

# Policy Document

## Climate Change and Health Policy

### Background

The Australian Medical Students' Association (AMSA) is the peak representative body for Australian medical students. AMSA believes that all communities have the right to the best attainable health. Accordingly, AMSA advocates on issues that impact local, national and global health outcomes.

Climate change is the greatest global health threat of the 21st century and will alter the way in which we manage public health and protect vulnerable populations, both within Australia and worldwide [1, 2]. Climate change has direct and indirect effects on mortality and morbidity, in that it leads to rising temperatures and extreme weather patterns, causes increased transmission of infectious diseases, and undermines environmental determinants of health such as clean air and water, and sufficient food [1]. Australia is particularly susceptible to the impacts of climate change. It has an ageing population, who are particularly vulnerable to the adverse affects of extreme heat [3]; a strong reliance on agriculture, which will come under threat in the face of increasing water scarcity [4]; and high population density in flood zones [5]. Additionally, Australia is one of the world's most urbanised countries, with more than 75% of the population living in urban areas. There is a strong likelihood of significant increases in climate-related cardiovascular and respiratory diseases in this sector of the population [2, 6]. Notably, the health costs related to burning coal have already been estimated at \$2.6 billion per annum [7]. In recent years, the increasing incidence of hotter, longer heat waves has led to numerous deadly bushfires [5] (such as the 2009 Black Saturday bushfires in Victoria [8]) as well as tropical cyclones, droughts and widespread flooding [3]. Current projections estimate that by 2050 there will be an additional 6214 climate-related deaths in Victoria alone [9] -- and thousands more across the country -- unless we act to limit rising temperatures through urgent and deep reductions in greenhouse gas emissions [3].

The 2016 Paris Agreement, adopted at the 2015 Paris Climate Conference, aims to limit global warming to 2°C above pre-industrial levels, with the epitomic aim of limiting the increase to 1.5°C [11]. Australia's Intended Nationally Determined Contribution (INDC) begins in 2020, and aims to reduce greenhouse gas emissions by 26–28% from 2005 levels, with measures including land-use, land-use change and forestry by 2030 [12]. This INDC has been evaluated and deemed "inadequate"; should all countries follow this approach, global warming would exceed 3–4°C [13]. Moreover, Australia's current policies and Direct Action Plan will mean Australia is unable even to meet its INDC as currently stated [14]. As

such, further measures will be necessary in the coming years to ensure that Australia meets its Paris climate commitments, and makes an adequate contribution to internal climate change minimisation and mitigation efforts.

Climate change, as a disease modifier and amplifier, threatens to exacerbate current health inequities, and thus presents unprecedented public health challenges both domestically and internationally. However, actions to mitigate anthropogenic climate change can potentially reduce the burden of disease worldwide [15]. The potential burden of disease associated with anthropogenic climate change varies according to a nation's overall level of development and climate, but is often exacerbated by other environmental, health, and social factors [16]. Disease burdens secondary to climate change vary; developing countries have a larger vector-borne disease burden, while more-developed countries have larger cardiovascular and respiratory disease burdens [11, 2]. Broadly, though, climate change is having a disproportionate impact upon certain populations, including residents of less-developed countries, indigenous peoples, and economically disadvantaged communities. For example, the Pacific Island Countries – some of Australia's nearest geographical neighbours -- face an increase in non-communicable diseases and will likely be the first nations to experience a marked increase in disease due to the interaction between climate change and such diseases [17]. Despite this, Australia is not currently a signatory of the Suva Declaration on Climate Change, which focuses on the specific needs of Pacific Island Countries with regards to climate change [18]. Domestically, many Aboriginal and Torres Strait Islander communities – particularly those living in remote regions of Australia -- are at a significant disadvantage insofar as responding to climate change-related health challenges, given existing levels of social and economic disadvantage [19]. Aboriginal and Torres Strait Islander peoples also have a strong connection to 'country', such that climate change is likely to have a particularly significant impact on their mental and physical health outcomes [20]. Moving forward, it will be necessary to factor the specific health needs of particularly vulnerable communities into climate change mitigation and adaptation strategies, to ensure that such communities are not faced with disproportionately significant climate-related health burdens.

