

Enhancing disaster resilience and adaptability

Background

Australia experiences many types of climate-related or climate-induced disasters. Some arise rapidly, such as storms, cyclones, floods and bushfires; others, such as drought, occur over extended time periods. All disasters affect people and communities, economically and socially, and can damage or destroy infrastructure and buildings, and change the natural environment. Disasters thus affect businesses, services, social activities and networks, and cultural and environmental heritage. Because more resilient communities are able to respond effectively to disasters, it is important to understand the factors that contribute to disaster resilience and how these can be promoted or enhanced.

Disaster impacted communities in Victoria and Queensland

OBJECTIVES

The aims of the project were to:

- » identify beliefs, behaviours and policies that support community resilience to disasters;
- » examine common community impacts and responses to four types of disasters;
- » assess the degree of resilience in each of four communities; and
- » use the results to identify appropriate and equitable emergency management policies and mitigation strategies for climate change events.

METHODS

The project focused on four disaster-impacted communities: Beechworth (bushfire) and Bendigo (drought) in Victoria and Ingham (flood) and Innisfail (cyclone) in Queensland. The research involved collecting demographic data, interviews, surveys and analysing data through models, in four steps:

1. Demographic data were used to profile communities for inter-community comparison, representativeness of samples, and comparisons within each community pre and post disaster impacts.
2. Interview data from 186 participants from the four communities were used to (i) identify factors that supported resilience and (ii) explore attitudes to climate change.

3. Surveys, constructed from empirical interview data and the literature, were completed by 1,008 residents to generalize findings.
4. Statistical models were constructed to understand the underlying characteristics of resilience.

The report contains a wealth of information on people's experience of disasters, how they felt during the event, how they coped at the time and afterwards, and also the effects on the communities. It also explores people's beliefs about climate change, and how these relate to demographic and socio-economic characteristics.

KEY FINDINGS

The resilience of each community and its residents was enhanced or decreased by characteristics unique to that community. Nevertheless, each of the four communities retained a stable population despite the impact of disasters, suggesting individuals remaining in the community were resilient and the four communities were resilient overall.

The project found that:

- » A sense of place encouraged people to remain in a community after a disaster and supported the disaster resilience of individuals and the community.
- » Household preparedness for disaster was strongly associated with adaptability, resilience and financial capacity.



Image © Ann Penny

Resilience is both an individual trait and a process. Being resilient is strongly linked to adaptability and having a sense of place. Important indirect influences on resilience are: financial capacity, family and neighbour support, communications, climate change knowledge and trust in communication sources.

KEY FINDINGS (continued...)

- » Individual safety and wellbeing was likely to contribute to community resilience and recovery.
- » Support for individual and community resilience came from many sources in each community.
- » Financial support from state and federal bodies sustained people who did not have support from within the community, possibly increasing their disaster resilience.
- » The groups who were most at risk and thus least resilient to disasters were relatively poorer financially, older in age (over 55) or less educated.
- » Prior experience sometimes results in a 'wait and see' attitude, which is detrimental to preparedness.
- » The relationship between climate change views and disaster experience is complex, and needs further exploration in rural and regional Australia.

Financial support could help increase the resilience of individuals and communities to climate-related impacts, but social support is also critical. For this reason, promoting a community's sense of place may be as important as investments that rebuild a community's physical and economic infrastructure.

Community resilience is also supported by communications and preparedness for a disaster by the local council and community groups and effective responses by these groups after a disaster.

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Gaps in community awareness and understanding of climate change and mistrust of sources of climate change information can prevent effective adaptation to climate change risks. Education has a key role to play in addressing these gaps.



Recommendations to build resilience

The project recommended that policies aimed at increasing disaster resilience need to be tailored to the circumstances and characteristics of each community.

More generally, disaster policies and programs need to build community resilience through:

- » **educating people and communities about climate change** and how their resilience to disaster can be enhanced;
- » **promoting a community's connectedness** thus enhancing individuals' sense of place;

- » **providing accurate and timely communications** about climate-related disasters;
- » **identifying positive local role models** for disaster preparedness;
- » **fostering social connectedness** and stronger connections between neighbours;
- » **assisting people whose financial circumstances prevent them from adequately preparing** for disasters; and
- » **promptly restoring infrastructure and essential services.**

This document summarises key findings from the NCCARF report *Recovery from Disaster: Resilience, Adaptability and Perceptions of Climate Change*. The project was led by Helen Boon, James Cook University. The full report is available at: www.nccarf.edu.au/publications/recovery-disaster-resilience-adaptability-climate-change

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