The Natural Hazards Research Platform Overview of first 4 years: 2009-2013 and the road ahead

David Johnston



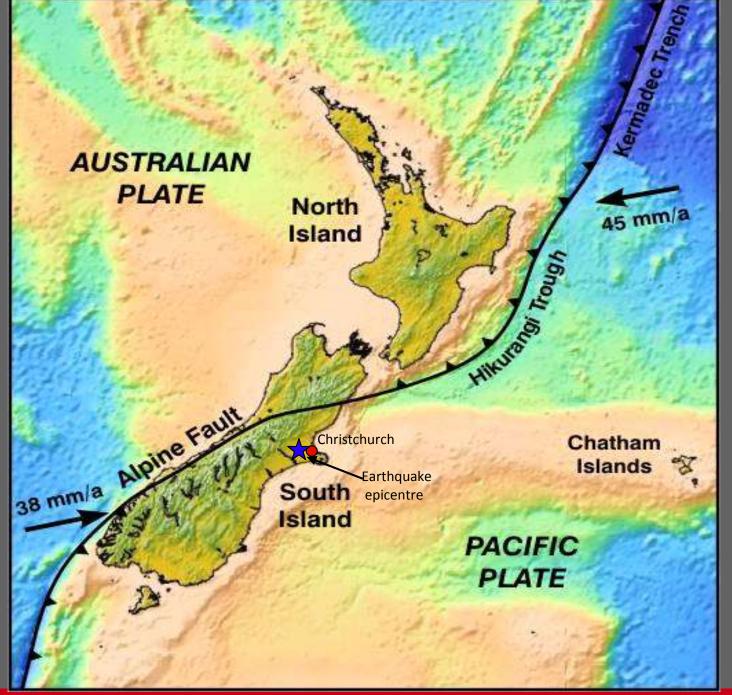


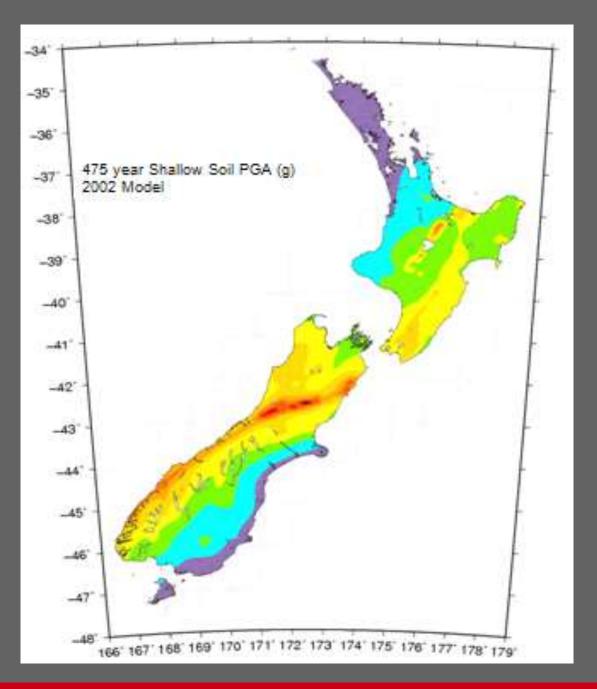










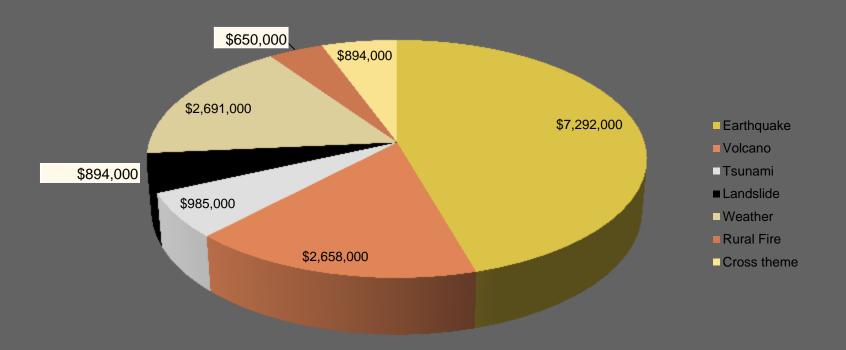


The Natural Hazards Research Platform

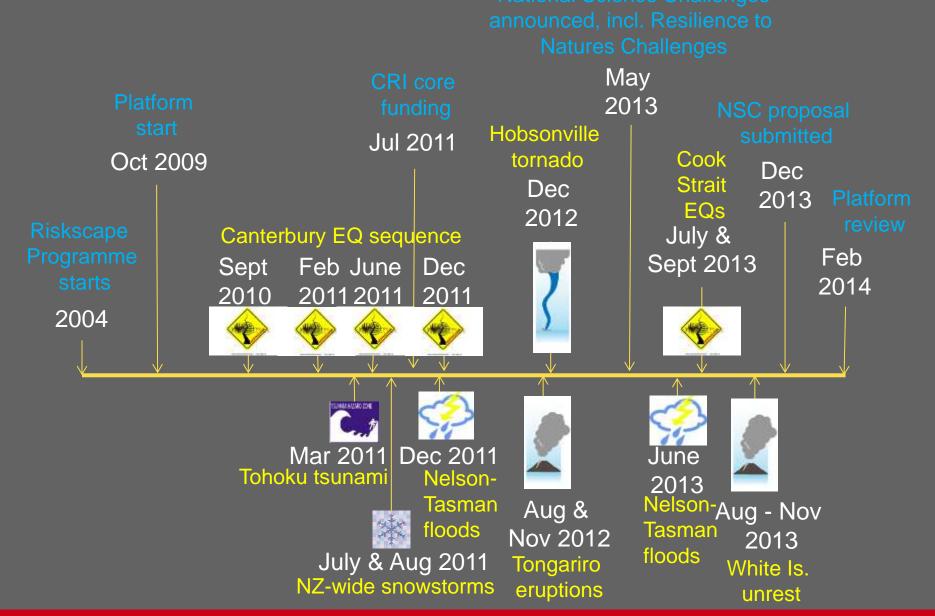
A reminder:

- Established Oct 2009 to provide a stable, long-term research environment
- Moving from a competitive to a collaborative environment
- Obligation to provide science advice in the <u>national interest</u>
- Emphasis on a partnering approach between members
- Technical people not directly involved in the science empowered to make allocation decisions (Platform Management Group)

Natural Hazards Research Platform – Research Themes & Funding (2013)



Platform Events Timeline



How we link themes with the Hazard and Risk continuum

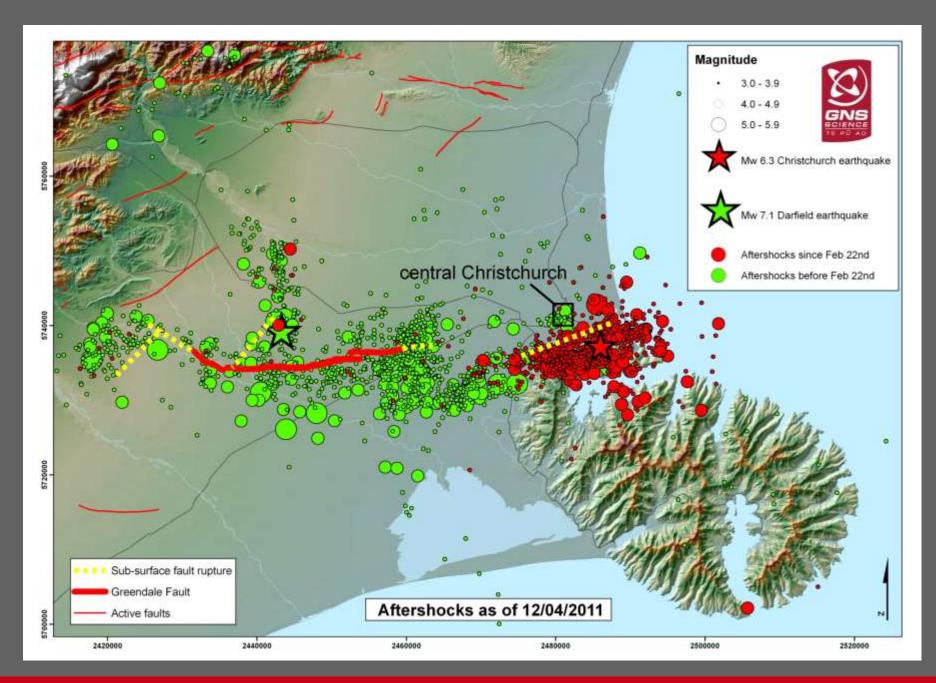


Theme 3 Theme 1 Theme 4 Theme 2 Fire in the Geological Predicting Landscape Hazards **Buildings** and Weather, Flood Models Infrastructure & Coastal Hazards Theme 5 Developing Regional and National Risk Evaluation Models Theme 6 Societal Resilience: Social, Cultural, Economic & Planning Factors