The medical profession has a significant role to play in climate change advocacy, and in implementing changes within the health sector that will reduce its current substantial carbon footprint. The possibilities in this regard are numerous; individual doctors, medical organisations and industry groups all have avenues along which they can effectively pursue greater sustainability and climate change mitigation strategies. For example, individual, organisational and institutional divestment has emerged as an adjunct campaigning strategy for the policy changes required to mitigate climate change [21]. Divestment involves selling off shares held in companies that profit from industries detrimental to health, such as the fossil fuel industry [22]. Although divestment has little proven effect on company share prices [23, 24], it is a powerful tool for drawing public attention and stigmatising the worst polluters [24]. At its most effective, divestment can be a strong statement by large groups of shareholders as to the unethical nature of

industries such as fossil fuels and can promote more direct measures, such as fossil fuel boycotts and calls for policy change [25].

An increasingly popular, and effective, option for climate change mitigation is sustainable food consumption, due in large part to the high greenhouse gas emissions associated with the agriculture industry. Figures vary widely depending on sources, but it is commonly held that animal agriculture is responsible for between 18-29% of global greenhouse gas emissions - more than all transport combined [26, 27]. Australia's per capita emissions due to agriculture are third-highest in the OECD, as Australia produces more than 100 kilograms of beef per person per year [28]. More sustainable diets, such as vegetarian diets, have at least 50% reduction in greenhouse gas emissions per calorie of food than Mediterranean and omnivorous diets [29].

The United Nations Food and Agriculture Organisation estimates that each year, approximately one-third of all food produced for human consumption in the world is lost or wasted. Without accounting for greenhouse gas emissions from land use change, the carbon footprint of food produced and not eaten is estimated to be 3.3 gigatons of carbon dioxide equivalent; as such, food wastage ranks as the third-greatest emitter, after the USA and China [8]. As such, improving food sustainability has clear benefits with respect to climate change mitigation. Similarly, supporting sustainable practices with regards to transport and water usage has been shown to mitigate climate change [30]. In 1999 the Intergovernmental Panel on Climate Change estimated that aviation is responsible for around 3.5% of anthropogenic climate change, a figure which includes both carbon dioxide and non-carbon dioxide induced effects [1]. It is also known that by 2025, nearly two-thirds of the world's population will live in water-stressed basins [4], and that the continual supply of freshwater enjoyed by many developed nations is extremely vulnerable to the adverse impacts associated with climate change [31]. By implementing and advocating for more sustainable practices with regards to food and water consumption and transportation, the medical profession has the potential to contribute to climate change mitigation.

## Position Statement

AMSA recognises the scientific consensus at IPCC and among medical bodies that anthropogenic climate change poses immense threats to human health and well-being worldwide. As recognised leaders in the community, health professionals must be advocates for the prevention of climate change and its impacts on health, and work to protect their patients from its devastating consequences. As such, AMSA believes that:

1. Human-induced emissions are directly responsible for the current rapid rate of climate change;
2. Health must be placed at the centre of UNFCCC (United Nations Framework Convention on Climate Change) international negotiations where it will stand as an effective framework from which to build a fair, ambitious and legally binding global deal;

3. Immediate and sustainable action on climate change must be taken at a local, national, and global level if we are to safeguard global public health;
4. Vulnerable communities will bear the initial burden of climate change, with many already experiencing significant effects;
5. Use of renewable energy sources over coal combustion is an effective way to reduce both greenhouse gas emissions and the negative health effects of air pollution;
6. Individuals and groups have a responsibility to consider the sustainability of their actions, and where possible reduce the associated environmental impact.

