



The Mental Health Impacts of Climate Change

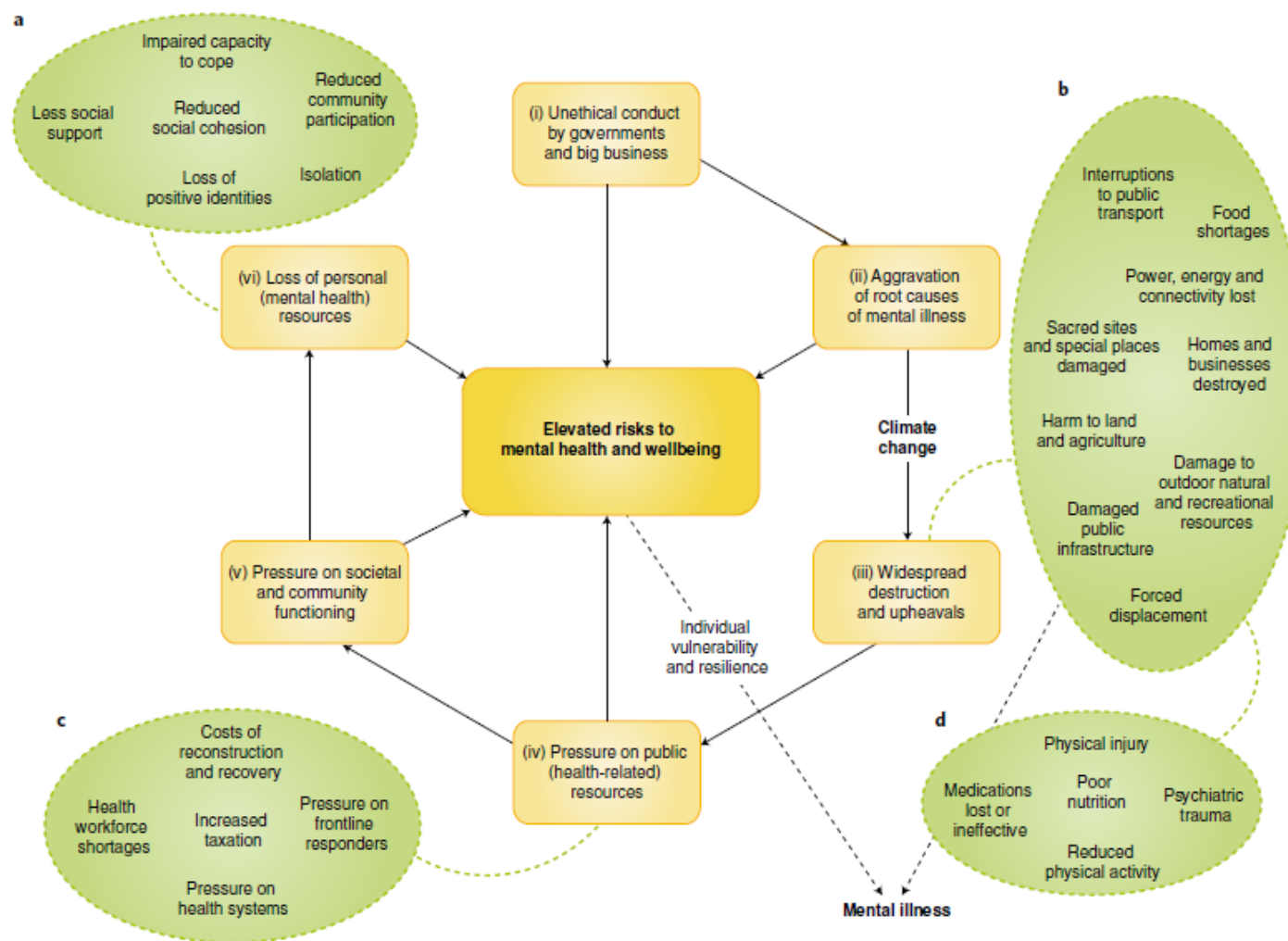
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<https://public-health.uq.edu.au/MHCC-TRN>