From Natural Hazard Research to Risk Management – the Science Challenge Value Chain **Basic Data &** NSC Example Research **Outcomes** Underpinning Research Products/ Users Research **Themes Outputs** Tectonics Accurate models of Successful warnings & MCDEM. tsunami & volcanoes evacuations (tsunami, Geoscience regional Geological, enabling smart monitoring & local govt, floods, storm surge, mapping Weather & Accurate weather and fire emergency volcano) Offshore marine models & warnings Fire Hazards services Appropriate response Marsden Accurate volcano status MBIE. (tsunami, earthquake, •EQC & warnings insurance. flood, volcano) Research on low damage •PBRF - University energy & Resilient More resilient society building technologies construction CRI discretionary **Building &** sectors Retrofit solutions for Sustainable Infrastructure earthquake prone buildings MfE, Regional development Critical Risk-based landuse & local govt, Safer buildings & **Dependencies** planning guidance for construction resilient infrastructure for NSC Societal & managing natural hazards sector, NZPI Improved mitigation GeoNet Economic Probabilistic hazard & risk Treasury, & preparedness High performance models DPMC. Resilience Socio-economic impact Lifelines. Faster recovery computing models with direct & Regional & from hazard events indirect losses local govt, **Founding** Improved natural Regional Peer reviewed research utilities, **Documents** hazard risk management articles and reports & National transport & CDEM National in New Zealand construction Risk Models sector, MfE Plan Partnering Agreement