## Policy

AMSA calls upon:

1. The Australian Federal and State Governments to:
  - a. Recognise and act in alignment with Intergovernmental Panel on Climate Change (IPCC), and United Nations Framework Convention on Climate Change (UNFCCC) and COP21 objective of limiting average global surface temperature increase to 1.5 degrees celsius;
  - b. Proactively take measures and restructure current policies to achieve a reduction in greenhouse gas emissions at a minimum of 26-28% from 2005 levels by 2030 in accordance with the Paris Agreement [12];
  - c. Act both fairly and responsibly within the international community by fulfilling obligations under the United Nations Framework Climate Change Convention;
  - d. Employ a range of mitigation techniques to attain meaningful reductions in emissions. These may include, but are not restricted to:
    - i. Investment in renewable energy technologies, such as wind and solar, over coal mining and hydraulic fracturing to reduce the burden of respiratory and cardiovascular diseases;
    - ii. Carbon pricing mechanisms and emissions trading schemes to promote energy efficiency;
    - iii. A moratorium on new coal mines and coal-fired power plants;
    - iv. Investing in public transport and active transport infrastructure (e.g. cycling paths) to reduce car use and promote active living;
    - v. Re-forestation and increased green spaces to decrease air pollution, increase physical activity, and improve mental health;
    - vi. Subsidising sustainable agricultural methods and moving away from monocultures and industrial agriculture as

- discussed in the Background Paper to AMSA Climate Change and Health Policy (2014);
- vii. Carbon capture and storage;
  - e. End subsidies to fossil fuel industries to remove their economic advantage and promote open markets;
  - f. Encourage subsidies to fossil fuel industries to instead be committed to climate change adaptation and mitigation programs;
  - g. Establish an independent body to monitor and ensure accountability of fossil fuel-powered electricity generation in Australia;
  - h. Support and fund long-term community health impact studies on Australian coal mining and fossil fuel extraction;
  - i. Strengthen the adaptive capacity of vulnerable communities to minimise the adverse impacts of climate change with adequate financial, technological, and logistical support, including but not limited to:
    - i. Investment in improving food and water security;
    - ii. Training of a health workforce capable of effectively managing the immediate and long term health effects of climate change;
    - iii. Education programs regarding the lifestyle impacts associated with climate change;
    - iv. Improved ability to respond humanely and generously to individuals displaced by climate change [24];
  - j. Ensure that climate change legislation is adequate, robust, and binding;
  - k. Work in consultation with Aboriginal and Torres Strait Islander communities to ensure that they receive adequate support to adapt to the health challenges posed by climate change.
2. Australian universities and medical schools to integrate climate change and its relationship to health within the medical curriculum, and other specific health courses. This may include, but is not limited to, teaching on:
    - a. The impacts of climate change on human health and its inherent link to sustainable development. This should include the need for the international health community to actively engage in adaptation and mitigation efforts on a global scale;
    - b. The current and future agenda for sustainable global development, including issues of effective global governance and international agreements which work toward this goal;
  3. Australian Medical students and health professionals to:
    - a. Reduce their carbon footprints;
    - b. Continue to run and expand the Code Green campaign to educate students and the public on the health impacts of climate change and actively advocate to key stakeholders that action on climate change is necessary to protect human health;

- c. Work with relevant organisations, such as Doctors for the Environment Australia (DEA), the International Federation of Medical Students' Association (IFMSA), the Climate and Health Alliance (CAHA) and the Australian Medical Association (AMA), to publicly provide a voice for countries/communities vulnerable to and already affected by climate change through meetings with key stakeholders;
  - d. Consider the health impacts of energy sources within the health sector and implement strategies to reduce carbon intensive energy use;
  - e. Consider the waste management in health facilities and support waste minimisation efforts.
4. All businesses, companies, organisations and individuals to:
    - a. Begin a process of transferring funds, when feasible without damage, from financial institutions and superannuation funds investing in fossil fuel developments to those generating energy from renewable energy sources;
    - b. Reduce their carbon footprint and implement strategies to reduce carbon intensive energy use;
    - c. Where possible and appropriate, invest in ethical funds that promote health, renewable energy, education, and sustainable industries.
  5. AMSA Executive, AMSA Global Health Management, Medical Societies and Event Teams to :
  6. Begin a process of transferring funds, when feasible without damage, from financial institutions and superannuation funds investing in fossil fuel developments to those generating energy from renewable energy sources;
  7. Continue monitoring of financial institutions, superannuation funds and other organisations with which AMSA and affiliates associate to ensure they continue to align with AMSA's stance on climate change and health, for the purpose of advocating a re-alignment with AMSA's stance where feasible;
  8. Where possible and appropriate, invest in ethical funds that promote health, renewable energy, education and sustainable industries and AMSA and affiliated to select future vendors in accordance with these attributes;
  9. Promote sustainable principles and options, where feasible without damage at AMSA meetings and events, including but not limited to:
    - a. Transport options;
    - b. Food selection, with emphasis on:
      - i. The provision of vegetarian and vegan meal options that meet the dietary requirements as outlined by the Australian Dietary Guidelines;
      - ii. Supporting, sourcing and providing locally sourced in season produce;
      - iii. Encouraging event attendees to consume vegetarian meal options where possible;



