LANCET COUNTDOWN: HEALTH AND CLIMATE CHANGE IN OCEANIA

THE LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
2025 CLIMATE AND HEALTH POLICY BRIEF FOR

AUSTRALIA

LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE
In collaboration with Wellcome

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Acknowledgement of Country

The MJA–Lancet Countdown on Health and Climate Change acknowledges and respects the Traditional Owners of Australia's lands, seas, and waterways. We honour the deep, ongoing connection First Nations Peoples have to Country, and recognise their exceptional knowledge, stewardship, and leadership in both health and climate change. We also acknowledge the ongoing effects of racism and colonialism on First Nations Peoples and affirm that confronting these injustices is essential to addressing the health and environmental issues explored in this brief.

Introduction

The most recent MJA–Lancet Countdown on Health and Climate Change report, released in April 2025, presents updated evidence on the growing health burden of climate change in Australia and across the region.(1) Australia is one of many countries on the frontlines, with rising temperatures and increases in the intensity and frequency of extreme weather events affecting communities nationwide. The report also highlights persistent shortcomings in Australia's response to these health threats.

A key concern highlighted in the report is the continued decline in volunteer firefighter numbers, a critical element in the nation's bushfire response. At the same time, Australia's energy system remains heavily reliant on fossil fuels.

The next ten years will be critical for reducing emissions and accelerating a clean energy shift, to meet the recently announced emissions reduction target of 62–70% by 2035.

In this context, we propose two urgent policy recommendations to accelerate Australia's climate response:

1. Strengthen Australia's capacity to reduce and respond to bushfires
2. Accelerate the transition to renewable energy and coordinated decarbonisation across all sectors, including healthcare

Recommendations

1 STRENGTHEN AUSTRALIA'S CAPACITY TO REDUCE AND RESPOND TO BUSHFIRES

- **Recommendation 1.1**: Enhance support for firefighting volunteers through sustained financial compensation, workplace protections, and mental health services to strengthen bushfire response capacity.

2 ACCELERATE THE TRANSITION TO RENEWABLE ENERGY AND COORDINATED DECARBONISATION ACROSS ALL SECTORS, INCLUDING HEALTHCARE

- **Recommendation 2.1**: Halt approval of new coal, oil and gas projects, accelerate closures of existing projects, and phase out fossil fuel exports to align with net zero emissions targets.
- **Recommendation 2.2**: Transition healthcare facilities to 100% renewable energy and integrate sustainability and climate education across the health sector.

1 STRENGTHEN AUSTRALIA'S CAPACITY TO REDUCE AND RESPOND TO BUSHFIRES

Australia is experiencing more frequent and severe climate-related events, particularly bushfires, which are having increasing impacts on human health. While bushfires have long been part of the Australian landscape, climate change is driving an increase in their frequency and severity.

Between 2003 and 2023, bushfire exposure across the country increased, with greater year-to-year variability (Indicator 1.3), signalling more frequent and intense bushfire seasons ahead.

Nearly 10% of Australian homes are located in high-risk areas for bushfires, floods, and rising sea levels, and the direct economic costs of these climate events are projected to reach $40 billion annually by 2050.(2)

Bushfire smoke is now a major contributor to air pollution in Australian cities. During the 2019-2020 Black Summer, bushfire smoke pushed air pollution levels beyond international health guidelines (Indicator 3.3), resulting in an estimated 445 excess deaths and over 3,000 hospitalisations due to smoke inhalation, far surpassing the 33 direct fire-related deaths.(3)

A critical component of Australia's ability to adapt to more frequent and severe bushfires is its firefighting volunteers. However, over the past seven years, the number of firefighting volunteers has declined by 38,442 people (17%) (Indicator 2.4). This reduction affects Australia's capacity to combat and prevent bushfires, given the important role firefighters have in risk management programs to reduce bushfire hazards and fire ignitions.

Understanding the factors driving volunteer decline is critical. The Volunteering in Australia 2022 report found that the most common reason for not volunteering was work or family commitments.(4) During the Black Summer fires, volunteers spent an average of three weeks fighting fires and around nine nights away from home, highlighting the personal and financial strain of volunteering during large-scale bushfire events.(5)

Protecting the health and safety of volunteers is important. A University of Western Australia survey of responders to the Black Summer bushfires found that 4.5% of volunteers and 5.1% of paid professional responders had probable post-traumatic stress disorder, while 4.6% of volunteers and 5.5% of paid professional responders experienced very high psychological distress.(6) These findings emphasise the need for expanded access to mental health services for all volunteers, with targeted support following major bushfire events. Additionally, safeguarding volunteers' respiratory health by ensuring all have access to P3 respirator masks is essential. While disposable P2 (or equivalent N95) masks offer some protection, full-face P3 respirators provide the highest level of protection against bushfire smoke contaminants.(7)

While supporting volunteers is essential, we cannot rely solely on unpaid labour. Australia also needs to significantly expand its paid firefighting and land management workforce to ensure year-round capacity for prevention, mitigation, and response activities, particularly as bushfire seasons lengthen and intensify.

