



# Real, Urgent & Now

# Communicating the Health Impacts of Climate Change



CLIMATE  
AND  
HEALTH  
ALLIANCE

## Recognition and Commitment

We recognise Aboriginal and Torres Strait Islander People as the traditional custodians of the land on which we live and work and acknowledge that sovereignty of the land we call Australia has never been ceded. We commit to listening to and learning from Aboriginal and Torres Strait Islander people about how we can better reflect Indigenous ways of being and knowing in our work.

## About Climate and Health Alliance

**Why we exist:** Climate change is the greatest threat to health we face.

**Our theory of change:** If the health sector leads on climate advocacy and solutions, decision-makers and the public will act, because the community cares about health and trusts health voices.

**Our mission:** To build a powerful health sector movement for climate action and sustainable healthcare.

**Our vision:** The health sector plays a leading role in restoring a safe climate, and an ecologically sustainable, just and healthy world.

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**Every major public health  
victory of the last  
century has had effective  
communication at its heart.**

**Dr. Ed Maibach, Director of the Center for Climate Change  
Communication, George Mason University**

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**Australian health professionals know that effective communication is one of the most powerful tools they can use to protect and promote public health**

# Glossary

## Mitigation

Reducing greenhouse gas emissions to help stop climate change and its impacts getting worse. An example of mitigation is transitioning from coal-fired power to renewable energy.

## Adaptation

Actions we should take now to help us cope with the climate impacts we are already experiencing. An example of adaptation would be planting trees across a city to improve air quality and reduce the health impacts of extreme heat.

## Paris Agreement

A legally binding international treaty to combat climate change created in December 2015. This treaty was adopted by nearly every nation during international climate negotiations in Paris. Central to the Agreement was the goal to limit global warming to well below 2 degrees Celsius and preferably to 1.5 degrees.

## Framing

Choosing how to express something according to how you want your audience to respond. Framing the same information in different ways can affect how people think about an issue. For example, a 20% chance of death can equally be portrayed as a 80% chance of life, thereby focussing the audience on the chances of a positive (reward) outcome rather than the negative (risk) this message also implies. While negative frames are often chosen because they're attention-grabbing, they can risk reducing people's willingness to listen to what you're saying.

# Why this guide was created

Australian health professionals know that effective communication is one of the most powerful tools they can use to protect and promote public health.

Communication that encourages behaviour change in the context of a public health issue can be highly effective: you only need to look at Australia's health-led response to the COVID-19 pandemic to see how advice from trusted health professionals saved lives and reduced harm. And the biggest global health threat of the 21st century is climate change, according to a landmark 2009 Lancet report<sup>1</sup> and the World Health Organization (WHO). A stable climate is the most fundamental determinant of human health.<sup>2</sup>

## This document is designed to support you to:

- 
- ✔ Speak with confidence about climate change and its health impacts with patients/clients, colleagues and communities guiding and supporting behavioural change that promotes positive health outcomes and a safe climate
- 
- ✔ Join a growing cohort of health professionals who recognise their unique authority and responsibility to talk to the public, media, and decision-makers about the health impacts of climate change and the health benefits of climate action
- 
- ✔ Take a leadership role in encouraging health services, clinics, hospitals, offices, and other health care facilities to be as environmentally sustainable as possible
- 
- ✔ Promote actions that reduce greenhouse gas emissions and offer health co-benefits. For example: walking, riding or using public transport instead of driving cars; shifting to a healthier, plant-based diet; or switching to renewable energy
- 
- ✔ Reduce your personal carbon footprint
- 
- ✔ Advocate for action on climate change within personal and professional circles, and your community

1 Costello, Anthony, Mustafa Abbas, Adriana Allen, Sarah Ball, Sarah Bell, Richard Bellamy, Sharon Friel et al. "Managing the health effects of climate change: lancet and University College London Institute for Global Health Commission." *The Lancet* 373, no. 9676 (2009): 1693-1733.

2 Maibach, Edward, Jeni Miller, Fiona Armstrong, Omnia El Omrani, Ying Zhang, Nicky Philpott, Sue Atkinson et al. "Health professionals, the Paris agreement, and the fierce urgency of now." *The Journal of Climate Change and Health* 1 (2021): 100002.

# Why talk about climate change

## Rising levels of greenhouse gases are driving climate change and harming our health.

Climate change is already responsible for a rising death toll and the spread of illness around the world. In Australia, the unprecedented and climate-related bushfires of 2019–20 had major implications for public health, causing the death of 33 people.<sup>3</sup> A further 417 deaths and 3,151 hospitalisations have been attributed to the bushfire smoke that blanketed the east coast of Australia.<sup>4</sup> In addition to direct health impacts through extreme events, climate change is also increasingly affecting many social and environmental determinants of health—clean air, safe drinking water, nutritious food, and secure shelter.



3 Hughes, Lesley, Steffen, Will, Mullins, Greg, Dean, Annika, Weisbrot, Ella & Rice, Martin, “Summer of Crisis” 2020, Climate Council, <https://www.climatecouncil.org.au/wp-content/uploads/2020/03/Crisis-Summer-Report-200311.pdf>.

4 Arriagada, N. Borchers, Andrew J. Palmer, D. M. Bowman, Geoffrey G. Morgan, Bin B. Jalaludin, and Fay H. Johnston. “Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia.” *Med. J. Aust* (2020).