- iv. Reducing meat amount in meals and using alternative protein sources, while promoting further vegetable and fruit consumption;
- c. Waste Management.

## References

1. World Health Organization [WHO] 2016, WHO Global Programme on Climate Change & Health, Switzerland, viewed 7 February 2017, <<http://www.who.int/globalchange/mediacentre/news/global-programme/en/>>.
2. Watts, N, Adger, WN, Agnolucci, P, Blackstock, J, Byass, P, Cai, W, Chaytor, S, Colbourn, T, Collins, M, Cooper, A, Cox, PM, Depledge, J, Drummond, P, Ekins, P, Galaz, V, Grace, D, Graham, H, Grubb, M, Haines, A, Hamilton, I, Hunter, A, Jiang, X, Li, M, Kelman, I, Liang, L, Lott, M, Lowe, R, Luo, Y, Mace, G, Maslin, M, Nilsson, M, Oreszczyn, T, Pye, S, Quinn, T, Svendsdotter, M, Venevsky, S, Warner, K, Xu, B, Yang, J, Yin, Y, Yu, C, Zhang, Q, Gong, P, Montgomery, H & Costello, A 2015, 'Health and Climate Change: Policy Responses to Protect Public Health", Lancet vol. 386, no.10006, pp. 1861-1914, [http://dx.doi.org/10.1016/S0140-6736\(15\)60854-6](http://dx.doi.org/10.1016/S0140-6736(15)60854-6).
3. Steffen, W, Hughes, L & Perkins, S 2014, Heatwaves: Hotter, Longer, More Often, Climate Council of Australia, Australia, retrieved 7 February 2017, <<http://www.climatecouncil.org.au/uploads/9901f6614a2cac7b2b888f55b4dff9cc.pdf>>.
4. Qureshi, ME, Hanjra, MA & Ward, J 2013, 'Impact of water scarcity in Australia on global food security in an era of climate change', Food Policy vol. 38, pp.136-145, <<http://dx.doi.org/10.1016/j.foodpol.2012.11.003>>.
5. Garrett G. Understanding Floods: Questions & Answers [Internet]. 1st ed. Queensland Government; 2011 [cited 17 February 2017]. Available from: [http://www.chiefscientist.qld.gov.au/images/documents/chiefscientist/pubs/floods/understanding-floods\\_full\\_colour.pdf](http://www.chiefscientist.qld.gov.au/images/documents/chiefscientist/pubs/floods/understanding-floods_full_colour.pdf)
6. Australian Government Department of Infrastructure and Regional Development 2015, State of Australian Cities 2014-2015: Progress in Australian Regions, Australia, retrieved 7 February 2017, <[https://infrastructure.gov.au/infrastructure/pab/soac/files/2015\\_SoAC\\_full\\_report.pdf](https://infrastructure.gov.au/infrastructure/pab/soac/files/2015_SoAC_full_report.pdf)>.
7. Castleden, WM, Shearman, D, Crisp, G & Finch, P 2011, 'The mining and burning of coal: effects on health and the environment', Medical Journal of Australia vol.195, no.6, pp. 333-335, retrieved 7 February 2017, <<http://dx.doi.org/10.2134/jeq1993.00472425002200020002x>>.
14. Garnaut, R 2008, 'Australia's Emissions in a Global Context' in The Garnaut Climate Change Review: Final Report, Cambridge University Press, Cambridge, retrieved 7 February 2017, <<http://www.garnautreview.org.au/2008-review.html>>.
8. Victorian Government Department of Human Services 2009, January 2009 Heatwave in Victoria: an Assessment of Health Impacts, DHS, Melbourne. <http://www.parliament.vic.gov.au/vufind/Record/82439> .

