The *Lancet* Countdown on health and climate change: Australia a world leader in neglecting its responsibilities

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Climate is integral to good health and wellbeing, but it can also be a forceful driver of death and disease. Many diseases both here in Australia and globally are climate sensitive — the global magnitude of such diseases was estimated to be 39 503 684 deaths (69.9% of total annual deaths) and 1 530 630 442 disability-adjusted life years in 2019.[1,2] Climate change is the biggest health threat facing humanity.[3,4]

The *Lancet* Countdown on health and climate change is a multidisciplinary, international collaboration established to monitor the links between climate change and health globally and to put health at the centre of the response to climate change. It tracks over 40 indicators, reporting its findings annually in *The Lancet*. The Countdown is to the year 2030, tracking progress as the world moves rapidly towards the near-term greenhouse gas emissions reduction commitments under the Paris Agreement.

Established in 2017, the Australian *MJA–Lancet* Countdown — a collaboration of the nation's leading health and climate change experts — conducts extensive assessments of the specific connections between climate change and health, and opportunities (or missed opportunities) of Australia's response. For each of the past five years (2018 to 2022), the collaboration has presented its findings in the *Medical Journal of Australia*, in unison with the publication of the global *Lancet* Countdown report. In recognition of Australia's geographic position and the importance of regional relationships, the *MJA–Lancet* Countdown is actively broadening its scope to Oceania, with, for example, the inclusion of a concise assessment of health and climate change in New Zealand in its 2022 report.[5]

With Australia as its precedent, the *Lancet* Countdown has been establishing other regional centres around the world, with centres now in Asia, South America, Europe, and Small Island Developing States, and efforts underway to establish an African centre.[6] Regional centres are publishing their own annual assessments of the state of health and climate change in their region, and for the first time this year the regional reports will be published separately from the global report — in the lead-up to the annual Bonn Conference of the United Nations Framework Convention on Climate Change and just ahead of Earth Day in April 2024 — to allow for more in-depth analysis and engagement away from the global findings.

In this editorial, being published in the *MJA* simultaneously with the 2023 global *Lancet* Countdown report in *The Lancet*,[6] we describe key indicators for which Australia is explicitly mentioned in the report. One of the many adverse impacts of climate change on Australia is highlighted in the 2023 report. With 55% of the region's land area experiencing extreme drought in at least one month per year on average over the past decade — a massive increase from the 14% in the 1950s and the second worst figure globally, not far under the 64% for Africa[6] — Australia is clearly on the frontline of the climate change catastrophe. Australia's record 2017–2020 drought, the associated temperature and rainfall extremes, and the devastating Black Summer bushfires of 2019–2020[7] are stark indicators of things to come.

Australia's particular susceptibilities to climate change are well understood. The 2023 *Lancet* Countdown report identifies Australia (and New Zealand) as being extremely well served by research on the health impacts of climate change, with about 50 studies per million people exposed to climate change, more than double that of any other region of the world.[6]

It is therefore an indictment of Australia and its citizens that the 2023 global *Lancet* Countdown report shows that we lead all other regions of the world in per capita greenhouse gas emissions from our energy sector,[6] with, on average, each of us contributing significantly to the changing climate and the death and disease it is causing.[8] The report also highlights that this extends to Australia's health care sector, which has the eleventh highest per capita greenhouse gas emissions in the world.[6] Additional key messages from the report that are particularly relevant to Australia are listed in the Box.

Australia's first ever national health and climate strategy, when published, will be an important step forward — identifying areas to better prepare the Australian health system for the challenges presented by climate change.[9,10] Poised to host the United Nations climate change Conference of the Parties in

Additional key messages from the 2023 global *Lancet* Countdown report[6]

Globally:

- People over 65 years of age, a group particularly vulnerable to heat, are now exposed to double the number of heatwave days compared with that around the turn of the century.
- Heat-related deaths are projected to quadruple by the middle of the century.
- Labour capacity loss due to heat is projected to increase by more than 50% by the middle of the century.
- Climate is becoming more suitable for the transmission of a number of key infectious diseases such as dengue and West Nile virus.
- The transformation of energy generation from fossil fuels to renewable energy will bring substantial co-benefits, such as a reduction in the 3.3 million deaths annually from airborne particulate matter, 1.2 million of which are from fossil fuel-derived sources of pollution.
- Urban greening provides multiple benefits, such as local cooling, improved air quality, and benefits to physical and mental health.
- The value of funds committed to fossil fuel divestment has grown substantially over the past 15 years, and now stands at almost US$41 trillion.
- The corporate sector is increasingly engaged in health and climate change, with almost 40% of companies now making direct reference to the links between the two.
- Legislation and litigation are emerging as important and powerful mechanisms for action on health and climate change.

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2026, our government can take further action between now and then to demonstrate the required leadership on this most important issue, and to better protect Australia and all its peoples. Two actions are clear — Australia must cease fossil fuel subsidies and must increase its greenhouse gas emissions reduction target from the current 43% to at least 50% by 2030 (from 2005 levels).

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1 Cissé G, McLeman R, Adams H, et al. Chapter 7: Health, wellbeing and the changing structure of communities. In: Pörtner H-O, Roberts DC, Tignor MMB, et al, editors. Climate change 2022: impacts, adaptation and vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press, 2022; pp. 1041-1170.

2 Vos T, Lim SS, Abbafati C, et al., GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet* 2020; 396: 1204-1222.

3 Costello A, Abbas M, Allen A, et al. Managing the health effects of climate change: *Lancet* and University College London Institute for Global Health Commission. *Lancet* 2009; 373: 1693-1733.

4 Health Organization; Regional Office for the Americas of the World Health Organization. Climate change and health. https://www.paho.org/en/topics/climate-change-and-health (viewed October 2023).

5 Beggs PJ, Zhang Y, McGushin A, et al. The 2022 report of the *MJA–Lancet* Countdown on health and climate change: Australia unprepared and paying the price. *Med J Aust* 2022; 217: 439-458. https://www.mja.com.au/journal/2022/217/9/2022-report-mja-lancet-countdown-health-and-climate-change-australia-unprepared

6 Romanello M, Di Napoli C, Green C, et al. The 2023 report of the *Lancet* Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *Lancet* 2023; https://doi.org/10.1016/S0140-6736(23)01859-7.

7 Zhang Y, Beggs PJ, McGushin A, et al. The 2020 special report of the *MJA–Lancet* Countdown on health and climate change: lessons learnt from Australia's "Black Summer". *Med J Aust* 2020; 213: 492.e2-492.e10. https://www.mja.com.au/journal/2020/213/11/2020-special-report-mja-lancet-countdown-health-and-climate-change-lessons

8 Vicedo-Cabrera AM, Scovronick N, Sera F, et al. The burden of heat-related mortality attributable to recent human-induced climate change. *Nat Clim Chang* 2021; 11: 492-500.

9 Australian Government Department of Health and Aged Care. National Health and Climate Strategy. 15 June 2023. https://www.health.gov.au/our-work/national-health-and-climate-strategy (viewed July 2023).

10 Heenan M, Rychetnik L, Howse E, et al. Australia's political engagement on health and climate change: the *MJA–Lancet* Countdown indicator and implications for the future. *Med J Aust* 2023; 218: 196-202. https://www.mja.com.au/journal/2023/218/5/australias-political-engagement-health-and-climate-change-mja-lancet-countdown ■