## The current and expected health impacts of climate change include:<sup>5</sup>



**Injury, illness or death due to extreme weather events, including bushfires, heatwaves, and floods**



**An increase in cardiovascular and respiratory diseases due to increased aeroallergens and air pollution**



**Food and water insecurity due to reduced crop yields and poor quality water sources, resulting from changing weather patterns**



**An increase in vector-borne diseases (e.g. dengue fever), as a result of warmer weather and changing rainfall patterns**



**Mental health impacts from extreme weather events and/or changing environments as well as their associated social and economic impacts**

While many health professionals are already seeing climate-related health conditions in their community, a clear majority believe that the incidence of these health conditions will increase significantly over the next 10 years.<sup>6</sup>

5 Horsburgh, Nick, Armstrong, Fiona & Mulvenna, Vanora, "Framework for a National Strategy on Climate, Health and Well-being for Australia" 2017, [https://d3n8a8pro7vnm.cloudfront.net/caha/pages/40/attachments/original/1498008324/CAHA\\_Framework\\_for\\_a\\_National\\_Strategy\\_on\\_Climate\\_Health\\_and\\_Well-being\\_v05\\_SCREEN\\_%28Full\\_Report%29.pdf?1498008324](https://d3n8a8pro7vnm.cloudfront.net/caha/pages/40/attachments/original/1498008324/CAHA_Framework_for_a_National_Strategy_on_Climate_Health_and_Well-being_v05_SCREEN_%28Full_Report%29.pdf?1498008324).

6 Sustainability Victoria, "Linking Climate Change and Health Impacts" 2020, <https://www.sustainability.vic.gov.au/About-us/Research/Health-and-Climate-Change-Research>.

## Urgency of the task

Even a small increase in average temperature has a profound impact on our health and the climate. Australia has warmed by over 1.5 degree since 1960, leading to an increase in the frequency of extreme weather events, including heatwaves, bushfires, and floods.<sup>7</sup>



The current warming trend is extremely likely (greater than 95% probability) to be the result of human activity and it is accelerating at an unprecedented speed.

Burning fossil fuels (coal, oil and gas) for energy (through electricity, heating, cooling and cooking, and transport) is producing unprecedented amounts of greenhouse gas emissions.

These emissions act like a blanket wrapped around the earth, trapping excess heat in our lower atmosphere. The trapped heat is reflected back to Earth, increasing air and sea temperatures, which in turn affect the climate. For example, it is changing rainfall patterns, exacerbating extreme weather events, and melting permafrost. Sea levels are also rising as water volume expands and land-based ice melts.

Reaching net zero emissions—where we produce no more emissions than Earth’s systems can naturally absorb—is a crucial part of limiting global warming to 2°C in alignment with the Paris Agreement. We must do everything we can to reach net zero emissions as quickly as possible, in order to slow global warming and avert the worst impacts on health, biodiversity, and infrastructure.

Without strong action to curb greenhouse gas emissions, the health impacts of climate change will only get worse.

7 Ying Zhang, Paul J. Beggs, Alice McGushin, Hilary Bambrick, Stefan Trueck, Ivan C. Hanigan, Geoffrey G. Morgan et al. “The 2020 special report of the MJA-Lancet Countdown on health and climate change: lessons learnt from Australia’s “Black Summer”.” Medical Journal of Australia (2020).



## Your role in tackling climate change as a trusted voice on health

As a health professional, you have the trust<sup>8</sup> and respect of the community and the authority to speak directly about public health threats. You are therefore uniquely placed to effectively inform the public and other decision-makers about:

**The urgent need for action on climate change**

**The benefits to human health if we do take action**

**The risks to human health if we do not take action**

You have the opportunity to reframe climate change as a public health issue. Health is universally valued by all people, regardless of political preference or ideology, thus climate action to protect health is a uniquely compelling call to action. It has enormous potential to reframe the issue of climate change in people's minds.

In addition, climate action is the greatest health opportunity of the 21st century. Many climate change strategies will also lead to health improvements and deliver considerable savings for healthcare budgets. Well-designed climate policies can reduce poverty, build community resilience and reduce global inequity.<sup>9</sup>

Despite growing awareness of the links between climate change and health,<sup>10</sup> people need and want more information about how climate change will affect their health. Victorian-based research indicates that around three in four people want to know more about the health impacts of climate change, and are interested in the actions they can take to protect their health and mitigate climate change.<sup>11</sup>

By talking about climate change, you can help others to tackle climate change and its health consequences, promote actions that deliver immediate health benefits, and reduce costs to health systems and communities.

8 Hanrahan, Catherine "Australia Talks: The most and least trusted professions revealed," 27 November 2019, <https://www.abc.net.au/news/2019-11-27/the-professions-australians-trust-the-most/11725448>

9 Costello, Anthony, Mustafa Abbas, Adriana Allen, Sarah Ball, Sarah Bell, Richard Bellamy, Sharon Friel et al. "Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission." *The Lancet* 373, no. 9676 (2009): 1693-1733.

10 Ying Zhang, Paul J. Beggs, Alice McGushin, Hilary Bambrick, Stefan Trueck, Ivan C. Hanigan, Geoffrey G. Morgan et al. "The 2020 special report of the MJA-Lancet Countdown on health and climate change: lessons learnt from Australia's "Black Summer"." *Medical Journal of Australia* (2020).

11 Sustainability Victoria, "Linking Climate Change and Health Impacts" 2020, <https://www.sustainability.vic.gov.au/About-us/Research/Health-and-Climate-Change-Research>.



Health professionals have a duty of care, as well as an opportunity to safeguard the health of current and future generations. You are on the front line in protecting people from climate impacts—from heat-waves and other extreme weather events; from outbreaks of infectious or vector borne diseases such as coronavirus, dengue; from the effects of malnutrition; as well as treating people that are affected by cancer, respiratory, cardiovascular and other non-communicable diseases associated with environmental pollution.<sup>12</sup>

12 World Health Organization, “WHO calls for urgent action to protect health from climate change – Sign the call”, n.d., <https://www.who.int/globalchange/global-campaign/cop21/en/>





**This is your opportunity to help tackle climate change and its health consequences, promote actions that deliver immediate health benefits, and reduce costs to health systems and communities.**



## Add your voice to the growing call for action on climate change as a health emergency

Many health professionals recognise that they have an important role to play in informing the public about the links between climate change and health.<sup>13</sup>

Organisations representing 40 million health professionals worldwide, including over half a million in Australia, are calling on governments around the world to listen to health experts and the science in response to the climate crisis, just as they did for the COVID-19 crisis.<sup>14</sup>

In Australia, there is strong support from both the public and health professionals for the health sector to lead on climate change and health.<sup>15</sup> In response, several peak professional organisations have declared that climate change is a health emergency.<sup>16</sup>

13 Sustainability Victoria, "Linking Climate Change and Health Impacts" 2020, <https://www.sustainability.vic.gov.au/About-us/Research/Health-and-Climate-Change-Research>.