9. Australian Government Department of the Environment and Energy 2016, Climate Change Impacts in Victoria, Australia, retrieved 7 February 2017, <<https://www.environment.gov.au/climate-change/climate-science/impacts/vic>>.
10. United Nations Framework Convention on Climate Change 2015, Paris Agreement, France, retrieved 7 February 2017, <<http://dx.doi.org/10.1289/ehp.1509756>>.
11. Campbell-Lendrum, D, Manga, L, Bagayoko, M & Sommerfeld, J 2015, 'Climate change and vector-borne diseases: what are the implications for public health research and policy?', *Philosophical Transactions of the Royal Society B*, vol.370, no.1665, retrieved 7 February 2017, <<http://rstb.royalsocietypublishing.org/content/royptb/370/1665/20130552.full.pdf>>.
12. Australian Government Department of the Environment and Energy 2016, Paris Agreement, Australia, retrieved 7 February 2017, <<https://www.environment.gov.au/climate-change/international/paris-agreement>>.
13. Cochca M, Hare B, Parra P, Cantzler J, Hohne N, Jeffery L et al. Australia set to overshoot its 2030 target by large margin [Internet]. Climate Action Tracker; 2015 p. 9. Available from: [http://climateactiontracker.org/assets/publications/briefing\\_papers/082015\\_Australia.pdf](http://climateactiontracker.org/assets/publications/briefing_papers/082015_Australia.pdf)
14. Tracking (I)NDCs - Climate Action Tracker [Internet]. Climateactiontracker.org. 2016 [cited 17 February 2017]. Available from: <http://climateactiontracker.org/indcs.html>
15. Haines, A, McMichael, AJ, Smith, KR, Roberts, I, Woodcock, J, Markandya, A, Armstrong, BG, Campbell-Lendrum, D, Dangour, AD, Davies, M, Bruce, N, Tonne, C, Barrett, M & Wilkinson, P 2009, 'Public health benefits of strategies to reduce greenhouse gas emissions: overview and implications for policy-makers', *Lancet*, vol. 374, no. 9707, pp. 2104-2114, retrieved 7 February 2017, < [http://dx.doi.org/10.1016/S0140-6736\(09\)61714-1](http://dx.doi.org/10.1016/S0140-6736(09)61714-1)>
16. McMichael, AJ 2013, 'Globalization, climate change, and human health', *The New England Journal of Medicine*, vol.368, no.14, pp. 1335-43, retrieved 7 February 2017, <http://dx.doi.org/10.1056/NEJMra1109341>
17. McIver L, Kim R, Woodward A, Hales S, Spickett J, Katscherian D, Hashizume M, Honda Y, Kim H, Iddings S, Naicker J, Bambrick H, McMichael AJ, Ebi KL 2015, 'Health Impacts of Climate Change in Pacific Island Countries: A Regional Assessment of Vulnerabilities and Adaptation Priorities', *Environmental Health Perspectives*, retrieved 7 February 2017, <<http://ehp.niehs.nih.gov/wp-content/uploads/advpub/2015/12/ehp.1509756.acco.pdf>>.
18. Narayan R. UN accepts and registers PIDF Charter [Internet]. Loopsamoa.com. 2016 [cited 18 February 2017]
19. Altman JC, Jordan K. Impact of climate change on Indigenous Australians: submission to the Garnaut climate change review: Australian National University, Centre for Aboriginal Economic Policy Research; 2008



