

# Capability Statement

Mental Health in Climate Change Transdisciplinary Research Network





# About us

The University of Queensland's Mental Health in Climate Change Transdisciplinary Research Network (MHCC-TRN) was established in late 2019 to help government agencies, community groups, and other organisations respond to the mental health and wellbeing challenges associated with a changing climate.

Natural disasters such as floods, bushfires, cyclones, storms, prolonged heat, and drought, can cause significant distress for individuals and communities, and subsequently affect their physical and mental health.

There has been little evidence about the burden of a changing climate on mental health. Further transdisciplinary research is required to better guide policymakers, health service planners, and communities in developing and implementing interventions that successfully support affected individuals and communities.

This transdisciplinary Network brings together academics from a range of disciplines across UQ, as well as industry partners, government agencies, and community organisations. Its mission is to understand the challenges faced by those impacted and develop much needed research that will serve as evidence base for interventions, tools, and policies to improve mental health outcomes in communities.

# **Research objectives**

- 1. To understand the experience, distribution and determinants of mental illness/poor social and emotional wellbeing in the age of climate change.
  - Explore, characterise, and quantify the full range of (short-, medium-, and long-term) mental health outcomes and emotional experiences associated with a changing climate, and identify which are most significant for communities
  - Understand how social/political/institutional forces
     shape emotional wellbeing, vulnerability, and resilience
  - Develop an appropriate and validated measure of the social and wellbeing impacts of a changing climate
- 2. To conceptualise the systems underpinning social and emotional wellbeing in the age of climate change.
  - Explore, define, and quantify pathways and mediating factors connecting changing climate exposures and mental health outcomes
  - Qualitatively identify critical points for intervention that can be quantitatively tested
  - Develop a model, which can be iteratively refined, where the most viable points for intervention can be tested prior to implementation and where scenarios can be run to help service planning on the ground
- To develop interventions to harness the political importance of emotional responses to a changing climate, while optimising the social and emotional wellbeing of communities in the age of climate change.
  - Explore existing community and psychosocial interventions for social and emotional wellbeing in the context of changing climate, and critically analyse their inclusivity, feasibility, effectiveness, and benefits
  - · Develop novel interventions where gaps exist
  - Analyse and assess the co-benefits of taking action
- 4. To inductively understand and quantify the benefits of addressing the social, emotional, and mental health harms associated with climate change.
  - Analyse and assess the inclusivity, feasibility, effectiveness, and benefits of existing and novel community and psychosocial interventions for social and emotional wellbeing in the context of a changing climate
  - Explore, understand, and quantify the benefits of intervening to reduce the social and emotional effects, including mental health harms, associated with a changing climate
- 5. To translate knowledge into policy and practice through research with in-built impact to improve social and emotional wellbeing in the age of climate change.
  - Work with key stakeholders to develop researchbased translation strategies that consider optimal mechanisms in context for policy and practice change.
  - Understand how social and emotional wellbeing shapes changing climate decision-making across sectors and evaluate the impacts of decision-making on mental health.



## **Research Projects**

The Network collaborates with key stakeholders from government, industry and academia to co-design research projects that optimise strategies and mechanisms for policies, interventions, and practice change.

We help identify relevant key research areas and develop research questions, leading to opportunities for academic experts and Higher degree by research candidates to conduct academic research. The Network's conduct of research may be required from various academic disciplines' angles, such as public health, health economics, environmental and social sciences, or communications. However, all our projects focus on mental health affected by climate change.

To view examples of past, current, and future projects, visit the <u>https://public-health.uq.edu.au/MHCC-</u> <u>TRN</u> research page on our website. The Network welcomes new research proposals as well as enquiries from government, industry, and interested academic researchers and students.



# Case Study Stanthorpe:

# A System Dynamics Model to better understand mental health

In recent years, substantial funding has been provided to boost the mental health of regional Queenslanders affected by drought and disasters. However, the evidence-base for which activities should be delivered where, and to whom, is lacking. Systems modelling is a promising approach for studying the complex system of environmental change and mental health because it can predict interactions and formulate interventions to achieve desired results. A key strength of system dynamics modelling is the engagement of (diverse) relevant sectors, bringing together collective experiences and expertise to form a combined understanding on all aspects of the system.

Researchers from our network developed a system dynamics model for the community of Stanthorpe, Queensland to assess mental health outcomes associated with environmental disasters linked to climate change. Prolonged drought, running out of drinking water, bushfires, floods, and COVID-19 were some of the numerous natural disasters experienced in rapid succession by the Stanthorpe community.

The system dynamics modelling provides key insight into the key drivers of poor mental health outcomes in residents of the Stanthorpe community who were exposed to drought and disasters. The model also identified intervention points that may lie both inside and external to the health sector.

## **Network Members**



#### Dr Sara Alidoust

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- The benefits of interacting with nature
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# **Steering Committee**



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- Indigenous health
- Climate change and health
- Water, sanitation and hygiene (WASH)
- Sustainable development



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- Solution-focused social science and health
- Health inequalities
- Intervention development and evaluation
- Community participative research
- Salutogenesis and assets-based interventions
- Syndemics

For more information

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