14 May 26 2020, <https://healthyrecovery.net>

15 Sustainability Victoria, "Linking Climate Change and Health Impacts" 2020, <https://www.sustainability.vic.gov.au/About-us/Research/Health-and-Climate-Change-Research>.

16 Climate and Health Alliance, "Climate change is a health emergency," n.d., <https://www.climatehealthemergency.org/declaring>



# How to talk about climate change

## Golden rules

1. **Simple messages, repeated often, by trusted voices, are most effective.**
2. **Put people first.** Frame the issue as a health problem rather than as an environmental problem. Many people see the problem of climate change as global and abstract, while health is local and concrete.<sup>17</sup>
3. Introduce the health benefits of climate solutions and speak to the values your patients and clients care about most (personal health, family, community, protecting who and what is at risk—vulnerable people, nature and clean air)
4. **Events such as extreme heat or flooding or poor air quality create an opportunity to educate people** on the health impacts of climate change. This can encourage people to consider how they could prevent such harm to health in future.
5. **Use visual language so that your audience can see themselves in the solution.** For example, “Australia’s climate is already **harsh** and climate change is **supercharging** that. But human beings—and Australians—are known for their **resilience** and **resourcefulness**. We can **take charge** of our health and protect **our beautiful country** if we act now.”
6. **Be careful of polarising language** like ‘climate crisis’ or ‘climate emergency’ in a clinical setting. The scale and nature of the threat is huge but repeating messages that invoke fear can ‘desensitise’ and turn some audiences away from your message.
7. **Don’t get caught up in conversations that question climate science.** It’s not up for debate. If conversation veers into debate or politics, redirect it back to your professional expertise and evidence around climate change health impacts.
8. **Avoid repeating a negative statement in order to attack it.**<sup>18</sup> For example, if a dismissive person argues that climate action is too expensive, do not get caught up in arguing about money. Instead, reframe according to your values. For example, “Taking climate action to protect public health is the best investment a government can make.”

17 Maibach E, Nisbet M, & Weathers M. (2011) “Conveying the Human Implications of Climate Change: A Climate Change Communication Primer for Public Health Professionals”. Fairfax, VA: George Mason University Center for Climate Change Communication, <https://www.climatechangecommunication.org/wp-content/uploads/2016/04/Climate-Communication-Primer-for-Public-Health-Professionals-1.pdf>

18 Lakoff, G. (2004). “Don’t Think of an Elephant! Know your values and frame the debate. The essential guide for progressives.” White River Junction, Chelsea Green Publishing: Vermont, USA.



**Simple messages,  
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## Key messages to remember

Where possible, stick to three key points:

- **Climate change is bad for our health and health professionals are already seeing the impacts firsthand.** Where possible, provide examples from your own experience as a health professional.
- **We need to act now to protect our health, the health of our families and communities, and the health of vulnerable people,** including children, older people, those with chronic illnesses, those who are socially and economically disadvantaged, and those living in remote and rural Australia.
- **Taking action is a ‘win-win-win’ because these actions benefit our health, our economy and the climate.**

## Additional messages which may help you when talking to patients and clients.

- **Climate change is happening now** and climate scientists agree it is driven by human activity.
- **Climate change is already harming our health.** Without urgent action, health disasters will continue to worsen, hurting us and generations to come. We must act urgently to manage impacts that are now unavoidable, and avoid future risks.
- **Climate action is good for health.** Well-designed strategies to reduce greenhouse gas emissions have significant benefits for health and wellbeing, like cleaner air, soil and water; improved mental health; more resilient communities, and more. Many actions show health benefits almost immediately.
- **No one, regardless of their wealth or geographic location, is immune from the effects of climate change.**
- **The health of some people is affected more severely,** including low-income, remote and disadvantaged communities, and people with disabilities or chronic illness. We need to look after each other to ensure healthy people, healthy places, and a healthy planet.
- **Together we can take and demand action on climate change.** Many of the needed solutions, like affordable renewable energy, are available right now. If supported by governments, these could be implemented widely and cost-effectively. **But we cannot delay—we must act urgently.**

## Speak to a person's values

Health is a universal value. Everyone can relate to health. Research shows people across the political spectrum will talk about climate change if something they care about or love is under threat from climate change.<sup>19</sup> So, taking climate action to mitigate negative health outcomes and promote positive health outcomes will engage people across the whole of society.

Values influence immediate behaviours, including what we eat, how much we walk or cycle, how we use electricity, how much we recycle—as well as our broader behaviours and attitudes, like concern about environmental damage, whether we volunteer to help others, our purchasing decisions and our ecological footprint.<sup>20</sup> Look for the core beliefs and values that unite us.

Facts from a trusted messenger that also align with a person's values can be powerful motivators for change.<sup>21</sup>

**Tip:** People make decisions about their behaviour partly based on the actions they see from others they respect and trust. So if you have chosen to get rid of the car and cycle rather than drive, this will matter to the people who know you and feel like they share your values. Talking about your actions can move the person you are talking to closer to a position where they want to do something themselves.

Research shows that people need a sense of efficacy in order to take action—a belief that they can personally do something, and that the thing they will do will be effective. In presenting your own actions, you can emphasise that they are doable and realistic.



When climate change is framed as a health issue, rather than purely as an environmental, economic, or technological challenge, it becomes clear that we are facing a predicament that strikes at the heart of humanity. **Health puts a human face on what can sometimes seem to be a distant threat.**<sup>22</sup>

19 Wang, S., Corner, A., and Nicholls, J. (2020). Britain Talks Climate: A toolkit for engaging the British public on climate change. Oxford: Climate Outreach.

