

Climate Change in Australia: A national adaptation plan for human health

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Climate Change in Australia

- Australia will experience a climate in the future that will be more variable and more extreme from our recent past
- The Australian Government aims to introduce a Carbon Pollution Reduction Scheme in 2010 to assist with global mitigation of CO₂e_q
- Other mitigation strategies are in development and most States and Territories recognise the need for local reduction strategies
- However, adaptation to inevitable changes is essential



Climate Change in Australia

- A National Climate Change Adaptation Framework, a collaboration of the Australian Government with the States and Territories, has been developed
- This framework identified the range of issues that needed to be addressed and includes:
 - ❖ Agriculture
 - ❖ Infrastructure
 - ❖ Fisheries
 - ❖ Biodiversity
 - ❖ Human Health
 - ❖ Indigenous communities
- A key element of the Framework is development of National Climate Change Research Plans



Climate Change and Health in Aus

- That climate change poses direct and indirect risks to health has been recognised within the National Adaptation Framework.
- Direct risks include:
 - ❖ physical injury from more frequent events such as bushfires and cyclones, and increased heat-related death and disease.
- Indirect risks include:
 - ❖ more infectious diseases transmitted through vectors
 - ❖ mental and physical health difficulties that typically follow social and economic disruption and dislocation through events such as drought



Climate Change and Health: Pathways

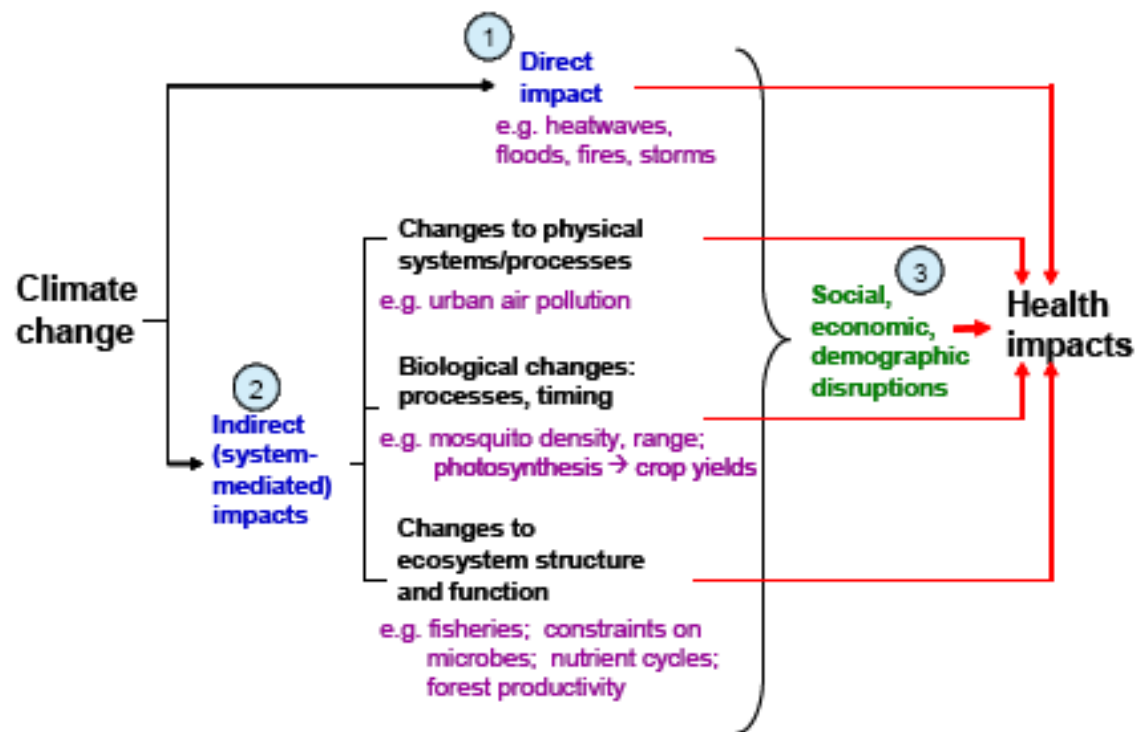


Figure 1: Potential ways in which climate change can impact on human health.