Links between mental health and climate change are complex



The impacts of climate change are multi-level

Primary (direct)

- Heat
- Rainfall and humidity
- Fires
- Floods
- Storms

Secondary (indirect)

- Drought
- Sea-level rise
- Land degradation
- Air pollution
- Physical health
- Water and food security

Tertiary (societal)

- Displacement and migration, loss of connection to land
- Health system pressures and reduced access to mental health care
- Reduced economic productivity
- Agricultural losses
- Reduced financial security
- Strain on community cohesion and social capital
- Loss of nature spaces and connection to nature
- Conflict and political instability

Case Study: Heat

- Heat is a particular vulnerability for Australia (IPCC AR6).
- The mental health impacts of heat are very significant and potentially impact many more people than the other direct impacts (such as floods, fires, cyclones, droughts).
- All types of mental health ED presentations go up during extreme hot days
- Increase in self-harm and suicide rates
- Increased psychiatric-related mortality
- Certain psychotropics (including hypnotics, anxiolytics, and antipsychotics) increase the risk of heatstroke and death associated with high temperatures
- Heat increases vulnerability to brain toxicity related to substance abuse



The spectrum of mental health impacts

Subclinical conditions

- Psychological distress

Clinical disorders

- Trauma-related disorders
 - Post-traumatic stress disorder
 - Acute stress disorder
- Depression
- Anxiety
- Self-harm and suicide

Environmental and climate specific constructs

- Climate anxiety
- Solastalgia
- Eco-grief

Exacerbation of pre-existing illness

Psychiatric-related hospitalisations and deaths

Potential neurodevelopmental impacts

Climate-specific constructs

- The term 'climate anxiety' describes how humans perceive, fear, and dread the impacts of climate change.
- Anxiety is considered an adaptive psychological, physiological and behavioural response to a threat. However, anxiety can also become clinically maladaptive and lead to chronic worry, restlessness, irritability, panic, and sleep disturbance
- A new study of 10,000 young people in 10 countries found nearly 60% felt 'very worried' or 'extremely worried'.



Priority populations

- Young people
- Pre-existing mental illness
- Low- and middle-income countries and Small Island Developing States
- Indigenous People
- Farmers



The research gaps are substantial

- Compared with other health areas, social and emotional wellbeing and climate change has received little research attention.
- To date, >80% of research explores the mental health impacts of climate change.
- Poor understanding of which factors increase vulnerability and resilience to the mental health impacts of climate change.
- Very little research related to interventions or policies designed to safeguard mental health in the face of climate change.
- Research on the impacts of climate change on mental health and mental health-related systems will assist decision-makers to develop robust evidence-based mitigation and adaptation policies and plans with the potential for broad benefits to society and the environment.



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Global priorities for climate change and mental health research