20 A Guide to Values and Frames for Campaigners. (n.d.). [online] Available at: [http://www.commoncause.com.au/uploads/1/2/9/4/12943361/common\\_cause\\_handbook.pdf](http://www.commoncause.com.au/uploads/1/2/9/4/12943361/common_cause_handbook.pdf)

21 World Health Organization, WHO Strategic Communications, Framework for effective communications, n.d., [online] Available at: <https://www.who.int/mediacentre/communication-framework.pdf>

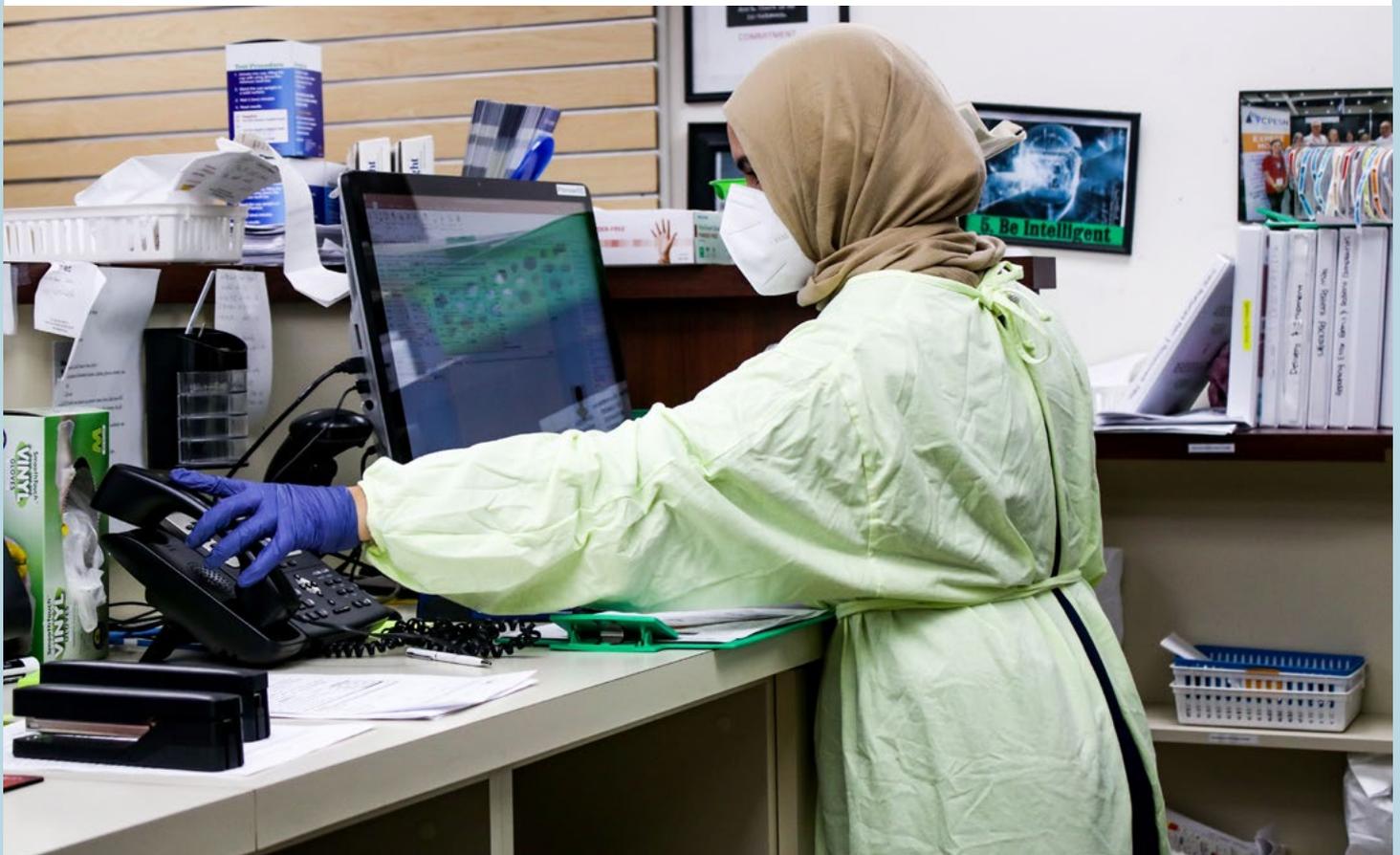
22 Wang, Helena & Horton, Richard. (2015). Tackling climate change: The greatest opportunity for global health. Lancet (London, England). 386. 10.1016/S0140-6736(15)60931-X.

## Promote behaviour change in patients and clients

As a health expert addressing climate change, your role is to promote and support health-promoting behaviour change. Research<sup>23</sup> identifies three key steps for effective behaviour change:

1. **Exploration.** Ask questions of your patients or clients. An open discussion in a spirit of trust and shared learning will help you identify a specific behaviour to prioritise. What is most important to them? Ask open questions to get the conversation rolling, rather than questions which might only produce a 'yes' or 'no' answer. Open questions invite a person to share their thoughts about their behaviour and choices and help them connect with the issue on their own terms.
2. **Application.** Climate change is a complex problem. Consider what behaviour change would be available for this person to make in impact. Explore the likelihood of that action being adopted.
3. **Feedback.** Follow up by assessing:
  - Was the action adopted?
  - Were there any barriers you can address?
  - If the action was adopted, consider suggesting another action. If it was not, understand why and consider an easier action.

23 The Method. A tried and tested approach to behaviour change, Working model by BehaviourWorks Australia. Version 1, 2017. Available at [behaviourworksaustralia.org](http://behaviourworksaustralia.org)



# Where to talk about climate change

These examples show where and how health professionals can connect climate change to health impacts in order to encourage behaviour change.

