

The Responsibilities of and Interactions between Tsunami Early Warning and Response Agencies in New Zealand

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Project Overview

- New Zealand has a separated structure for tsunami early warning and response
- Comparison of New Zealand's separated structure to systems in other countries
- Underlying issues within New Zealand's separated warning system structure

National monitoring by GNS Science



National warnings by the National Emergency Management Agency (NEMA)



Regional evacuations by Civil Defence Emergency Management (CDEM) Groups



Local evacuations by district and city councils

Study Area

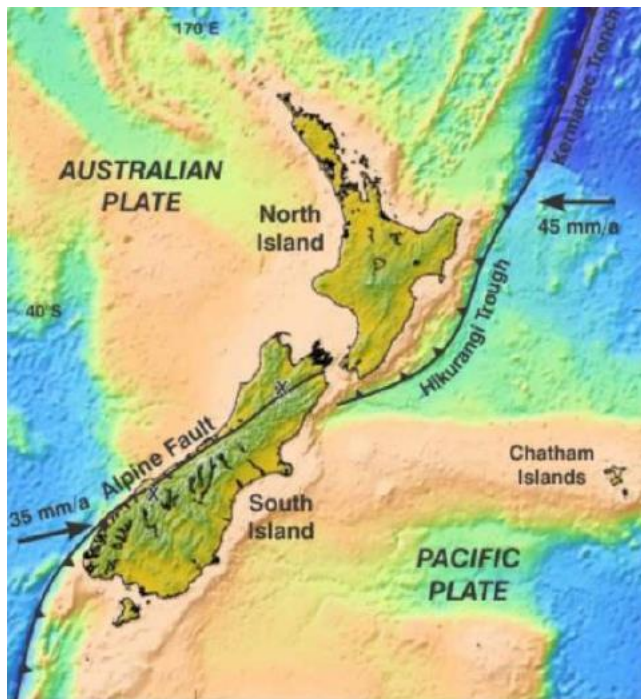


Figure 1. Regional tectonics of New Zealand (Nathan, 2011)

- New Zealand is vulnerable to locally, regionally, and distally generated tsunamis
- Waves can arrive within minutes to over 12 hours
- Can issue official warnings for distal events but rely on natural warning signs for local events