20. Hennessy K, Fitzharris B, Bates BC, Harvey N, Howden M, Hughes L, et al. Australia and New Zealand: climate change 2007: impacts, adaptation and vulnerability: contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. 2007
21. Intergovernmental Panel on Climate Change 2007, 'Summary for Policymakers' in: Climate Change 2007: Mitigation of Climate Change. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, retrieved 7 February 2017, [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/contents.html](http://www.ipcc.ch/publications_and_data/ar4/wg3/en/contents.html)
22. Costello, A, Abbas, M, Allen, A, Ball, S, Bell, S, & Bellamy, R 2009, 'Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission.' Lancet, vol. 373, no. 9676, pp. 1693-733, retrieved 7 February 2017, < [http://dx.doi.org/10.1016/S0140-6736\(09\)60935-1](http://dx.doi.org/10.1016/S0140-6736(09)60935-1)>
23. Ansar, A, Caldecott, B & Tilbury, J 2013, Stranded assets and the fossil fuel divestment campaign: what does divestment mean for the valuation of fossil fuel assets, University of Oxford Smith School of Enterprise and the Environment, Stranded Assets Program, retrieved 7 February 2017, <http://www.smithschool.ox.ac.uk/research-programmes/stranded-assets/SAP-divestment-report-final.pdf>
24. Ritchie, J, & Dowlatabadi, H 2015, Fossil Fuel Divestment: Reviewing Arguments, Implications & Policy Opportunities. Pacific Institute for Climate Change, Canada, retrieved 7 February 2017, <https://pics.uvic.ca/sites/default/files/uploads/publications/Divestment%20WP%20Jan%202015-FINAL.pdf>
25. Baron, R & Fischer D 2015, Divestment and Stranded Assets in the Low-carbon Transition Background paper for the 32nd Round Table on Sustainable Development. Organisation for Economic Cooperation and Development, Paris, retrieved 7 February 2017, <<https://www.oecd.org/sd-roundtable/papersandpublications/Divestment%20and%20Stranded%20Assets%20in%20the%20Low-carbon%20Economy%2032nd%20OECD%20RTSD.pdf>>.
26. Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, De Haan C. Livestock's long shadow: FAO Rome; 2006.
27. Vermeulen SJ, Campbell BM, Ingram JSI. Climate Change and Food Systems. Annual Review of Environment and Resources. 2012;37(1):195-222.
28. Garnaut, R 2008, 'Australia's Emissions in a Global Context' in The Garnaut Climate Change Review: Final Report, Cambridge University Press, Cambridge, retrieved 7 February 2017, <http://www.garnautreview.org.au/2008-review.html>
29. 4613.0 - Australia's Environment: Issues and Trends [Internet]. Canberra: Australian Bureau of Statistics; 2009. Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4613.0Feature+Article1Jan+2010>
30. Aleksandrowicz L, Green R, Joy EJM, Smith P, Haines A. The Impacts of Dietary Change on Greenhouse Gas Emissions, Land Use, Water Use, and

Health: A Systematic Review. Wiley AS, ed. PLoS ONE. 2016;11(11):e0165797. doi:10.1371/journal.pone.0165797. Climate Commission 2013, Off the charts: Extreme Australian summer heat, retrieved 7 February 2017, <https://climatecommission.angrygoats.net/report/off-charts-extreme-january-heat-2013/>

31. Australian Medical Students' Association 2016, 'Refugee and Asylum Seeker Health Policy' in *The Orange Book*, pp. 316-327, viewed 17 July 2016, [https://www.amsa.org.au/wp-content/uploads/2016/07/Orange\\_book\\_8ed\\_2nd\\_Council\\_2016.pdf](https://www.amsa.org.au/wp-content/uploads/2016/07/Orange_book_8ed_2nd_Council_2016.pdf)

## Policy Details

Name: Climate Change and Health Policy

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***Amalgamation of the Climate Change and Health Policy (2014) and the Sustainable Events Policy (2014)***