Setting	Communication opportunity	Example
During interactions with patients and clients	Discuss climate change impacts on health where related health issues present—or may risk patient health	“As the planet warms, we are at greater risk of heat-related stress and illness. We need to take steps to ensure your health is protected, and we need to support actions to reduce global warming to reduce this threat in the future”
Waiting and consulting rooms	If you work in a public facing practice, consider communications materials such as pamphlets in your waiting room and posters in your office	Pamphlets titled ‘Climate change is impacting our health’ which clearly communicate impacts, and strategies to mitigate and adapt.
Workplace or institution	The health sector is responsible for 7% of all Australia’s emissions.  Establish a culture of climate friendly practices and behaviours in your workplace.	Advocate for your institution to buy renewable energy, reduce energy use through energy efficiency measures and recycling  Advocate for or set up a bike storage area and encourage riding bikes to work. Set up a riding group and encourage others to use active or public transport
Website	Add information to your website about climate change and its impacts on human health	Create a page on ‘Climate change is a health emergency’. You can list peak health bodies who stand behind this statement, and your commitment to working with government agencies and other organisations to tackle it

## Getting the message out further

You may not be able to do all of these, but there may be an action below that fits in with your existing activities or inspires you to begin building your public profile.

Setting	Communication opportunity	Example
Local media, like newspapers, television and radio	<p>You can write op eds or guest columns, and offer interviews to instigate conversation and respond to local climate and health-related issues.</p> <p>Local newspapers and media remain at the core of communities, often feeding into broader community discussion and other media. The climate change and health story, especially when localised, has considerable potential to interest local news outlets and reach large segments of the local community.</p> <p>Link conversations to the health effects of recent or local health risks of extreme weather - and the local and global benefits for health from climate action.</p>	<p>Start a conversation around:</p> <ul style="list-style-type: none"> <li>- Concerns about the risks to your community of extreme heat through climate change</li> <li>- The incidence of energy poverty in the community, and the benefits of community renewable energy bulk buying</li> <li>- The health risks from air pollution and the need to move to cleaner energy sources for electricity and transport</li> <li>- The need to retrofit local housing for variable climate and invite local environmental advisers to suggest simple, affordable approaches to better insulating homes</li> </ul>
Community engagement and action	<p>Partner with others in your community to draw attention to the health impacts related to climate change</p> <p>Sponsor face-to-face or web-based opportunities for the public, experts and stakeholders to discuss, plan, and learn about the risks and responses to climate change</p>	<p>You can:</p> <ul style="list-style-type: none"> <li>- Form or join a local climate action group and organise local events under this banner</li> <li>- Start a petition to increase green spaces and tree shade around local parks, schools, public sport and health facilities</li> </ul>
Institutional or public forums	<p>Use your workplace or professional forums to educate others in the sector about climate change and health.</p>	<p>You can:</p> <ul style="list-style-type: none"> <li>- Organise presentations on climate change and health with expert speakers, or webinars for your professional association</li> <li>- Arrange a presentation to your team or department, or speak at a conference on the topic</li> </ul>

Local, state or federal governments	<p>Speak at local council meetings and dedicated public hearings on relevant projects (like transport projects, housing projects, etc), presenting a public health approach to climate change.</p> <p>Meet with your MP and make known your concern as a health professional, and ask them to commit to taking action to respond.</p>	<p>Work with a local group or your professional association to write a position statement calling on local, state and federal governments to take urgent action on climate change; and call on them to implement a National Strategy on Climate, Health and Wellbeing</p>
Social media and online blogs	<p>Develop your reputation as a health practitioner who cares about climate impacts on local health. Develop a Twitter profile and following by sharing the latest research and information about climate change and health.</p>	<p>Share links to latest research on climate change and health, including examples of where countries and cities and institutions are taking action to showcase pathways to action</p>
Clinicians, colleagues and professional circles	<p>Join other health professionals and share information to strengthen the knowledge base within your own organisation and amongst your peers.</p>	<p>Ask your workplace, professional association or union to sign up to campaigns supporting action on climate for health. If you need assistance to do this, get in touch at <a href="mailto:office@caha.org.au">office@caha.org.au</a></p>
Join climate and health organisations	<p>Support campaigns and initiatives of organisations working in this space</p>	<p>Supporting organisations and initiatives already working on climate and health issues can help you amplify your personal impact. Sign up as a member, or become a regular donor to support their work</p>

# This work will make a difference

## Public health campaigns in Australia have led to significant behaviour and policy change

Climate change is a complex issue that requires unprecedented and dedicated action from all members of society to influence policy and behaviour change. However, health professionals can play an important role in shifting behaviour around public health issues, as these examples show:

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**Compulsory seat belts save lives.** Despite extensive evidence of the benefits of wearing seat belts, many people continued not to. But a public health campaign in favour of mandatory legislation was extraordinarily successful. It brought together the powerful medical associations in alliance with other major lobby groups such as the motor vehicle organisations, and was championed by politicians. The strategic use of government inquiries and standing committees was also important, as were intensive media campaigns. This shifted public opinion and by the early 1970s it was mandatory to wear seat belts in most states.<sup>24</sup> This law has been credited with saving countless lives in crashes.

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**Reduced incidence of skin cancer in young adults.** Australians demonstrate the highest rates of UVR-damage related cancers in the world. The first major move to prevent sun-related skin cancers was the Slip! Slop! Slap! campaign in the 1970s and '80s. This evolved into the SunSmart campaign, which in turn was followed by a major Australian government campaign from 2006 to 2010. In addition to direct messaging of the community through advertising and more recently through social media, public health messages are targeted at schools, workplaces, the fashion industry, the television and movie industries and the surf lifesaving community, among many others. Clear reductions in melanoma incidence rates are demonstrated in the Under 40's age group who grew up in the Slip! Slop! Slap! Era, (though in the 60+ group, they continue to climb).

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**Fewer gun deaths.** The Public Health Association of Australia (PHAA) took an active role in gun control following the time of the Port Arthur massacre. The National Firearms Agreement (NFA) of 1996 strictly limited gun ownership and trade in Australia. In striking contrast to many other developed nations, Australia has significantly reduced incidence of mass shootings since 1996. Firearm homicide dropped substantially following the massacre, for a cumulative two-year drop in firearm homicide of 46%.<sup>25</sup>

24 Transport Accident Commission, "Media Release: 40 years of seatbelts saving lives in Victoria," 3 August, 2010, <https://www.tac.vic.gov.au/about-the-tac/media-room/news-and-events/2010-media-releases/40-years-of-seatbelts-saving-lives-in-victoria#:~:text=Wearing%20a%20seatbelt%20became%20mandatory,drop%20of%2013%20per%20cent>.

