

# Wellington Earthquake Resilience Collaboratory Workshop

3 Sept 2019

Nelson, New Zealand

















#### Wellington Earthquake Resilience Collaboratory



A multi-agency collaborative work programme, open to <u>any</u> project with a focus on Wellington Earthquake Resilience.

Includes projects funded under:

It's Our Fault, QuakeCoRE, Resilience Challenge, MBIE Endeavour, GNS SSIF, anyone else...

Tsunami risk Landslide hazards Basin-edge effects Land use planning and policy Community-based resilience Kura e Tai Åniwhaniwha

Wellington Earthquake Resilience Collaboratory

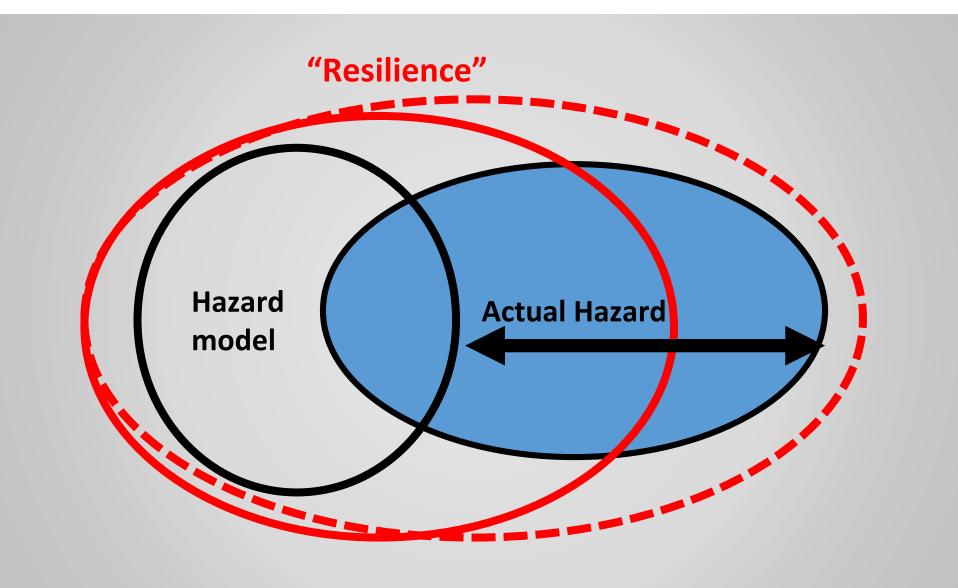


Key Wellington
Stakeholders

Waterfront liquefaction risks
Existing buildings – risks and retrofit
Residential performance
Cordon planning
Smart Seismic Cities
Fire Following Earthquake
Advanced building monitoring

# Plan for bigger than expected earthquake







# Learning from Mega-disasters The Great East Japan Earthquake (World Bank)

#### FIGURE 2: Summary of findings and lessons learned from the project

#### **Great East Japan Earthquake**

- Low probability, high impact
- High level of complexity
- Widespread impact due to globalized supply chains

#### Japan's DRM system

- Investment in structural and non-structural measures
- Culture of preparedness and learning from past disasters
- Multi-stakeholder involvement
- Legislation, regulation, and enforcement
- High-tech, sophisticated instruments