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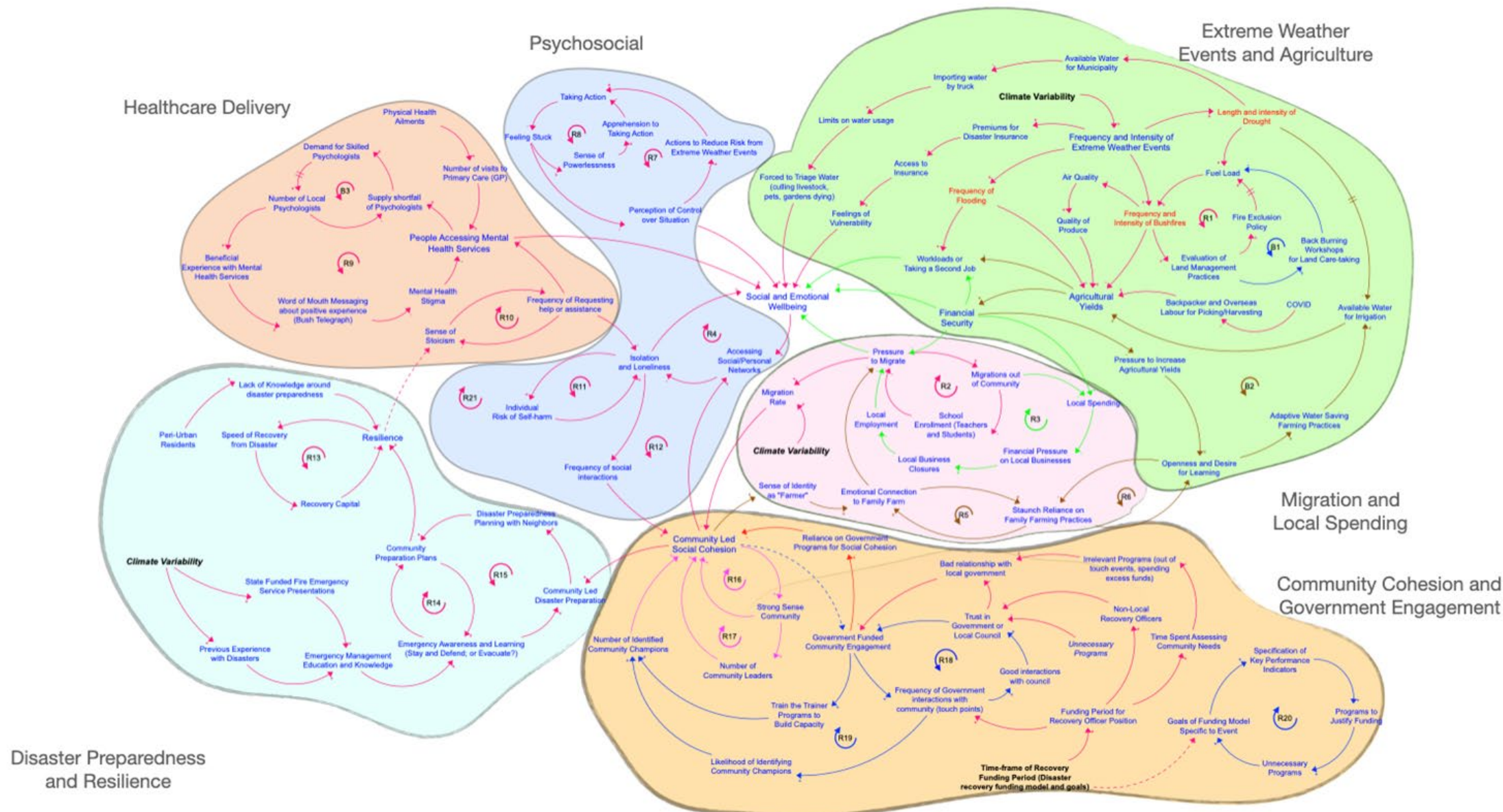
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TEN KEY PRIORITIES: PROGRESSING RESEARCH ON MENTAL HEALTH AND CLIMATE CHANGE

- 01 Understand, characterise and quantify the full range of (past, present and future) mental health outcomes impacted by climate change-related exposures.
- 02 Understand what factors increase vulnerability and resilience to the mental health impacts of climate change.
- 03 Develop appropriate and validated quantitative measures of climate change-related mental health impacts.
- 04 Define and quantify the causal pathways, including modifying and mediating factors, between climate change exposures and mental health outcomes.
- 05 Assess the appropriateness, feasibility, effectiveness, and scalability of mental health and psychosocial interventions (clinical and non-clinical) in the context of climate change.
- 06 Understand how communication around climate change can impact mental health.
- 07 Explore the interaction between engagement in activities that support climate change mitigation and adaptation and mental health outcomes.
- 08 Explore the association between, and potential co-benefits of, climate change mitigation and adaptation practices and mental health outcomes.
- 09 Understand how the evidence-base from mental health research influences decision-making related to climate change.
- 10 Understand and quantify the economic costs of the mental health impacts of climate change.

Jacobson C, Charlson F, Richards R. 2022. Why and how environmental change impacts mental health outcomes in a rural community: using systems modelling to unpack a wicked problem. Manuscript under development.





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Thank you

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