

# THE AUSTRALIAN NATURAL DISASTER RESILIENCE INDEX

## A SYSTEM FOR ASSESSING THE RESILIENCE OF AUSTRALIAN COMMUNITIES TO NATURAL HAZARDS



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### AUSTRALIA FACES INCREASING LOSSES FROM NATURAL HAZARD EVENTS. RESILIENT COMMUNITIES WILL BE BETTER ABLE TO ANTICIPATE HAZARDS, WITHSTAND ADVERSITY, REDUCE LOSSES AND ADAPT AND LEARN IN A CHANGING ENVIRONMENT. THE AUSTRALIAN NATURAL DISASTER RESILIENCE INDEX IS A SYSTEM OF INDICATORS THAT ASSESS AND REPORT THE RESILIENCE OF AUSTRALIAN COMMUNITIES TO NATURAL HAZARDS.

Australia's recently adopted National Strategy for Disaster Resilience takes a resilience approach to natural hazard management, recognizing four characteristics of disaster resilient communities:

- Functioning under stress
- Self-reliance
- Social capacity
- Successful adaptation

A resilience approach gives communities greater options and diversity in managing natural hazards, and places preparation, prevention, response and recovery in the context of societies adapting to and learning from change.

There is a need for a standardized national scale system for assessing and reporting the resilience of Australian communities to natural hazards.

This project will develop a Natural Disaster Resilience Index for Australia and assess and report the current state of disaster resilience.

#### RESILIENCE TO NATURAL HAZARDS

There are many definitions of resilience arising from social science, psychology, engineering and environmental science. Regardless of its discipline of origin, resilience is a concept for describing and managing an uncertain, dynamic and complex world. A resilient system retains the structures and functions to absorb external shocks and to reorganize and renew following crisis or disturbance.

In this project, resilience is the capacity of a system to not only anticipate, absorb and recover from natural hazard events but to use a culture of learning, adaptation and transformation to enhance resilience to future events.

#### CAPACITIES FOR RESILIENCE

The Australian Natural Disaster Resilience Index focuses on assessing resilience as two sets of capacities: coping capacity and adaptive capacity. Capacities are the potential for resilience contained in a system. Capacities do not directly assess the response of a system to a natural hazard event, but they do assess the enabling factors that enhance resilience to natural hazards. These enabling factors have been identified in studies of natural hazards both in Australia and overseas.

##### Coping capacity

Coping capacity refers to the factors that allow the community to anticipate, cope with, absorb and attain satisfactory functionality following a natural hazard event.

Examples of coping capacities include:

- Self-reliance
- Social cohesion and community connectedness
- Mitigation
- Emergency service capability
- Economic capital

##### Adaptive capacity

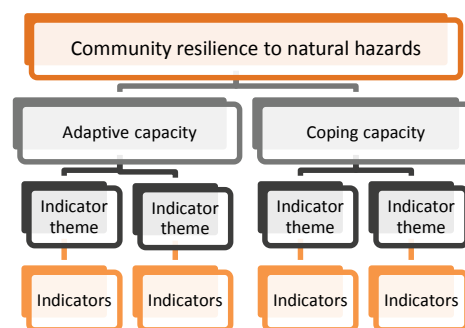
Adaptive capacity refers to the factors that allow the community to learn, adapt and transform to enhance resilience to future natural hazard events.

Examples of adaptive capacities include:

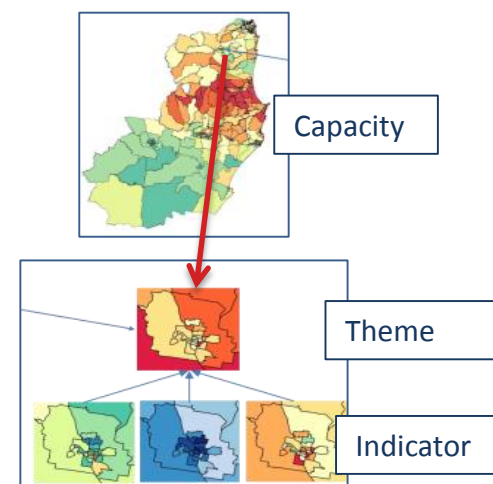
- Governance and policy innovation
- Leadership
- Learning and review capability
- Partnerships
- Diversity

#### CONSTRUCTING THE AUSTRALIAN NATURAL DISASTER RESILIENCE INDEX

We will use a hierarchical structure for the Australian Natural Disaster Resilience Index. The index is not 'one number', but rather, is made up of different levels of assessment and reporting – capacities, themes and indicators.



The assessment of community resilience to natural hazards will be arrayed on maps. The maps present the capacities, indicator themes and indicators arrayed along a continuum of 'good' to 'poor' resilience.



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