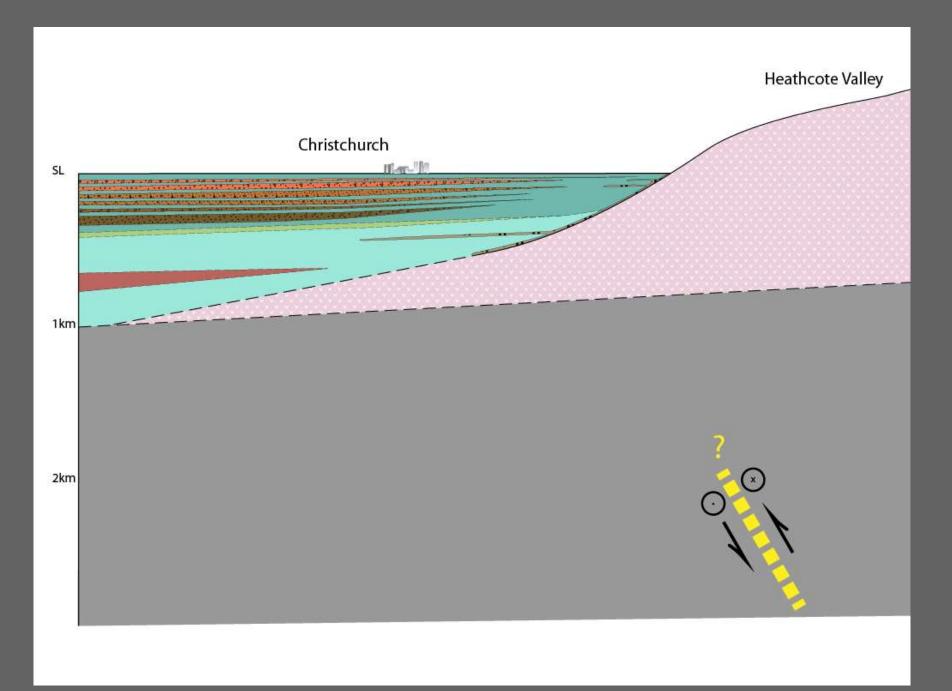
What Would Success Look Like?

- Reduced exposure to significant hazard risk
- Delivery of appropriate tools and information to end users in a timely fashion
- Relevant research in the national interest
- Maintaining science excellence and publishing appropriately
- Working cohesively across disciplines and across institutions
- Building capacity and capability in the national interest



A tale of two earthquakes – the Canterbury sequence of 2010-2011

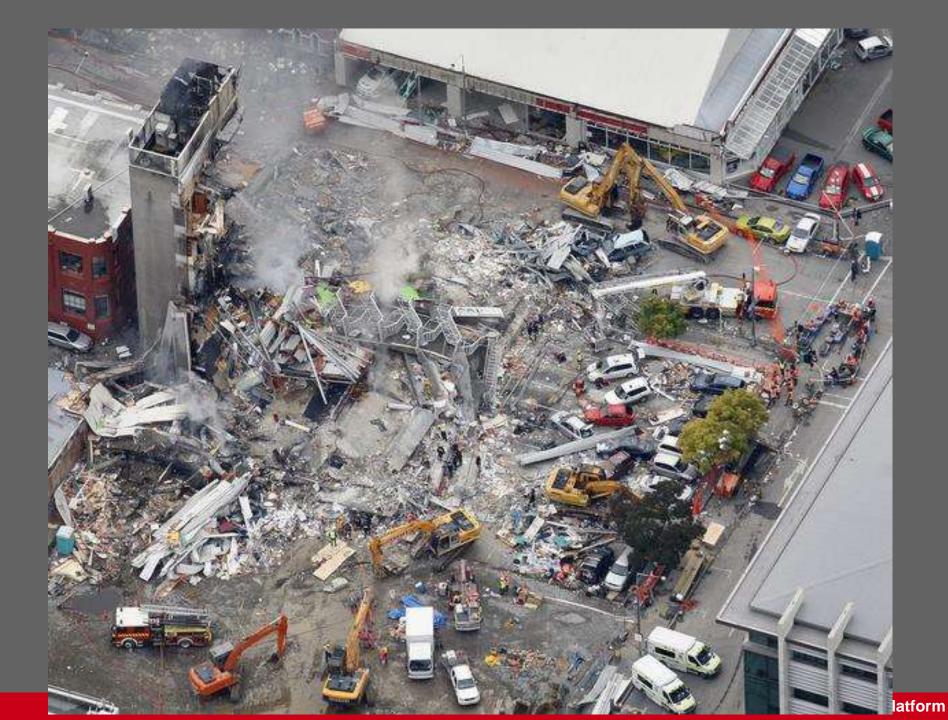






CTV Building





Social and psychosocial impacts