25 David Hemenway and Mary Vriniotis, "The Australian Gun Buyback" BULLETins, Spring, 4 (2011).

## The times are changing

The good news is that right now, climate action is picking up speed. We have an extraordinary opportunity to improve human health by taking strong action on climate. While this may seem an overwhelming challenge, there are many sectors and jurisdictions globally who are already taking strong action and contributing to solutions, including:



**The UK's National Health Service has committed to reaching net zero emissions by 2040**



China has announced it will strengthen its 2030 climate target (NDC) and aim to achieve carbon neutrality before 2060



BHP pledged to keep emissions at or below 2017 levels by 2022 and to reach net-zero emissions by 2050. It has also announced a US\$400m climate investment fund



Nine of the 20 biggest banks in Australia now have targets of net-zero emissions for operations before 2050<sup>27</sup>



The global movement for fossil fuel divestment reached \$11 trillion in September 2019<sup>26</sup>



Sweden, France, Denmark, the UK, New Zealand and Japan are just a few of many countries to set legally binding net zero emissions targets



Woolworths

Woolworths has pledged to cut emissions produced by its network by 63% by 2030



**The Tasmanian Government has announced they will double their renewable generation to a global-leading target of 200% of current needs by 2040.**

<sup>26</sup> Yossi Cadan, Ahmed Mokgopo, and Clara Vondrich, "\$11 Trillion and Counting," 2019, [https://631nj1ki9k11gbkx39b3qpz-wpengine.netdna-ssl.com/divestment/wp-content/uploads/sites/52/2019/09/FF\\_11Trillion-WEB.pdf](https://631nj1ki9k11gbkx39b3qpz-wpengine.netdna-ssl.com/divestment/wp-content/uploads/sites/52/2019/09/FF_11Trillion-WEB.pdf)

<sup>27</sup> Richard Proudlove, Coral Bravo, and Amandine Denis-Ryan, "Net zero momentum tracker - banking sector report," 2019, <https://www.climateworksaustralia.org/resource/net-zero-momentum-tracker-banking-sector-report/>

# Summary

- **Climate change is a health emergency. As a health professional, your voice counts.**
- **Australia's health care professionals are highly trusted, credible experts on public health.**
- **There is a clear, tangible relationship between our health and wellbeing and the increasing impacts of climate change.**
- **Healthcare professionals are trusted and effective voices for health-motivated behaviour change and are critical to building awareness and action on climate change at individual, societal and policy levels in Australia.**
- **Australia's biggest health organisations are taking a stand and calling for climate action to protect our health and wellbeing. Health professionals are increasingly advising on policy and fronting the media to present the health effects of climate change.**
- **There are many opportunities for health professionals and organisations to get involved in climate action to protect health.**
- **We have an urgent imperative to act: As health professionals, you have a unique opportunity to speak truth about climate change using health evidence and a values-focused health lens.**

## Resource 1

# How you can act on climate change

If you want to take action on climate change in your personal life, at work or in your community, here are some ideas of how to get started.

For more information on climate action, head to [www.caha.org.au/act](http://www.caha.org.au/act)

### In your personal life

- **Learn about how climate change affects health.** There are many excellent evidence-based resources for learning about climate change and its health impacts. For a list of regularly updated resources, head to [www.caha.org.au/educate\\_yourself](http://www.caha.org.au/educate_yourself)
- **Reduce your carbon footprint.** You can reduce your personal impact through everyday choices, such as reducing your meat consumption, using more active or public transport, reducing household energy consumption and more. For more information, head to [caha.org.au/reduce\\_your\\_carbon\\_footprint](http://caha.org.au/reduce_your_carbon_footprint)
- **Divest your money.** Many Australian banks and superfunds invest in fossil fuel projects - move your money into ones that don't. Find out how at [www.caha.org.au/divest\\_your\\_money](http://www.caha.org.au/divest_your_money)
- **Use your vote.** You can vote for political parties that strongly support policies that will protect our health by addressing climate change, such as:
  - Establishing a carbon price
  - Phasing out burning of fossil fuels
  - Strengthening regulation of air quality
  - Protecting forests and other ecosystems
  - Investing in environmentally sustainable, climate resilient healthcare

### At work

- **Speak to your patients and clients.** You are uniquely powerful in communicating the health impacts of climate change to your patients—and this guide should help you do just that. For specific examples on bringing up climate change in a clinical setting, head to [www.caha.org.au/speak\\_to\\_your\\_patients\\_clients](http://www.caha.org.au/speak_to_your_patients_clients)
- **Speak to the media.** Health professionals are the most trusted source of information on the health impacts of climate change. By participating in interviews, writing op eds and more, you can get this important issue on the public agenda. Email [office@caha.org.au](mailto:office@caha.org.au) to find out how we can support you to engage with the media.

- **Sign up to a sustainable healthcare program.** Lobby your workplace to join the Global Green and Healthy Hospital network - a free collaborative network of health organisations who are reducing their environmental impacts for a healthy future for people and the planet. Email [gghh@caha.org.au](mailto:gghh@caha.org.au) if you'd like support, have questions, or have found that your workplace is a member and you'd like to connect with the network.

## **In your community**

- **Engage with your local MP.** Build a meaningful relationship with your local MP to advocate for local climate action and sustainability. You can call, email, write, and meet with your MP to have your voice heard and hold them accountable on their climate action strategies. You can start by asking your MP to support a National Framework on Climate, Health and Well-being: [bit.ly/3aa2F5E](https://bit.ly/3aa2F5E)
- **Volunteer your time.** Become a member of a local climate action group or environmental sustainability group.
- **Talk to your friends and family.** Most Australians care about climate change, but they can feel isolated in their concern because many of us tend not to talk about the issue. Personal conversations can bring family and friends a long way in thinking and acting on climate.
- **Speak to your community.** Take the opportunity to speak to community groups about climate change and health. Ask CAHA for a set of slides you can adapt for your own talks. Join our Facebook group to connect with others, share ideas, and ask questions: [fb.com/groups/climatehealthchamps](https://fb.com/groups/climatehealthchamps)

# Climate change impacts and health effects

This chart outlines a range of climate change impacts and their health effects.