Climate Change and Health: Research

- The National Adaptation Research Plan: Human Health is the first (of 8) to be produced and released
- Is to provide the agenda for health and climate change research for the next 5-7 years
- Implementation of the research plan will contribute to:
 - ❖ an improved understanding of the range of current and anticipated risks to health from climate change,
 - ❖ estimates of the likely resultant burdens of poor health,
 - ❖ an understanding of differential vulnerabilities within the population, and
 - ❖ agreement on the relevant criteria for assigning priorities in the choice of adaptive strategies.



Climate Change and Health: Research

- The Human Health Research Plan identifies key research questions within nine themes of health-related adaptation research:

- ❖ heat,
- ❖ extreme weather events,
- ❖ vector-borne diseases,
- ❖ food, air and water quality,
- ❖ mental health,
- ❖ community and Indigenous health, and
- ❖ health services and infrastructure



Climate Change and Health: Research

- It was important to identify priorities within the nine themes
- The following criteria were used:
 - ❖ Severity of impact/degree of benefit
 - ❖ Immediacy of required intervention/response
 - ❖ Need to change current intervention/practicality of intervention



Research Priority Areas:

- *Heat*

- ❖ Which categories of persons are most vulnerable to short-term extremes of heat?

- Do levels of understanding vary within population sub-groups about the risks and what they can do about them?

- ❖ Are changes needed to public health policy in order to manage heatwave impacts?

- ❖ Do early warning systems for heat waves and other extreme weather events reduce adverse health impacts?

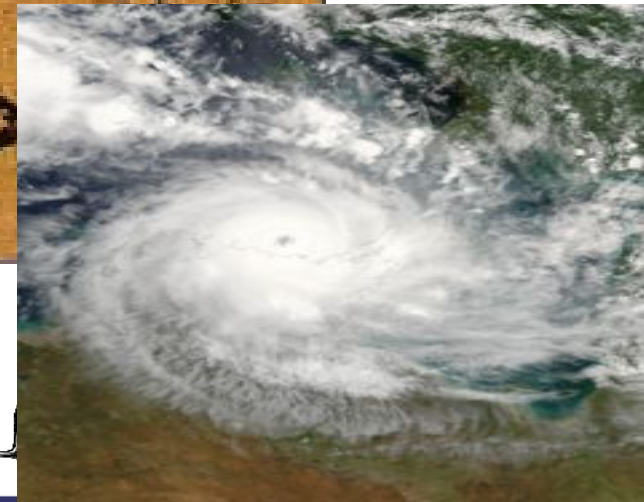


Fire on State Road 11 near Bunnell.

Research Priority Areas

- *Extreme weather events*

- ❖ Cyclones, storms, floods
- ❖ bushfires
- ❖ Drought
- ❖ Heat
 - Does public education about the risks of extreme events, and how to avoid them, alter knowledge and behaviour?



Research Priority Areas

- *Vector-borne diseases*
 - ❖ What are the future increased risks of arbovirus diseases arising from climate change?
 - ❖ How would existing public health systems cope with increased levels of vector-borne disease infections?
 - ❖ Can meteorological forecasts provide useful advance warning of altered risks of vector-borne infectious disease outbreaks?



Research Priority Areas



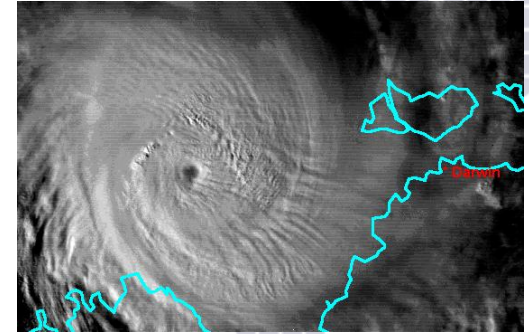
- *Food, air and water quality*
 - ❖ Where will the likely impacts on food safety and quality be observed?
 - ❖ What can be implemented to reduce the risk of food-borne disease outbreaks?
 - ❖ What is the role of water authorities in the management of climate change impacts?



Research Priority Areas

- *Mental health*

- ❖ What interventions are required to minimise the potential adverse mental health effects of natural disasters (such as drought, windstorm and floods)?