Equally important is meaningful engagement with Aboriginal and Torres Strait Islander communities, who have managed fire on Country for tens of thousands of years through cultural burning. These traditional fire management techniques are important for bushfire mitigation and protecting biodiversity.

To address these issues, we call on the Federal and State Governments to implement a comprehensive support package for volunteer firefighters. There is precedent for financially supporting volunteers, as the Australian Government introduced a one-off compensation scheme in response to the Black Summer fires. The majority of Australians support a more comprehensive and sustained Army Reserve-style compensation model, offering benefits such as insurance, tax incentives, and payments to reduce the financial hardship associated with prolonged deployments or potential injuries.(8) Long-term financial, workplace, and medical support for Australia's volunteer firefighters would help to boost recruitment and retention, strengthening capacity for bushfire mitigation and ultimately protecting public health.

1 RECOMMENDATIONS

- **Recommendation 1.1**: Enhance support for firefighting volunteers through sustained financial compensation, workplace protections, and mental health services to strengthen bushfire response capacity.

2 ACCELERATE THE TRANSITION TO RENEWABLE ENERGY AND COORDINATED DECARBONISATION ACROSS ALL SECTORS, INCLUDING HEALTHCARE

Australia's energy system remains heavily reliant on fossil fuels, with coal, oil, and gas dominating the national energy mix (Indicator 3.1).

Fossil fuels are the leading contributor to climate change, accounting for approximately 67% of global greenhouse gas (GHG) emissions.(9) Fossil fuel projects also have widespread impacts on human health by contaminating air and waterways. Rural and remote communities and Aboriginal and Torres Strait Islander peoples are most susceptible to these harms due to their proximity to extraction sites and pre-existing health inequities.(10)

Despite these risks, Australia has made limited progress in reducing fossil fuel production and use, with recent policy decisions reinforcing fossil fuel dependence. Closures of major coal-fired power stations have been delayed or reconsidered; at least 30 new coal, oil and gas projects have been approved since 2022;(11) and over 116 new coal and gas developments remain in the national investment pipeline.(12) In 2023–24 alone, governments allocated AUD$14.5 billion in fossil fuel subsidies (Indicator 4.5).

Phasing out fossil fuel extraction is critical for both climate change mitigation and the protection of human health.(13)

Transitioning to renewable energy sources such as wind and solar can significantly reduce air pollution, lower GHG emissions, and deliver major health benefits. Investment in renewable industries has the potential to add AUD$333 billion to the Australian economy annually between 2035 and 2050.(14) By 2050, renewable energy exports could nearly triple the value of current fossil fuel exports. Redirecting the AUD$14.5 billion in fossil fuel subsidies, alongside savings from reduced healthcare costs related to climate and pollution-related illness, would allow for reinvestment into low-carbon energy infrastructure and health systems.

The health of current and future generations depends on urgent emissions reductions this decade. As a sector committed to safeguarding health, healthcare has a responsibility to lead by example in decarbonisation efforts, particularly given its contribution of 5-7% of Australia's total emissions (Indicator 3.7).(15,16) A transition to fully electrified healthcare facilities powered by 100% renewable electricity is critical, especially in jurisdictions yet to commit to this goal, including New South Wales, Queensland, Western Australia, and the Northern Territory. By following the lead of states like Victoria, which has pledged to fully decarbonise its public hospitals by 2025 (although this target has not yet been achieved), other states can accelerate health system decarbonisation while lowering long-term operational costs.

Meaningful emissions reductions in the health sector require system-wide change beyond infrastructure decarbonisation. Approximately 80% of health sector emissions stem from supply chains related to the manufacture, distribution, and delivery of healthcare goods and services.(17) To address this, care pathways need to be redesigned, with sustainability embedded into funding decisions, procurement and clinical practice.(17) Empowering clinicians, managers, and support staff through education and training can enable the identification and reduction of high-emissions practices, from unnecessary diagnostics and treatments (i.e., low value and harmful care which make up about 40% of healthcare) to the use of anaesthetic gases which are potent GHGs.(18,19)

The Global Green and Healthy Hospitals Pacific Network is a good example of this and is Australia's largest sustainable healthcare network, where the program provides peer to peer learning and support for decarbonisation in over 4,000 hospitals and health services in Australia.