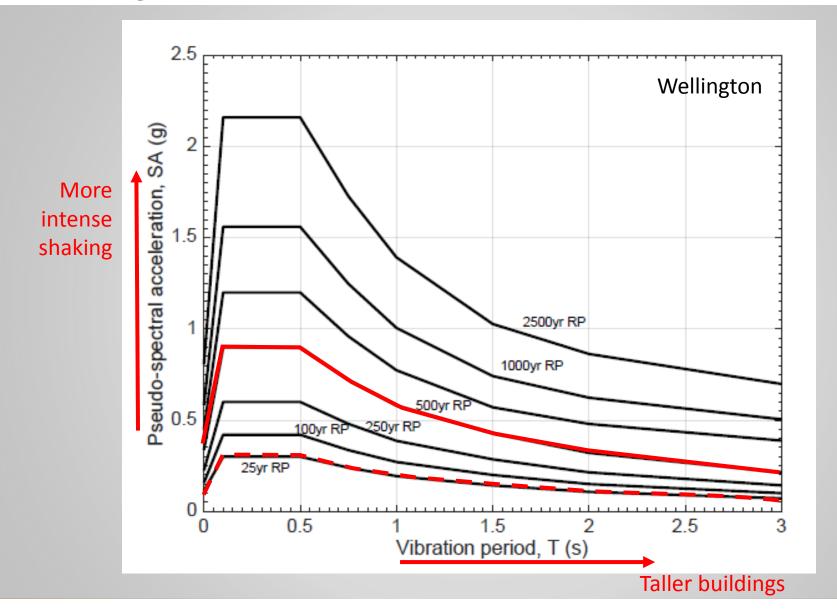
Risk assessment and communication

Coordination

Protection of vulnerable people

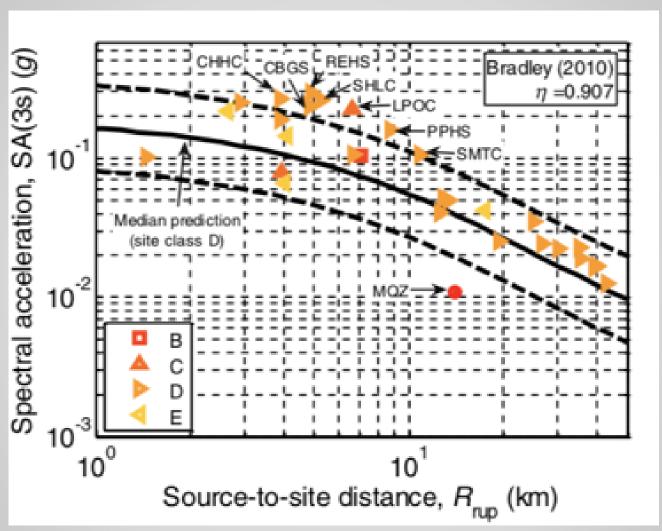
# "Design" Earthquakes





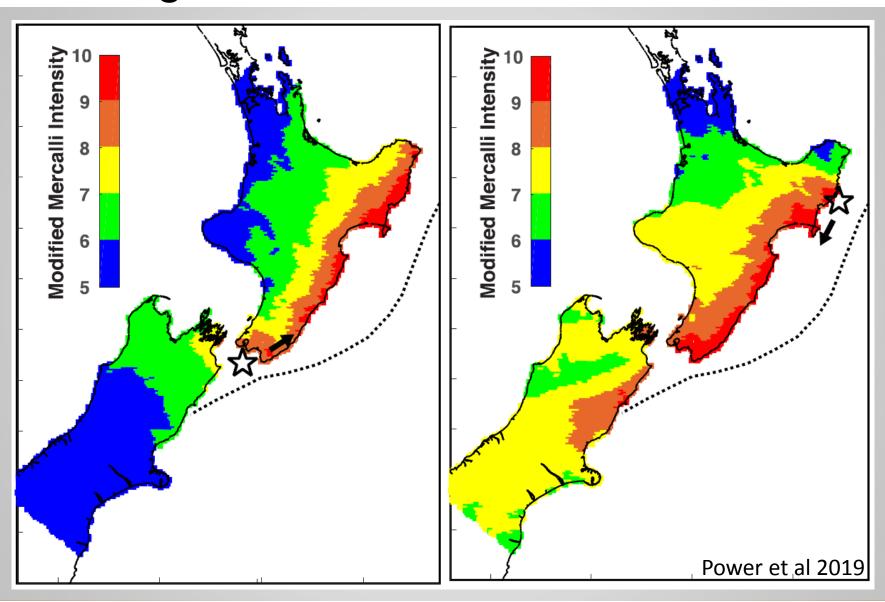


### Uncertainty in predictions





## Hikurangi subduction zone



# Today's goal



 Explore how sensitive the performance of our cities (and our recovery) is to this uncertainty in size of future earthquakes.

- Imagine a "larger than expected" earthquake has occurred
  - What are the impacts?
  - What can we do now to manage these impacts?
  - How do we "prepare to fail gracefully"?
- · Develop an action plan for research and implementation



10am-10:15am	Arrive for morning tea
10:15am-10:30am	Setting the scene (Ken Elwood and Caroline Holden)
10.30am-11.15am	The people of Wellington (Julia Becker and Dan Neely)
11.15am-12.00pm	Infrastructure (Liam Wotherspoon and Charlotte Brown)
12.00pm-12.45pm	Lunch
12.45pm-1.30pm	Land-use planning for hazard management (Wendy Saunders and Derek Baxter)
1.30pm-2:15pm	Buildings – existing and new (Tim Sullivan and Dave Brunsdon)
2:15pm-2:30pm	Retrofit Prioritisation Survey (Ilan Noy)
2:30pm-3:15pm	Insurance (Michael Drayton and Ilan Noy)
3.15pm-3.30pm	Afternoon tea
3:30pm-4.15pm	Response and recovery planning (Natasha Goldring and David Johnston)
4.15pm-4.45pm	Building an "Action Plan"
4.45pm-5.00pm	Wrap up
Speakers – each speaker are asked to speak for 5-10 minutes with no more than five slides	