



### **Climate change is harming our health in Australia, and poses a significant threat for the future.**

Our health, and the health of our families and communities is the foundation for our way of life, our society and our economy.

Health is one of the top priorities for Australians. Every year we collectively invest more and more in our health, and in 2008–09 this reached \$112.8 billion.

Our health depends on the natural environment for our basic requirements: safe water, clean air, sufficient food, tolerable temperatures and protection from the elements.

Over many decades thousands of scientists have painted an unambiguous picture: the global climate is changing and humanity is almost surely the primary cause. In the last 50 years, Earth's surface has heated rapidly in response to rising levels of greenhouse gases (especially carbon dioxide) created from the burning of fossil fuels and deforestation.

Global temperature will continue to rise. How hot Earth becomes will depend on the additional build-up of greenhouse gases in the atmosphere from now onwards.

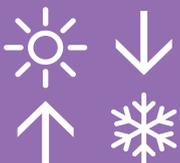
A changing climate is already putting pressure on the natural, economic and social systems that sustain good health. Climate change will lead to more injuries, disease and deaths in decades to come. Sustained action by Australia and other nations to reduce greenhouse gas emissions can help prevent the worst impacts.

CLIMATE CHANGE IS ONE OF THE MOST SERIOUS THREATS TO AUSTRALIANS' HEALTH, ESPECIALLY FOR THOSE IN OUR COMMUNITY WHO ARE ALREADY MOST VULNERABLE.

Few Australians are aware of the risks to their health or the health of their family and community. Much of the public and policy discussion on climate change has emphasised the environmental impacts. However, impacts on human health are also very important.

CLIMATE CHANGE MUST BE CONSIDERED A HEALTH PRIORITY.

The risks to human health from climate change include: injuries and fatalities related to heatwaves and other severe weather events; spread of some infectious diseases from rising temperatures and changes in rainfall; water and food contamination from rising temperatures, changes in rainfall patterns and extreme events; exacerbated respiratory allergies from increased allergens (pollens and spores) in the air; exacerbated respiratory and heart diseases in response to increases in some air pollutants; mental health problems in those experiencing physical and economic impacts; and the health consequences of population dislocation as some regions become uninhabitable.



## Climate change is a serious threat to our health and well-being.

Climate change is harming our health in Australia, and poses a significant threat for the future.

### 1. Australia is getting hotter, leading to increased heat-related deaths and disease.

- › Heat is a silent killer and is the leading cause of weather-related deaths in Australia.

VERY HOT DAYS AND HEATWAVES PUT SUBSTANTIAL PRESSURE ON OUR BODIES—LEADING TO LETHARGY, HEATSTROKE, RENAL (KIDNEY) FAILURE, HEART-ATTACKS AND EVEN DEATH.

- › As Australia has become hotter there has been an increase in the annual number of extremely hot days and the frequency of severe heatwaves. The number of hot days has doubled in the last five decades, leading to more heat-related deaths and disease.
- › By the end of the century the number of days over 35°C is expected to increase by: 3 times in Melbourne; 4 times in Sydney; 2.5 times in Adelaide; 20 times in Brisbane; 3 times in Hobart and 6 times in Canberra. By the end of the century, the estimated temperature in Perth during one fifth of the year—or two and a half months—will be over 35°C, while in Darwin 10 months of the year will be over 35°C.
- › Climate change is forecast to lead to thousands of premature deaths from heat by mid-century.
- › An increase in the yearly number of dangerously hot days could have significant economic impacts via the loss of physical work capacity and lost work-days.

### Projected number of days over 35°C in Australian capital cities.

**MELBOURNE:**  
**SYDNEY:**  
**BRISBANE:**  
**ADELAIDE:**  
**PERTH:**  
**CANBERRA:**  
**DARWIN:**  
**HOBART:**

2008	2030	2070	2100
9	12	21	27
3.3	4.4	9	14
0.9	1.7	8	21
17	22	34	44
27	35	56	72
5	8	21	32
9	36	221	312
1.4	1.7	2.5	3.4

Source: Modified from CSIRO, cited in Garnaut, 2008.



## 2. More frequent and severe extreme events can seriously harm our health.

A CHANGING CLIMATE LEADS TO CHANGES IN THE FREQUENCY, INTENSITY, GEOGRAPHIC AREA AND DURATION OF EXTREME WEATHER AND CLIMATE EVENTS, AND CAN RESULT IN EVENTS NOT SEEN SINCE RECORDS BEGAN.

