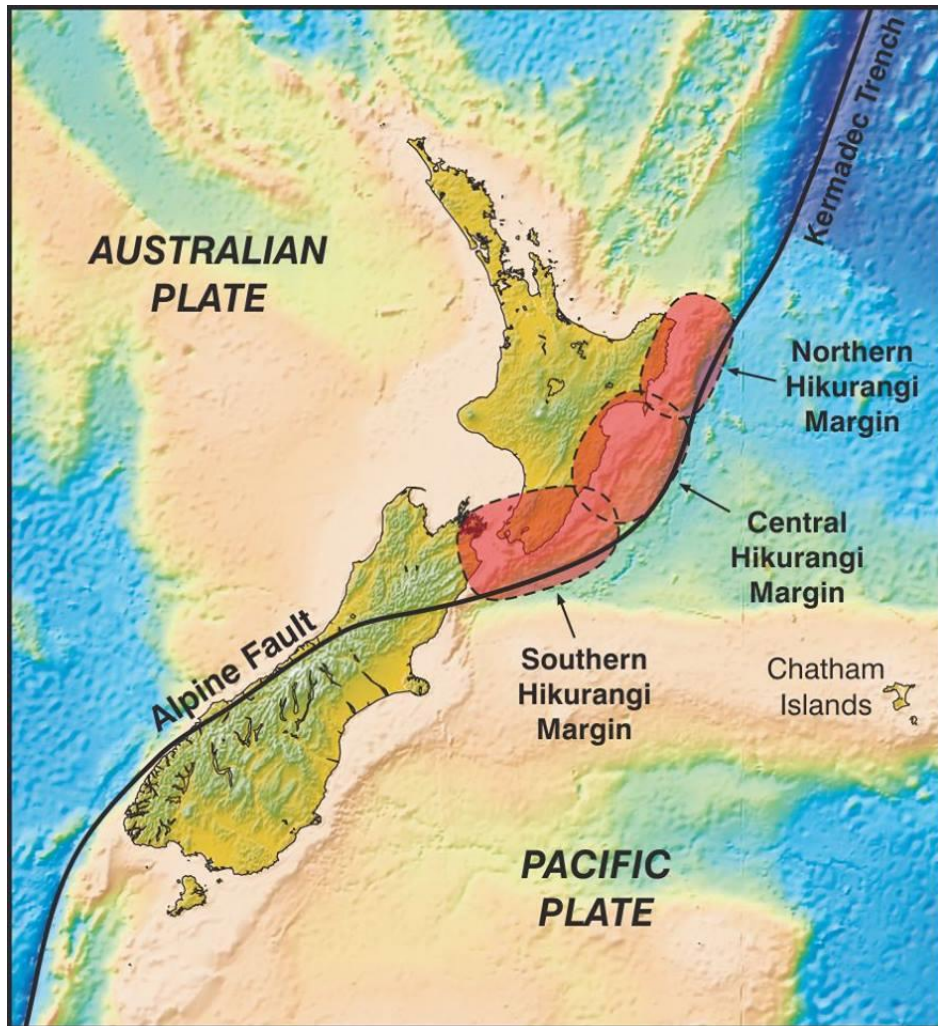
