



## AUSTRALIA

Submission under decision 6/CP.17 | October 2012

Nairobi work programme on impacts, vulnerability and adaptation to climate change | SBSTA

### I. Overview

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This submission contains the views of the Australian Government on potential future areas of work for the Nairobi work programme on impacts, vulnerability and adaptation (NWP), as requested under paragraph 2 of decision 6/CP.17.

Climate change impacts including higher temperatures, sea level rise, extreme weather events and the spread of infectious diseases have human health consequences. The IPCC found that climate change is already contributing to disease and premature death around the world, and that these effects are increasing. Those living in developing countries, particularly Least Developed Countries (LDCs) and Small Island Developing States (SIDS) are disproportionately vulnerable to health problems associated with climate change.

Australia maintains that further work is required to understand the physical and psychological impacts of climate change on individual and community health. In particular, further work could draw on the experience of health sector workers, as a useful resource in understanding and addressing the climate change impacts on health.

This submission therefore recommends further consideration of health and climate change in the NWP. This is in line with the NWP's two key objectives of assisting countries covered by the NWP to improve their understanding and assessment of impacts, vulnerability and adaptation to climate change, and to help them make informed decisions on practical adaptation actions and measures.

### II. Climate change physical effects

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A wide-ranging study of the effects of health and climate change by the Climate Commission,<sup>1</sup> an independent body of cross-sector Australian experts, finds that health risks rise dramatically with increasing temperatures.

Even small changes in our environment can have dramatic effects on the human body. Serious heat stroke and even death can occur after a relatively short time if a person's core body temperature exceeds 42 degrees Celsius. A three-day heatwave at around 43 degrees Celsius in the city of

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<sup>1</sup> Climate Commission 2012, The Critical Decade: Climate change and health  
<http://climatecommission.gov.au/report/the-critical-decade-climate-change-and-health/>



thinkchange

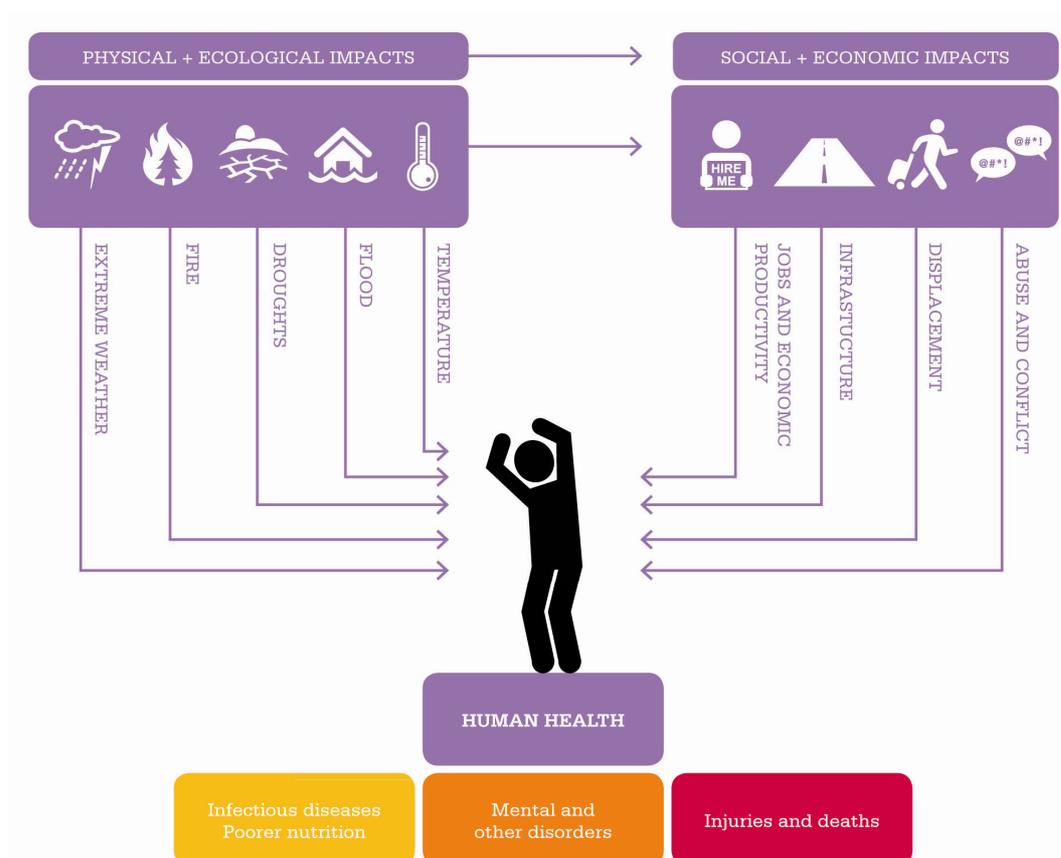
GPO Box 854 Canberra ACT 2601 Tel: 02 6159 7000 [www.climatechange.gov.au](http://www.climatechange.gov.au)

Melbourne in 2009 led to 980 deaths, an estimated 62 percent increase above normal fatality levels. Rising temperatures threaten the health of everybody, while those least able to respond will be the most at risk. These include people with existing illnesses such as kidney and heart-related problems. Old people and children will also bear the brunt of climate change in LDCs.