- › Extreme weather events such as heatwaves, heavy rainfall, floods, hail storms and bushfires, injure and kill people. They also have longer-term impacts on the spread of infectious disease, the mental health of communities suffering in the aftermath, and on people needing to access compromised health services and infrastructure.

## 3. As the climate changes, infectious diseases will rise.

- › The expected rise in some infectious diseases associated with increasing temperatures, changes in rainfall, and more intense extreme weather events is of serious concern.
- › Dengue fever is currently confined to northern Queensland. As north-eastern Australia becomes hotter and wetter the range of the mosquito that spreads dengue fever is projected to move south. A southward spread could put five to eight million Australians at risk by the end of the century, 10–16 times the population that is currently at risk.
- › As average temperature continues to rise across Australia the incidence of bacterial food-borne diseases will also rise.

CLIMATE CHANGE WILL LEAD TO INCREASES IN CERTAIN TYPES OF AIR POLLUTANTS, AS WELL AS AIR-BORNE ALLERGENS LIKE POLLEN AND MOULD SPORES. THESE HAVE SERIOUS IMPACTS ON RESPIRATORY ILLNESSES, SUCH AS ASTHMA, HAY FEVER AND LUNG CANCER, AND ON HEART DISEASE.

## 4. Climate change poses risks for Australians' mental health.

- › Extreme weather events such as fires, floods and droughts can cause social dislocation and mental health problems, including post-traumatic stress, depression and anxiety.

WITH INCREASED EXTREME WEATHER EVENTS PREDICTED, THE MENTAL HEALTH OF COMMUNITIES AFFECTED BY THOSE EVENTS IS SERIOUSLY AT RISK.

## The more vulnerable members of the community will be hardest hit by climate change-related illness.

- › The more vulnerable members of the community—the elderly, the young, those with chronic illness, those in lower socio-economic groups and Indigenous communities—are especially at risk.
- › More frequent and more extreme bushfires, droughts and floods will increasingly affect physical wellbeing, mental health and incomes of rural Australians.

## Climate change will put increasing pressure on health services and infrastructure.

- › Hot days and heatwaves put substantial pressure on our health systems as demand for ambulance services and hospital treatment dramatically increases.
- › Extreme weather events, especially when they happen in close succession, also place heavy demands on Australia's emergency and health workers.

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## COMPREHENSIVE PLANNING IS NEEDED FOR THE LONGER TERM TO SECURE OUR PUBLIC HEALTH SERVICES AND INFRASTRUCTURE.

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## Prevention is better than cure.

- › The climate has been changing as a result of human activities for a number of decades, and we know it is continuing to change. Consequently, we must prepare for some of the expected impacts on human health that we can no longer prevent. One benefit of knowing what we can expect—for example, hotter temperatures and their likely health impacts—is that we can plan for the changes we need.
- › We still have time to prevent the worst impacts if rapid action is taken to reduce emissions. With decisive domestic and international action to control greenhouse gas emissions we can reduce the extent and severity of the harm Australians will suffer. This is the critical decade for action.
- › An effective response to climate change by the health system is essential to reducing the risk of injuries and illnesses and enhancing public preparedness.

## In addressing climate change we can build a healthier Australia.

- › Reducing greenhouse gas emissions will slow climate change and therefore help limit the risks to human health.
- › Some actions that reduce greenhouse gas emissions also have direct local health benefits. For instance, by:
  - improving the quality of our air through use of cleaner energy sources and more efficient use of energy; and
  - increasing our physical activity by improving the design of our cities and towns so that it is easier and safer to get around on foot, by bike and by public transport.

## Doctors, nurses and other health professionals have an important role to play.

- › Health professionals have an important responsibility in explaining health challenges and ensuring that health services are equipped for those threats.

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## AS TRUSTED MEMBERS OF THE COMMUNITY, HEALTH PROFESSIONALS AND HEALTH ORGANISATIONS HAVE MANY OPPORTUNITIES TO HELP THE PUBLIC AND DECISION MAKERS BETTER UNDERSTAND THE IMPLICATIONS OF CLIMATE CHANGE, INCLUDING THE RISKS TO HUMAN HEALTH AND AUSTRALIA'S HEALTH SERVICES AND INFRASTRUCTURE.

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