Social Research Methods

- 106 documents and archives collected

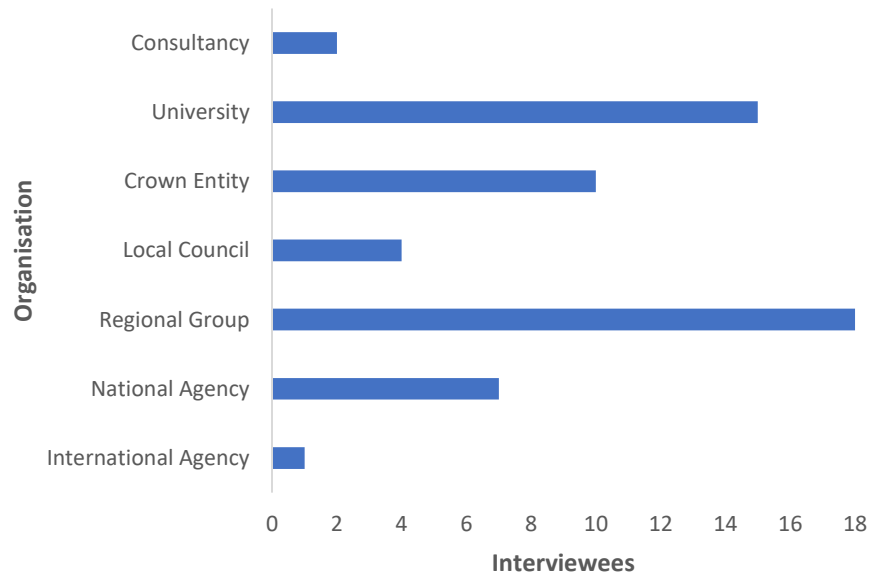


Figure 2. Organisation of interviewees

- 57 semi-structured interviews carried out

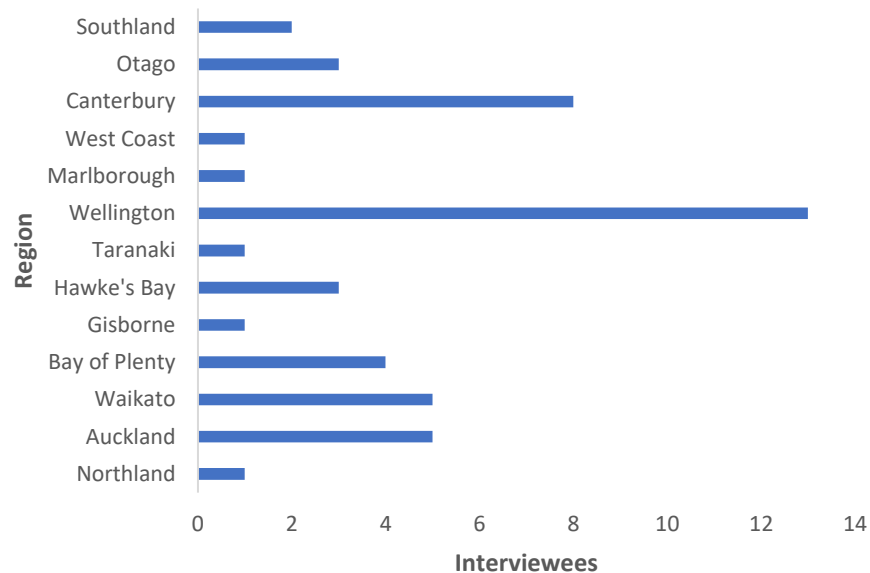


Figure 3. Location of New Zealand interviewees

Responsibilities and Interactions between Agencies

- GNS Science - national monitoring
- National Emergency Management Agency (NEMA) - national warnings
- Civil Defence Emergency Management (CDEM) Groups - regional evacuations
- District and city councils - local evacuations

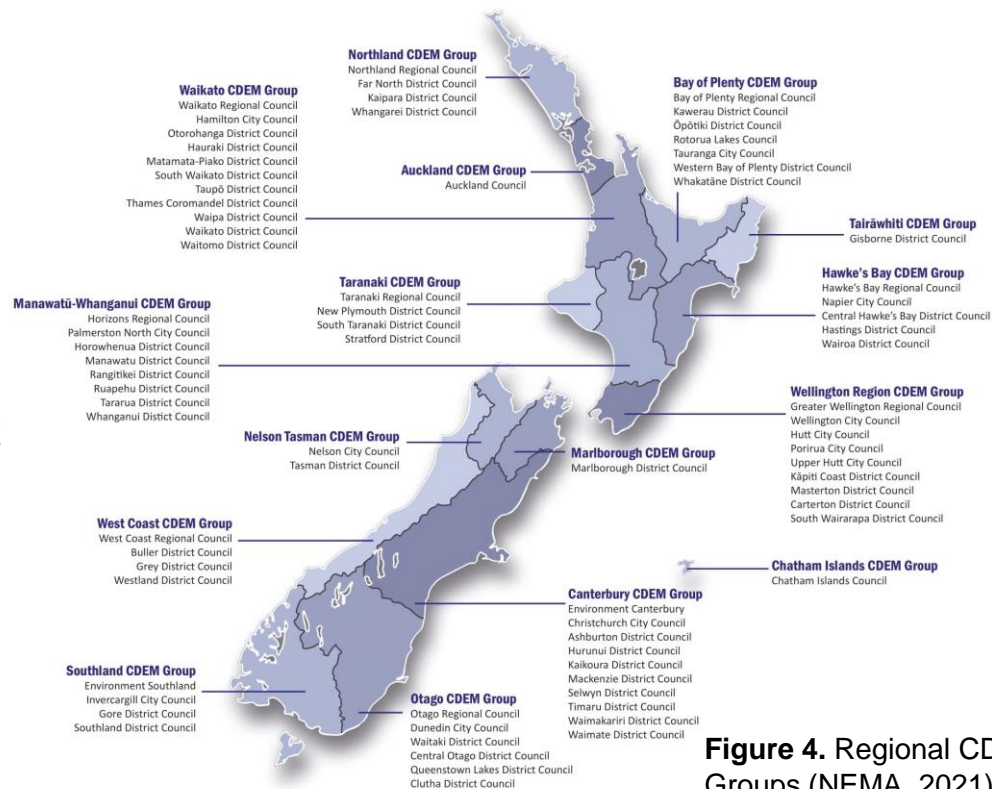


Figure 4. Regional CDEM Groups (NEMA, 2021)

Issues with New Zealand's Warning System Structure



Figure 5. GNS Science logo (GNS Science, 2020)

- Separate monitoring and warning agencies - potential for errors and delays

- Joint Australian Tsunami Warning Centre (JATWC) - monitoring and warning together



National Emergency Management Agency
Te Rākau Whakamarumarū

Figure 6. NEMA logo (NEMA, 2020)

- Separate warning and evacuation agencies - need for consistency and coordination



Civil Defence and Emergency Management
Te Rakau Whakamarumarū

Figure 7. CDEM logo (NEMA, 2022)

- 24/7 capability and funding - divide between national and regional resources

Summary

- Underlying issues involve the ways in which knowledge is exchanged within the warning system and the lack of integration between national, regional, and local agencies
- Addressing these issues would improve risk assessment and response in New Zealand

References

GNS Science (2020) *About Us*. Available at: <https://www.gns.cri.nz/Home/About-Us> (Accessed: 18 February 2020).

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Thank you for listening.

Any questions?

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