

Ellie Kay

Embedding Resilience Measurement in Policy and Action

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Emerging Researchers Application

As we enter a more uncertain future, there is growing competition for people's attention and greater demand for politicians to justify every dollar of public spend. Consequently, there is increased demand for monitoring and evaluation of resilience. Measuring resilience makes an abstract concept visible and comprehensible. Once people can see resilience, decision makers are better placed to drive interventions and initiatives that will bring lasting improvements to communities.

Our work focuses on operationalising the New Zealand Resilience Index (NZRI), a composite indicator that allows for the systematic measurement and visualisation of New Zealand's community resilience across time. This multi-capital index includes indicators from across six facets of society (built environment, natural environment, governance, social, economic, and cultural), in line with New Zealand's forthcoming National Disaster Resilience Strategy. In Phase 1 of the NZRI project, we have worked alongside resilience policy developers and civil defence and emergency management (CDEM) practitioners to align the NZRI with New Zealand's international and national policy commitments and embedding this framework of systematic assessment in strategy and planning for resilience at the national and regional level.

The NZRI provides a snapshot of community resilience potential across New Zealand. Yet, indices are only as good as the data behind them, and there are relatively limited data available to produce a consistent picture of national resilience. As a result, the NZRI is designed to be 'extensible', accommodating additional data available only at regional and local levels. Phase 1 of the NZRI project culminated in a co-creative process aligning the NZRI with a regional CDEM group's planning process, showing that including additional data both satisfies local operational needs, while contributing to New Zealand's wider resilience measurement requirements under national and international policy. Using an extensible version of the NZRI also provides a more nuanced view of resilience within local communities to help them monitor and manage their use of resilience investment resources.

Phase 2 of this project will focus on how the NZRI can be used to support decision-making processes. As part of this, we are developing an agile two-way channel for rapidly assessing local conditions and resilience capacities. This platform will allow decision makers and communities to engage each other and see real time responses through any web-capable device. Unlike other feedback systems, this approach allows for iterative democratic engagement with rapid reporting back to survey participants. Such a tool would greatly benefit the locally augmented NZRI, allowing for the seamless collection of data to guide pre-disaster resilience enhancement initiatives. Additionally, this tool allows for the validation of the NZRI by collecting post-disaster metrics, helping us to understand how indicators of resilience influence communities' recovery.

This work is being conducted under the Resilience to Nature's Challenges, one of New Zealand's 11 National Science Challenges. Embedding resilience measurement in national and international policy, helps our policies enable action in resilience improvement; supporting GRRN's mission to strengthen communities and systems' adaptive capacity in the face of a turbulent future.