

Climate Change & Health



The impacts of climate change pose significant risks to human health globally. Over past decades there been record temperatures, sustained heatwaves across the world, increased bushfires and floods and a growing number of catastrophic weather events across the world resulting in devastating loss of human life. According to some estimates, climate change contributes to 150,000 deaths and 5 million illnesses each year, and the World Health Organization estimates that a quarter of the world's disease burden is due to the contamination of air, water, soil and food.ⁱ The Garnaut Climate Change Review has stated that, 'Climate change will cause, annually, between 205,000 and 335,000 new cases of bacterial gastroenteritis by 2050, or between 239,000 and 870,000 cases by 2100.'ⁱⁱ

According to the British medical journal The Lancet, "Climate Change could be the biggest global health threat of the 21st Century".ⁱⁱⁱ The potential health impacts of climate change in Australia include an increase in heat wave related illnesses, food borne illnesses (such as gastroenteritis), insect borne illnesses (such as malaria, dengue and Ross river virus) and the health impacts of disasters from extreme weather events. These events will impact disproportionately on the elderly and disadvantaged – particularly Indigenous people living in the poorest conditions, enduring the worst health services and housing. This will increase the burden of death and disease and create new demand on our health system and health workforce in the years to come.

The Australian Medical Association has called on the next government to "... take the lead in developing and coordinating a National Strategy for Climate Change and Health so that Australia can respond effectively to the health impacts of climate change, extreme events, and to people's medium- to long-term recovery needs."^{iv}

The Greens are the only party with a policy response to the health impacts of climate change.

The Greens will establish a Climate Change and Human Health Taskforce to:

- Undertake research into the health risks posed to Australia by climate change to 2050;
- Develop a strategic plan to prevent and manage those risks including:
 - The preparedness of hospitals and other health facilities;
 - Training and skill development of the health workforce;
 - Conduct a needs analysis of pharmaceutical supplies and medical devices.

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- Provide detailed recommendations, including costs based on the strategic plan;
- Report bi-annually to Parliament.

Heatwave related deaths

It is predicted that heatwave related deaths will rise from 1,115 per year in Adelaide, Melbourne, Perth and Sydney to 2,300–2,500 by 2020 and 4,300–6,300 per year by 2050^v. Hospitalisation is going to increase due to heat-induced heart attacks, strokes and other health events. In 2009 the heatwave felt across SA, Victoria, Tasmania and parts of NSW claimed more than 400 lives, 374 in Victoria alone – these figures do not include the Black Saturday bushfire victims. The Victoria bushfires ravaged 12 communities, claiming 173 lives and injured more than 500 and is a cruel and devastating example of what can happen. Climate Institute research suggests that the risk of heat-related deaths will be greater in southern Australian cities, because people are not used to fluctuating temperatures nor do they have the adaptation techniques needed to cope and people aged over 65 are most likely to be affected.^{vi}

Mental illness and suicide

The damaging effects of acute weather disasters, such as floods and cyclones, on mental health have been long accepted. The effects of long-term weather disasters, such as drought, have been less researched, yet are emerging as serious threats to people's mental health wellbeing. The Garnaut Review^{vii} identified three key mental health implications of climate change: the direct impact of climate change will affect the prevalence and severity of mental health issues, as well as the existing mental health systems; vulnerable communities will experience disruptions to the social, economic and environmental determinants that promote mental health; the ongoing global threat of climate change may create emotional distress and anxiety about the future.

Infectious diseases

Climate change will influence the range and seasonality of various infectious diseases. Heavier rainfall may affect mosquito breeding and increase rates of Ross River disease and dengue fever, which is predicted to extend southwards on both western and eastern coasts. Dengue

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fever could reach down to Maryborough and Gympie in the east and the Carnarvon in the west. Between December 2008 and March 2009 there were several dengue fever outbreaks in North Queensland, covering the area from Port Douglas to Townsville^{viii}.

Food-borne and water-borne diseases

Warmer temperatures and increased rainfall variability are likely to increase the intensity and frequency of summer-time (salmonella) food-borne and water-borne diseases. Indigenous people will be at greatest risk because of living conditions and poor access to services (diarrhoeal hospital admissions of Aboriginal children in central Australia are predicted to increase 10% by 2050)^{ix}.

Health system issues

We need to develop a health system which will be able to respond to the major effect of climate change on human health as an ongoing problem, not a one-off crisis event. This will be the reality of the future, and our health system must be resourced and re-structured to respond. Any increased burden on health services will exacerbate already existing problems of health workforce issues everywhere (not enough doctors, not enough nurses) but especially in rural and remote areas. The public health system will require a massive injection of funds – private hospitals will not have the capacity or the incentive to respond to this major shift in Australia's health needs.

Health effects in neighbouring countries

Australia will need to develop a capacity to deal with increasing numbers of 'climate change' refugees from neighbouring countries in the Pacific. The health impacts on people in our region will also place demands on our health system and workforce.

For example:

- Decreasing crop yields in Asia as a result of changes in soil moisture, pollinating insect activity and temperature sensitive photosynthesis will produce declines in rice crops. Lower crop production, higher prices will lead to poorer nutrition and health, impacting on child growth and development.

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- Low lying nations in the Pacific are more susceptible to the adverse affects of climate change. The Stern report commissioned by the British government concluded that between 150 million and 200 million people could be displaced by climate change by 2050.^x
- The governments of Tuvalu and Kiribati have approached the Australian and NZ governments to request a plan for the migration of their populations as their homelands become uninhabitable.

Smog, smoke and chemical pollution

The increases in urban air pollution (e.g. ozone), and the interaction of this environmental health hazard with meteorological conditions will have the potential to increase rates of respiratory problems and asthma in cities. Increased exposure to dust in rural areas will also have the same effect, particularly on children.

Impact on agriculture, food sources and nutrition

Changes in crop yields and variability will impact on food sources, food choice and nutrition. For Indigenous communities, there is the additional risk of loss of traditional plant and animal food species.

i <http://www.climate.org/topics/health.html>

ii Garnaut Climate Change Review, The impacts of climate change on three health outcomes, pp.41

iii The Lancet, Volume 373, Issue 9676, Page 1659, 16 May 2009

iv AMA President, Dr Andrew Pesce, speech to The National Press Club, Canberra, 21 July 2010

v IPCC report and Tony McMichael, Director of the National Centre for Epidemiology and Population Health, ANU.

vi 'Climate Change Health Check 2020', Prepared by Dr Graeme Horton, Professor Tony McMichael, Doctors for the Environment, Australia, April 2008

vii Garnaut Climate Change Review, 2008, Rural mental health impacts of climate change, pp.7

viii 'Human Health and Climate Change in Oceania: A Risk Assessment 2002', Prepared by: Anthony McMichael and Rosalie Woodruff, National Centre for Epidemiology and Population Health, Australian National University, Canberra

ix CSIRO (op cit) McMichael, A. J., et al. (2003) Human Health and Climate Change in Oceania: A Risk Assessment. Commonwealth Department of Health and Ageing, 128 pp.

x www.sternreview.org.uk