Impact	Health effect
<p><b>Extreme heat</b></p>	<p>Heatwaves have caused more deaths in Australia over the past 100 years than any other natural event.</p> <p>Exposure to prolonged high temperatures leads to higher rates of heat-related illnesses, such as dehydration, heat exhaustion, heatstroke, and worsening of existing health conditions, such as heart and kidney stones and kidney disease, and potentially death.</p> <p>Climate change is predicted to lead to a five-fold increase in the cost of public health through higher temperatures increasing the risk of heatstroke, dehydration and respiratory problems, as well as causing direct injuries and displacement from extreme weather, mental health issues due to disruption and loss, and the spread of disease and illness. The health damages alone are estimated to reach almost US\$10 trillion (A\$14.5 trillion) a year by 2050.<sup>28</sup></p> <p>Australia’s housing stock has very poor thermal quality—public housing in particular—which fails to provide adequate and safe conditions for occupants, particularly posing an increasing risk to health as average temperatures increase and we experience more frequent and extreme weather events become more frequent.<sup>29</sup></p>
<p><b>Cyclones and damaging winds</b></p> <p>Cyclones may become more intense in some areas due to climate change</p>	<p>Cyclones may cause injuries, drowning, deaths and damage to essential infrastructure. Outbreaks of diarrhoeal diseases, acute respiratory infections and wound infections may occur in the aftermath, and disruptions to routine medical care can lead to worsening of pre-existing health conditions. Other health impacts include: mental health impacts such as depression and PTSD, population displacement and homelessness.</p> <p>Severe tropical Cyclone Yasi, the largest cyclone to cross the Australian coast, hit North Queensland in February 2011 and led to a record number of presentations to the Townsville Hospital Emergency Department. It prompted the evacuation of the Cairns Base Hospital, with 356 patients, staff and relatives transferred by air to Brisbane.</p>

28 HSBC, “Future cities: global warming and the risks to health,” 2019, <https://www.gbm.hsbc.com/insights/global-research/global-warming-urban-health-risks>.

29 Sustainability Victoria, “Linking Climate Change and Health Impacts,” 2020, <https://www.sustainability.vic.gov.au/About-us/Research/Health-and-Climate-Change-Research>.

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## **Air pollution**

Burning of fossil fuels releases dangerous air pollutants, like particulate matter, sulphur dioxide, nitrogen oxides, mercury, cadmium and arsenic.

Air pollution contributes to increased chronic obstructive pulmonary disease (COPD) and other respiratory diseases including asthma.

Air pollution from coal mining, production and combustion contributes to lung cancer, other lung disease, heart disease and stroke.

Urban smog contains air pollutants such as ground-level ozone. Ozone levels increase on hot sunny days, with models predicting increases with climate change. Ozone irritates airways and aggravates conditions like asthma.

The health impact of air pollution from the burning of coal in Australia is estimated to be approximately \$2.6 billion per year.<sup>30</sup>

The health costs of air pollution from all sources (from coal-fired power stations, vehicles, wood smoke) is estimated to cost Australia \$16 billion per annum.<sup>31</sup>

Air pollution from fossil fuel sources is estimated to cause 5700 deaths in Australia annually, or about 4% of all deaths each year.<sup>32</sup>

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## **Extreme rainfall, floods, storm surges**

The risk of severe flooding is expected to increase in many parts of Australia, due to an increase in the frequency and intensity of heavy rainfall episodes and sea level rise.

Floods may cause drowning, body injury, hypothermia, and longer-term mental health impacts. In addition, flooding may cause damage to infrastructure such as sewerage and drinking water supply systems. Fresh water supplies may be limited, and contaminated flood waters may spread harmful bacteria and viruses, leading to an increased risk of diarrhoeal disease. After a flood, stagnant water provides a potential breeding ground for mosquitoes that may transmit diseases, while damp conditions promote mould growth which may aggravate asthma and other allergic diseases.

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## **Drought**

Droughts can cause disruptions in food supply, changing patterns of crops, pests, and weed species, water shortages, malnutrition, food and water-borne disease, influence the emergence of new vector-borne and zoonotic disease, and long term mental health impacts, including suicide.

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30 Sustainability Victoria, "Linking Climate Change and Health Impacts" 2020, <https://www.sustainability.vic.gov.au/About-us/Research/Health-and-Climate-Change-Research>.

31 Clare Walter and Maxwell Smith, "Expert Position Statement on health-based standards for Australian regulated thresholds of nitrogen dioxide, sulfur dioxide and ozone in ambient air," [https://d3n8a8pro7vhm.cloudfront.net/caha/pages/36/attachments/original/1566475401/NOXSO2O3\\_Expert\\_Position\\_Statement\\_FINAL.pdf?1566475401](https://d3n8a8pro7vhm.cloudfront.net/caha/pages/36/attachments/original/1566475401/NOXSO2O3_Expert_Position_Statement_FINAL.pdf?1566475401)

32 Vohra, Karn, Alina Vodonos, Joel Schwartz, Eloise A. Marais, Melissa P. Sulprizio, and Loretta J. Mickley. "Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem." *Environmental Research* (2021): 110754.

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## Bushfires

The frequency of extreme fire weather has increased since the 1970s, particularly in southeast Australia, and the duration of the bushfire season has increased. The risk of bushfires is expected to continue to increase with climate change, particularly in southern and eastern parts of Australia.

Burns, injuries and death may result directly from bushfire exposure, while dehydration and heat exhaustion are particular risks for firefighters. Smoke inhalation can damage the lungs and airways. Smoke may also be carried hundreds or thousands of kilometres away from the bushfire zone, affecting the health of communities across vast areas.

Bushfires also damage and destroy homes, infrastructure and services; health care services may be severely affected, for example due to damage to hospitals and medical centres. Long-term mental health impacts on survivors of bushfires and emergency services personnel can be significant.

In Victoria in 2009, the Black Saturday bushfires resulted in 173 deaths, and 414 people presented to public hospital emergency departments in the first 72 hours after the fires.