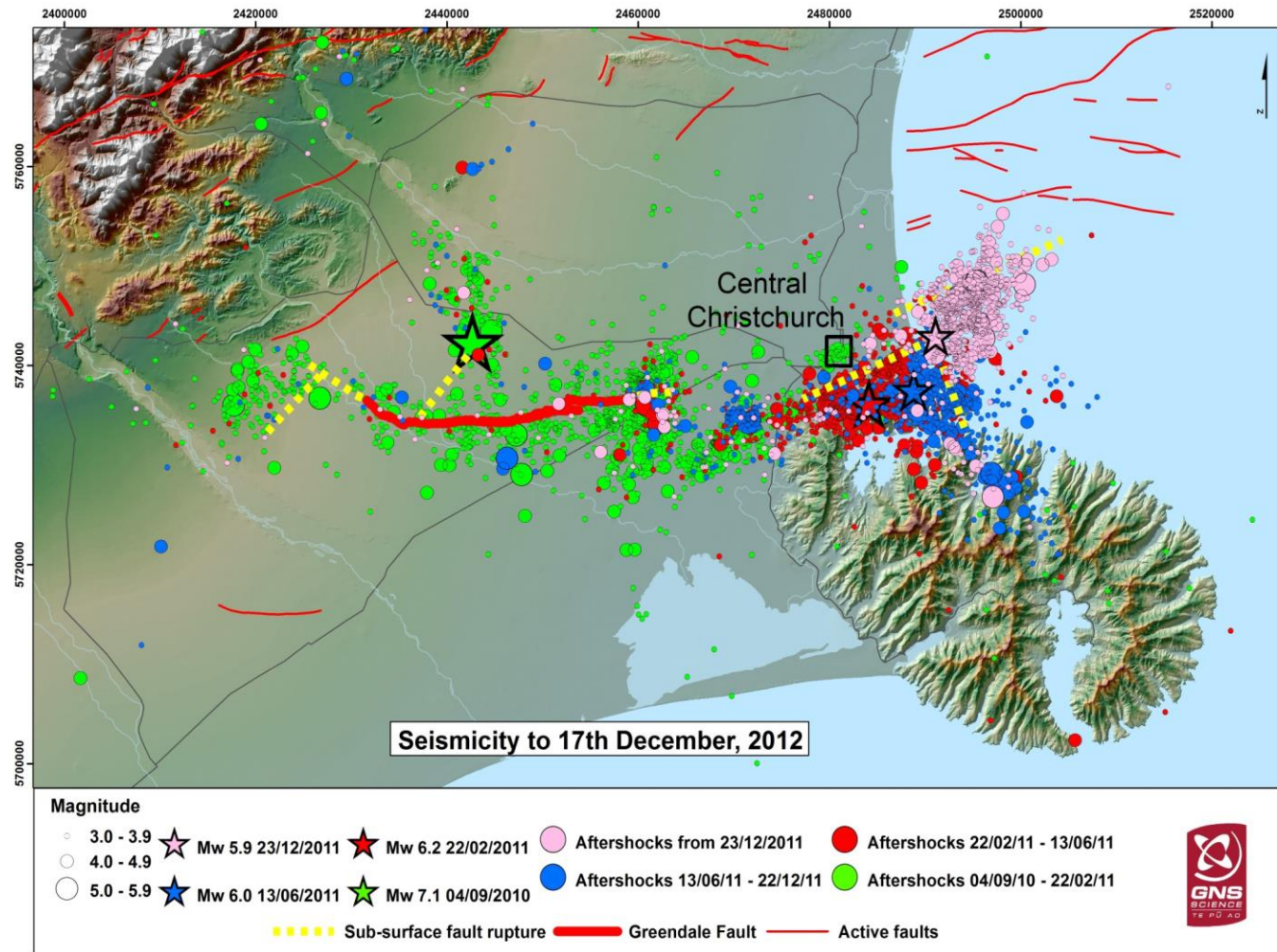

