

Climate Health WA Inquiry

About your submission

Are you responding on behalf of an organisation or group?

No

Yes

If yes, please identify the organisation:

Your contact details

The following information will not be published without your permission but enables the Inquiry to contact you about your submission if required.

First name	Lauren
Surname	Bloomfield
Address	[REDACTED]
Phone	[REDACTED]
Email	[REDACTED]

Publication of submissions

Submissions will be published with the name of the submitter unless otherwise indicated below. Do you consent to be identified in the published submission?

Yes, I / my organisation agree to be identified

No, I / my organisation request to remain anonymous

Terms of Reference

You are encouraged to address at least ONE of the Terms of Reference as listed below. Please select which item/s you will address:

1. Establish current knowledge on the implications of climate change for health in Western Australia (WA) and recommend a framework for evaluating future implications.

2. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will protect the public from the harmful health impacts of climate change.

3. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will strengthen the preparedness and

resilience of communities and health services against extreme weather events, with a focus on the most vulnerable in the community.

- 4. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will reduce the contribution of WA health services to climate change and other detrimental impacts.
- 5. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will enable WA Health services to implement change, including energy efficiency, to a more sustainable model.
- 6. Evaluate the likely benefits (health and wellbeing, social and economic) arising from climate change mitigation strategies, with a focus on WA health services.
- 7. Define the role of the Department of Health in leading public policy on climate change and health.
- 8. Recommend the Terms of Reference, scope and preferred methods for undertaking a climate change vulnerability assessment for the health sector.
- 9. Recommend the Terms of Reference, scope and preferred methods for developing a Climate Change Adaptation Plan for the health sector.

Submissions response field

Please type your response to the item(s) selected above into the field below. Alternatively you may provide your submission as a separate attachment (suggested maximum 5 pages).

Heat wave adaptation (vulnerable people)

We have conducted a number of projects around climate change associated heat wave impacts and adaptation strategies of vulnerable populations of outdoor workers in Africa (Ghana and Zimbabwe). This work informed the development of a PhD project in the city of Victoria Park, Western Australia, where a survey has been conducted assessing temperatures and humidity in older residents homes across a whole summer season. Heat coping and adaptation strategies were explored by interviewing participants and various stages of this project and the research is currently being written up in a series of papers.

Occupational heat stress has been assessed in a number of locations in the resources sector, these include studies to;

- ascertain heat exposures of various occupational groups,
- levels of hydration,
- loss of acclimatisation status by FIFO workers where time at home is in a cool climate,
- ingestion of ice slurry to reduce core body temperature,
- impact of protective clothing (chemical suits) on heat exposure
- heat exposures of firefighters.

Communicable disease control

Submissions response field

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Kerry Staples is developing a mathematical model that will be able to use various environmental inputs to figure out when we can expect a plague of mossies and this will help us kill them more effectively by putting less chemicals into the environment as our treatments will be more targeted to maximise effectiveness.

Impacts of climate change on communicable disease transmission

We are concerned about the impacts of climate change and communicable disease control on two main fronts: the impacts of shift in indices of markers such as heat, humidity and rainfall, and the impacts of extreme weather events.

Increasing global temperatures are expected to impact vector-borne diseases (VBDs) in a number of ways:

- a) range shifts in host or vector distribution that bring these hosts and vectors into contact with new human populations;
- b) changes in the population density of the host or vector that would result in increased or decreased frequency of contact with humans or with other hosts and vectors;
- c) changes in the prevalence of infection by the pathogen in the host or vector population that would increase or decrease the frequency of human (or other host or vector) contact with an infected host or vector; and
- d) changes in pathogen load brought about by changes in rates of pathogen reproduction, replication, or development in hosts or vectors that would affect the likelihood that a human (or other host or vector) contact would result in pathogen transmission".

In a Western Australian context, there is concern about a shift in the geographic range of vectors, and the implications for increased VBDs, (especially an increase in geographical locations in which the vector is active) particularly those spread by mosquitos. Modelling is needed to estimate the impact of changes in various climate markers on range shifts that may lead to an increase in cases of human disease.

Movements in humans and zoonotic reservoirs and/or intermediate hosts also impacts on the transmission patterns of communicable disease. Increased, decreased or otherwise altered contact between human and animal hosts who have migrated due to changing climate will also need modelling and assessing.

In addition, climate change has implications for increasing extreme weather events such as floods, cyclones and droughts, all of which have impacts on communicable disease transmission and outbreaks. Humanitarian crises that result from extreme weather events and displacement of human populations are often epicentres of outbreaks for a number of communicable diseases. Water scarcity encourages behavioural change such as collecting rainwater in open containers, which can serve as breeding grounds for vectors. Disaster

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preparedness and planning efforts centred around the impacts of extreme weather events in various regions of WA should include a focus on communicable disease outbreaks.

Please complete this sheet and submit with any attachments to: Climate Health WA Inquiry