

## Why did we undertake this study?

Critical infrastructure (CI) underpins a functioning society. Although the consensus is that CI systems must adapt to climate change, how CI providers are set up to take adaptive action is unclear. Looking at the adaptive capacity of CI providers gives insight into the decisions and resources that influence the adaptability of CI.

## How was it done?

We conducted a multi-national survey in Australia and Aotearoa-New Zealand of CI providers to gather their perceptions of their organisations capacity to adapt to climate change. The survey responses were analysed using the Adaptive Capacity Wheel developed by Gupta, et. al (2010), which allowed for an assessment of current levels of adaptive capacities. Themes, patterns and path dependencies emerged through analysis of the quantitative and qualitative responses.

## What did we find?

When scores of adaptive capacity are averaged, critical infrastructure providers in Australia and Aotearoa-New Zealand appear to be in a good position to adapt to climate change. However, the use of averages obscures variation in the scores. We found:

- Those in executive management positions perceive the level of adaptive capacity to be higher than those at lower organisational levels.
- Leadership was overwhelmingly recognised as the most important element of adaptive capacity.
- The dependencies between leadership and other aspects of adaptive capacity indicate meaningful climate change adaptation must begin with assessing the leadership capabilities of the people making strategic infrastructure decisions.
- Climate change policy must acknowledge, and work to enhance, the leadership capacities of critical infrastructure providers.

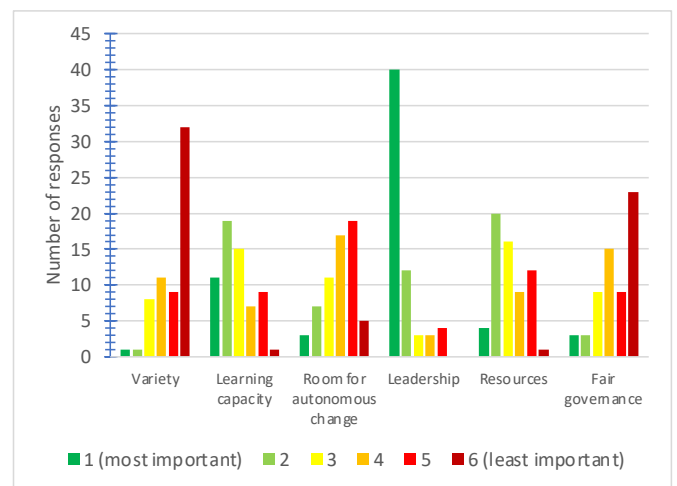


Figure 1: Perceived importance of dimensions of adaptive capacity for critical infrastructure providers

## What are the implications?

Critically assessing the adaptive capacity of the strategic decision makers within CI organisations is pivotal to meaningful adaptive actions in response and preparation for climate change. For example, if the leaders within CI provider organisations are not able or inclined to collaborate with multiple diverse perspectives or to innovate, it is unlikely the organisation and therefore critical assets, will be able to adapt to climate change in the timeframes needed. Policy settings that facilitate outcomes-based decision-making will give CI providers, and their leaders, the direction needed to adapt in a way that best suits the local context.

## Want more information?

The full paper is available from: <https://www.sciencedirect.com/science/article/abs/pii/S221209552300010X>

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## Coastal Governance: Embracing Vulnerability and Change