Research Priority Areas

- *Community and Indigenous health*
 - ❖ How might climate change and changes in occurrence of extreme events affect aspects of Indigenous culture and living conditions?
 - ❖ Which types of intervention most effectively increase the level of community resilience?
 - ❖ What are the key characteristics of Indigenous, rural and urban communities which determine their resilience to the potential stresses of climate change?



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Research Priority Areas

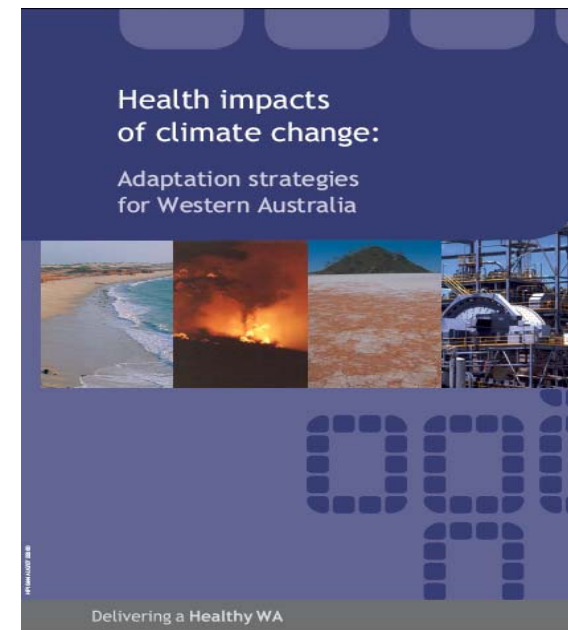
- *Health care system and infrastructure issues*
 - ❖ How can health sector responses be best supported through exchanges between climate change researchers and policy-makers?
 - ❖ What role should the primary health care sector play?
 - ❖ Is the healthcare system adequately structured and staffed to handle increased demands from (a) extreme weather events, and (b) outbreaks of infectious diseases?
 - ❖ What forms of training of healthcare professionals best prepares them to identify and respond to climate-related health impacts?



HIA and Climate Change

- A key element of the National Adaptation Strategy is vulnerability assessments but there is a shortage of appropriate tools
- Health Impact Assessment can be used for health
- WA DOH undertook HIA of climate change in collaboration with the WHO Centre for Environmental and Health Impact Assessment at Curtin University
- The publication is available from:

www.public.health.wa.gov.au



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Requirements for HIA of CC



Environmental changes

- Good local climate predictions
 - ❖ Temperature change (gradual and heat events)
 - ❖ Rainfall
 - ❖ Sea level rise
 - ❖ Extreme events



Requirements for HIA of CC

Health Impacts

- Consider health Impacts associated with:
 - ❖ Extreme Events
 - ❖ Gradual change



Requirements for HIA of CC

- Health impacts considered in relation to:
 - ❖ Direct impacts to humans
 - ❖ Natural environment:
 - water quality, air quality and biodiversity
 - Environmental diseases: production of food, vector-borne and food-borne disease
 - ❖ Built environment access to a range of health, emergency and other services, infrastructure and economics
 - ❖ Social environment social and cultural impacts, population displacement and mental health issues



Requirements for HIA of CC

- Consult across sectors and with communities to ensure scope of impacts appropriate
- Understand key current controls or coping strategies
- Need to consider impacts and coping strategies in context of vulnerability:
 - ❖ People (aged, young children, new migrants, outdoor workers, compromised health status, etc)
 - ❖ Specific regions
 - ❖ Infrastructure



Requirements for HIA of CC

- Undertake Health Risk Assessments for each health impact (or group of impacts)
 - ❖ This may be limited to expert opinion
- Prioritise risks
- Identify opportunities for adaptation
 - ❖ Identify linkages with other sectors



Categories of Adaptation Measures

- Legislative or Regulatory
- Public Education or Communication
- Surveillance and Monitoring
- Ecosystem Intervention
- Infrastructure Development
- Technological/Engineering
- Medical and/or Health Intervention
- Research/ Further Information



Thank you



For further information:

www.public.health.wa.gov.au

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