Climate change affects our health and wellbeing in many ways, through both direct and physical impacts and flow-on social and economic changes (see Figure 1 below). For example, rising temperatures and increasing heatwaves can affect the availability and affordability of foods that contribute to a healthy diet. For example, a severe heatwave in Western Europe in 2003 reduced grain yields by 25 percent in much of France.

Poor rural populations in developing countries reliant on subsistence farming are particularly vulnerable to climate change, as the growth, physical and mental development and, at the extreme, the survival of children are threatened by food shortages.<sup>2</sup> Rising food prices will affect the most socially disadvantaged populations, while financial pressures increase the likelihood of shifts to food with the lowest price per calorie. This can lead to an increased reliance on imported and processed foods, with a resultant rise in obesity and related non-communicable diseases such as hypertension, diabetes and stroke – a problem particularly prevalent in Pacific SIDS.

**Figure 1: The many ways that climate change can affect health**



<sup>2</sup> World Health Organization 2009, Protecting health from climate change: connecting science, policy and people <http://www.who.int/globalchange/publications/reports/9789241598880/en/index.html>

Climate change is likely to 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 people who suffer from respiratory illnesses, such as asthma and hay fever. Through alterations in temperature, rainfall and humidity, climate change is also beginning to increase the occurrence of various infectious diseases around the world – some mosquito-borne, some water-borne and some food-borne.

Urban populations, especially those in tropical megacities (like our recent UNFCCC informal session host city, Bangkok), are highly vulnerable due to the large concentration of people and infrastructure. Urban areas are exposed to a combination of health risks such as heatwaves, floods, infectious diseases and air pollution, while the “urban heat island effect” means that the average annual air temperature of a city with a million people can be 1 to 3 degrees hotter than surrounding areas. A warmer and more variable climate threatens to increase disease transmission and slow or even reverse the global public health community’s progress against infectious and heat-induced diseases. Ultimately, the greatest health impacts may stem from the gradual build-up of pressure on the natural, economic and social systems that sustain health, which are already under stress in much of the developing world.

### **III. Climate change psychological effects**

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Australia’s Climate Commission report has found that rising temperatures are also linked to an increase in mental health problems. Recent reports show that hospital admissions for mental and behavioural disorders in both rural and urban areas of Australia rise once ambient temperatures go above approximately 27 degrees Celsius.

Extreme weather events—including floods, hailstorms, heatwaves, bushfires and dust storms—can have traumatic impacts on individuals and communities, in extreme cases even leading to forced resettlement. Even just the prospect of future climate change and its likely effects exacerbates the feelings of stress for people already living on the margins.

Rural communities that experience downturns or disruptions in production due to changes in climate and environment are widely expected to experience stress, and, for many, depression. A decade of recent experience with drought and reduced farm yields in the southern parts of Australia underscore the risks of community morale, livelihoods, and health. One study of Australia’s most populous state (New South Wales) found that a decrease in annual rainfall by 300mm leads to an increase in the suicide rate by about 8% over the long-term average suicide rate.

### **IV. Linking the health sector with climate change adaptation**

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The effects of climate change on human health are already being felt around the world and are likely to grow worse with time. The risks of climate change can be minimised by adaptation: strengthening the foundations of good health and understanding the changes needed.

Australia maintains that doctors, nurses and emergency service providers can have insight into the ways climate change damages people’s health. They deal directly with the victims of extreme weather events such as cyclones and heatwaves along with the unseasonal and increased spread of disease.

Health sector workers are ideally placed to assist domestic adaptation strategies that encourage the resilience of their nation's health infrastructure and wider society. For instance, their inputs on scoping the health-related aspects of adaptation activities such as water and disaster risk alleviation should be valued highly. They also have a central role to play in ensuring that national health care systems are prepared to deal with an increase of health problems caused by climate change.

The role of health professionals as trusted communicators and respected members of society are especially useful in explaining the effects of climate change to affected individuals and educating the general public. Surveys have shown that they are among those most trusted to provide credible information about climate change. Health sector workers' past effectiveness in raising public awareness and advocating appropriate solutions to public health concerns, such as tobacco smoking, provides a good example of how they could provide adaptation advice to individuals and wider groups.

Australia recommends that the NWP consider further work on health and climate change, including engaging with health sector workers as a useful resource both to raise awareness and to address climate impacts in this area.