INFRASTRUCTURE LESSONS FROM RECENT MAJOR EARTHQUAKES IN NEW ZEALAND

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CASE STUDY: RECENT MAJOR EARTHQUAKES AFFECTING NEW ZEALAND INFRASTRUCTURE



2010/11 CANTERBURY EARTHQUAKES



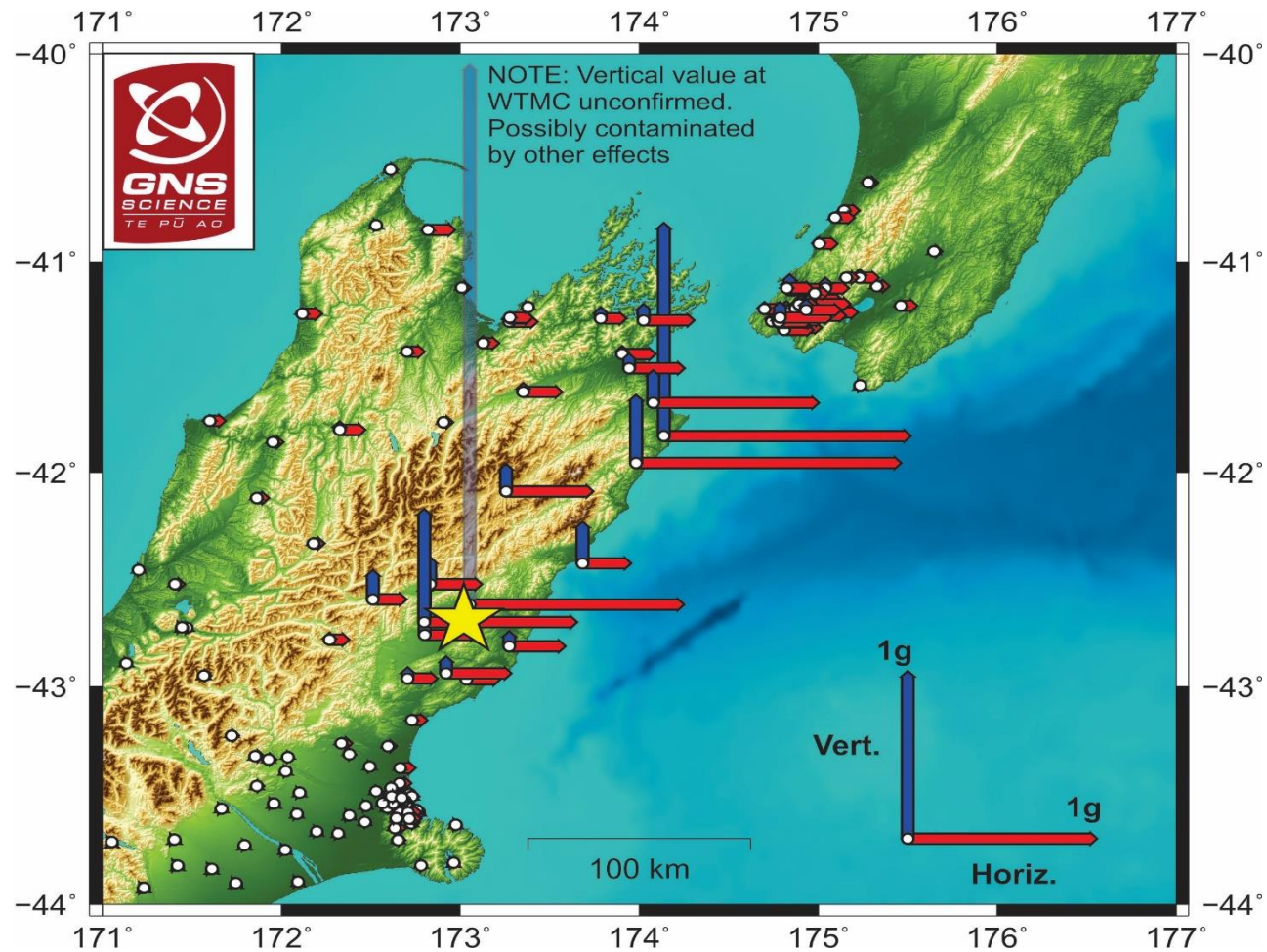
2010/11 CANTERBURY EARTHQUAKES



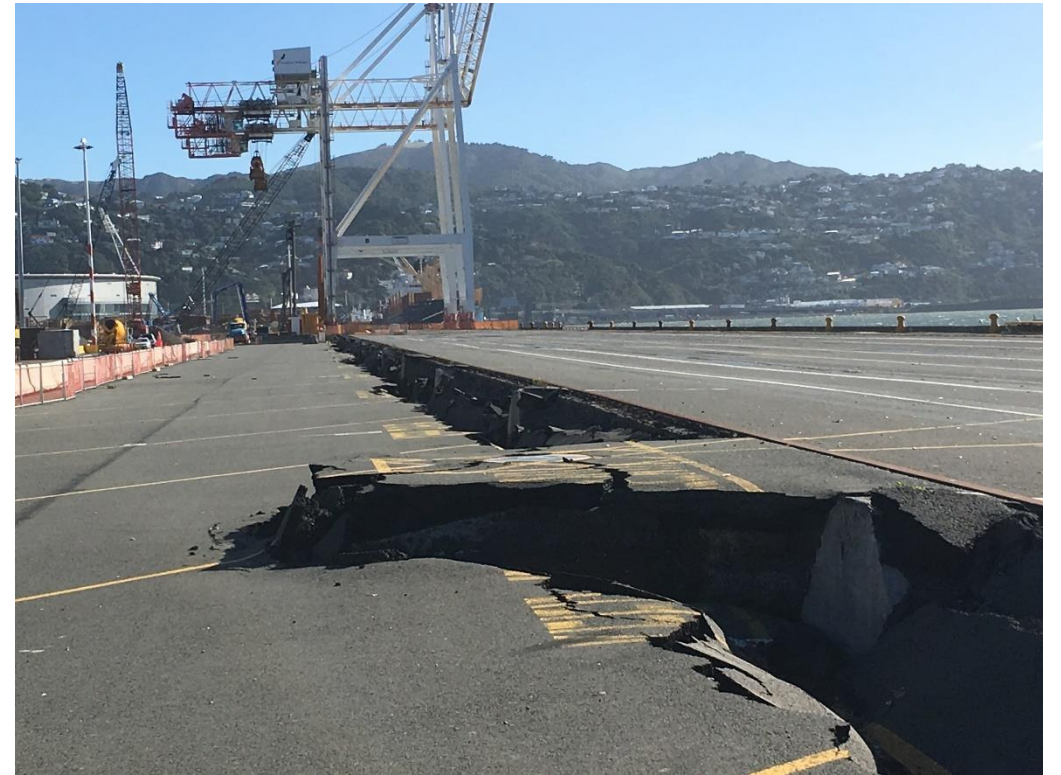
2010/11 CANTERBURY EARTHQUAKES



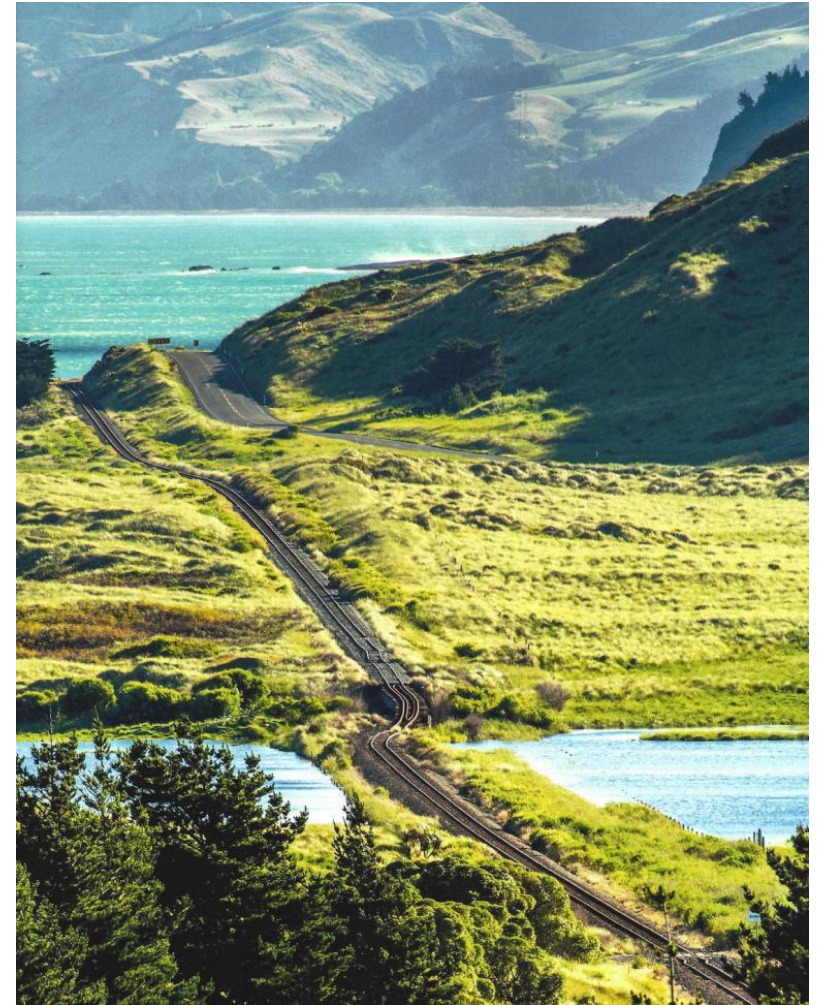
2016 KAIKOURA EARTHQUAKE



2016 KAIKOURA EARTHQUAKE



2016 KAIKOURA EARTHQUAKE



APPROACHES TO THE INFRASTRUCTURE REBUILD

- In the early stages of the recovery there was recognition of the need for a contractual approach for community infrastructure that is less controlling than customary contracts.
- Incentivised industry alliances were formed for the rebuild of public horizontal infrastructure (water and transportation networks).
- The Stronger Christchurch Infrastructure Rebuild Team (SCIRT) involving funders (central and local government), network owners and contractors was established following the 2010/11 Canterbury earthquakes.
- The success of SCIRT led to the creation of the North Canterbury Transport Infrastructure Recovery Alliance (NCTIR) to rebuild the extensively damaged state highway and rail corridors following the 2016 Kaikoura Earthquake.

KEY LEARNINGS FOR NEW ZEALAND INFRASTRUCTURE

Technical learnings

- Some bridges and buildings were either not rebuilt or were rebuilt in better locations – Build Back *Differently*.
- Telco networks have increased the size of fuel storage tanks for emergency generators.

Organisational/ Contractual learnings

- The benefits of an incentivised alliance involving funders (central and local government), network owners and contractors.
- The importance of relationships and collaboration.