The 2019-20 bushfires caused 33 direct deaths in southeastern Australia and an estimated additional 417 excess deaths. There were 1305 asthma emergency department presentations, and 3151 hospital admissions for cardiovascular and respiratory conditions through smoke exposure alone.<sup>33</sup>

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## Pollen count

Warmer temperatures and increasing levels of carbon dioxide in the atmosphere can increase the production, potency and release of allergens such as pollens and spores, aggravating allergic diseases, like asthma. Asthma and other allergic diseases have a major impact on physical health and quality of life, affecting work, school, social activities and psychological health. Approximately 1 in 5 Australians has an allergic disease and 1 in 10 suffers from asthma.

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## Rising average temperatures

Increasing temperatures and changing rainfall patterns are expected to change the patterns of mosquito-borne diseases, like Dengue fever and Ross River virus.

Increasing temperatures may also increase the risk of foodborne infections such as bacterial gastroenteritis, due to increased growth of pathogens including Salmonella, Campylobacter and E. coli.

Research suggests the number of deaths attributable to heat in Australia is at least 50 times higher than records suggest. Over 11 years, 340 deaths in Australia were recorded as due to excessive heat, but further analysis of medical records found 36,765 deaths were actually attributable to heat.<sup>34</sup>

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33 Arriagada, N. Borchers, Andrew J. Palmer, D. M. Bowman, Geoffrey G. Morgan, Bin B. Jalaludin, and Fay H. Johnston. "Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia." *Med. J. Aust*(2020).

34 Micheal Weaver, "Researchers say death by climate change "substantially underreported," 7 June 2020, <https://aboutregional.com.au/researchers-say-death-by-climate-change-substantially-underreported/>

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## Food security

Climate change is emerging as a key threat to global and national food security in the coming decades. Greater variability in rainfall, prolonged droughts and a greater incidence of extreme weather events are expected. In Australia, climate change has the potential to disrupt agricultural production and adversely affect our ability to produce nutritious and affordable food.

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## Biodiversity and habitat loss

Biodiversity supports human and societal needs, including food and nutrition security, energy, development of medicines and pharmaceuticals and freshwater, which together underpin good health. It also supports economic opportunities, and leisure activities that contribute to overall wellbeing.

Land use change, pollution, poor water quality, chemical and waste contamination, climate change and other causes of ecosystem degradation all contribute to biodiversity loss and can pose considerable threats to human health.

Human health and well-being are influenced by the health of local plant and animal communities, and the integrity of the local ecosystems that they form.

Unprecedented biodiversity loss, driven significantly by climate change,<sup>35</sup> is increasing the risk of disease transmission from animals to humans, and air pollution is facilitating transport of these pathogens across large distances.<sup>36</sup>

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## Health Services

Health leaders and experts agree that governments are not doing enough to tackle climate change, and they want to see a more coordinated approach to climate and health policy<sup>37</sup>

Emergency services are under pressure: for example, Ambulance Victoria had a 97% rise in call-out numbers for cardiac cases during the 2014 heatwave.<sup>38</sup>

Australia has one of the world's best health systems, but our health services remain highly vulnerable to climate and weather extremes. Very few health services have conducted a climate risk assessment, despite the fact climate change will damage healthcare infrastructure, disrupt service provision and continuity, negatively impact the workforce, and drive up healthcare costs.<sup>39</sup>

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35 United Nations, "Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'," 2019, <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>

36 Chen, Pei-Shih, Feng Ta Tsai, Chien Kun Lin, Chun-Yuh Yang, Chang-Chuan Chan, Chea-Yuan Young, and Chien-Hung Lee. "Ambient influenza and avian influenza virus during dust storm days and background days." *Environmental health perspectives* 118, no. 9 (2010): 1211-1216.

37 CAHA survey, 2017

38 State Government of Victoria, "The health impacts of the January 2014 heatwave in Victoria," 2014, <https://www2.health.vic.gov.au/about/publications/researchandreports/health-impacts-january-2014-heatwave>

39 Armstrong F, Cooke, S, Rissik, D, and Tonmoy, F. Human Health and Wellbeing Climate Adaptation Plan for Queensland, State of Qld, 2018. Available at: [https://www.qld.gov.au/\\_data/assets/pdf\\_file/0022/64237/h-cap-qld.pdf](https://www.qld.gov.au/_data/assets/pdf_file/0022/64237/h-cap-qld.pdf)

## Resource 3

# Further information and links

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Join over 98% of health stakeholders surveyed by the Climate and Health Alliance in the campaign for a national strategy on climate, health and wellbeing at [www.ourclimate-ourhealth.org.au](http://www.ourclimate-ourhealth.org.au)

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Track global progress on health and climate change via Lancet Countdown at [www.lancetcountdown.org](http://www.lancetcountdown.org)

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Learn about the work of Health Care Without Harm [www.hcwh.org/hcwh-content-tags/australia](http://www.hcwh.org/hcwh-content-tags/australia)

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Support your health service or institution to join the Global Green and Healthy Hospitals network, coordinated in Australia and New Zealand by Climate and Health Alliance (it's free!), at [www.greenhospitals.net](http://www.greenhospitals.net)

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Access facts sheets and health data around climate change through the World Health Organisation at [www.who.int/health-topics/climate-change#tab=tab\\_1](http://www.who.int/health-topics/climate-change#tab=tab_1)

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Join the Climate and Health Alliance in Australia, working for climate action to protect our health at [www.caha.org.au/join](http://www.caha.org.au/join)

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TIP: Health professionals can support policy makers by raising awareness of the health co-benefits of climate policies. A useful resource is a Lancet report that showed properly chosen actions to combat climate change can lead to improvements in health, accessible here: [www.thelancet.com/pb/assets/raw/Lancet/stories/series/health-and-climate-change.pdf](http://www.thelancet.com/pb/assets/raw/Lancet/stories/series/health-and-climate-change.pdf)

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**Continue the conversation at [caha.org.au](http://caha.org.au)**



**CLIMATE  
AND  
HEALTH  
ALLIANCE**