Embedding climate change into medical and health curricula across all disciplines will build a future workforce equipped to deliver evidence-based and low-carbon healthcare.

Rapid and coordinated decarbonisation across all sectors is essential for Australia to meet its recently announced emissions reduction target of 62–70% by 2035.(20) There is a critical opportunity for Australia to demonstrate climate leadership, and transitioning to renewable energy across all sectors would signify Australia's commitment to the Paris Agreement.(21) Without a pledge to end fossil fuel subsidies and halt fossil fuel projects, achieving our emissions targets will be increasingly difficult.

2 RECOMMENDATIONS

- **Recommendation 2.1**: Halt approval of new coal, oil, and gas projects, accelerate closures of existing projects, and phase out fossil fuel exports to align with net zero emissions targets.
- **Recommendation 2.2**: Transition healthcare facilities to 100% renewable energy and integrate sustainability and climate education across the health sector.

Conclusion

Australia is facing an escalating climate and health crisis, with rising temperatures, more frequent bushfires, and intensifying heatwaves.

Continued reliance on fossil fuels exacerbates these risks. The 2024 MJA–Lancet Countdown highlights the urgent need for a stronger, health-focused climate response. This brief outlines two key recommendations: strengthening capacity to respond to bushfires and accelerating the transition to renewable energy and decarbonisation across all sectors, including healthcare.

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About this Policy Brief

The concept for this brief was developed by the Lancet Countdown on Health and Climate Change. The brief was written by Philomena Colagiuri, Jake T. W. Williams, Paul J. Beggs, Calla MacGregor, and Ying Zhang. The MJA–Lancet Countdown also acknowledges the following organisations and individuals who have provided comments and review of this document: Michelle Isles (CEO) from the Climate and Health Alliance, Kate Wylie (Executive Director) from Doctors for the Environment Australia, Aparna Lal (Fellow) from the National Centre for Epidemiology and Population Health, The Australian National University, and Neeraj Bhala from the Gastroenterological Society of Australia, and the following organisations:

LANCET COUNTDOWN

The Lancet Countdown: Tracking Progress on Health and Climate Change exists to monitor the links between public health and climate change, and the transition from health threat to opportunity. We are a global collaboration of over 300 leading experts from academic institutions and UN agencies across the globe, bringing together climate scientists, engineers, energy specialists, economists, political scientists, public health professionals and doctors. Our findings are published annually in the leading medical journal The Lancet and other prominent journals ahead of the UN climate change negotiations. Our data makes clear how climate change is affecting our health, the consequences of delayed action and the health benefits of a robust response.

AUSTRALIAN COLLEGE OF NURSING

The Australian College of Nursing (ACN) is the national voice of the nursing profession focused on policy, advocacy, and education to advance nurses' status, recognition, and respect. We are committed to our intent of 'Shaping Health, Advancing Nursing' to enhance the health care of all Australians. Our membership, events and higher education services allow nurses at all levels to stay informed, connected and inspired. We are excited to lead change and create a strong, collective voice for our profession by bringing together thousands of extraordinary nurses nationwide. ACN is also an Australian member of the International Council of Nurses headquartered in Geneva, in collaboration with the Australian Nursing and Midwifery Federation (ANMF).

AUSTRALIAN MEDICAL ASSOCIATION

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AUSTRALIAN MEDICAL STUDENTS' ASSOCIATION

The Australian Medical Students' Association (AMSA) is the peak representative body of Australia's 17,000 medical students. AMSA's mandate is to connect, inform and represent medical students through national and grassroots advocacy, annual conferences, projects and publications.

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 groundbreaking research, perspectives on health care delivery and informed analysis on policy since 1914.

PUBLIC HEALTH ASSOCIATION OF AUSTRALIA

The Public Health Association of Australia (PHAA) is recognised as the principal non-government organisation for public health in Australia working to promote the health and well-being of all Australians. PHAA's mission is to promote better health outcomes through increased knowledge, better access and equity, evidence informed policy and effective population-based practice in public health.

THE ROYAL AUSTRALASIAN COLLEGE OF PHYSICIANS

The Royal Australasian College of Physicians (RACP) trains, educates and advocates on behalf of over 23,900 physicians and 9,400 trainee physicians in Australia and Aotearoa New Zealand across a broad range of medical specialties. Beyond the drive for medical excellence, the RACP is committed to developing health and social policies which bring vital improvements to the wellbeing of patients.