Urban sea level rise responses

Chris Cameron
New Zealand

Outline

The issue

Response options

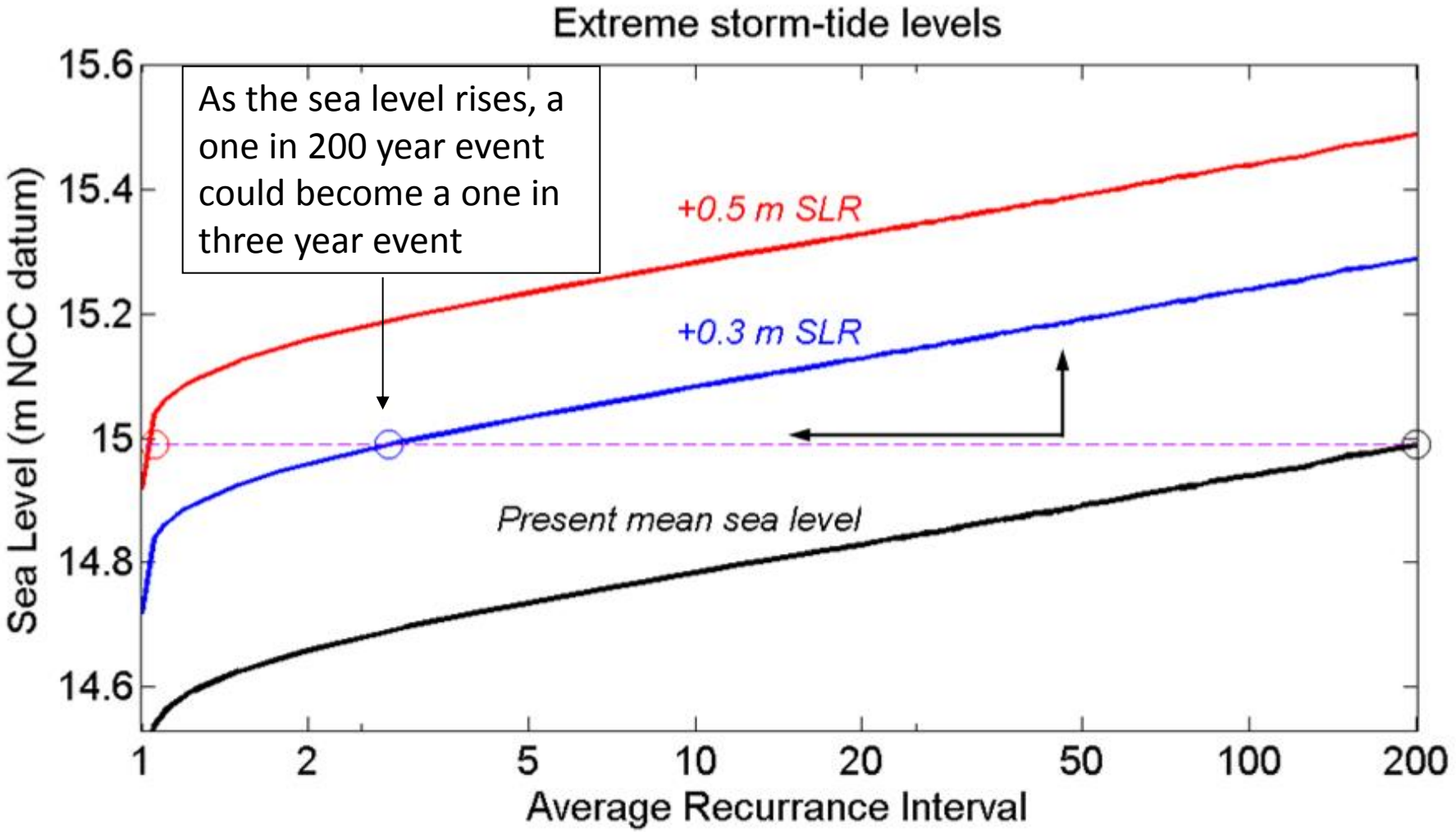
Engagement and collaboration

Discussion

The issues

- Government advice – but no national adaptation framework
- Complexity and uncertainty
- Significant economic / social / environmental impacts
- Resourcing, collaboration and partnerships
- Community engagement – understanding and action
- Time-frames
  - Short-term: Asset Management, Urban Plans, etc
  - Strategic: Beyond existing planning horizons (eg 100 years+)

Changing state: Storm-tides



Drainage issues with more frequent storm-tide levels or inundation events

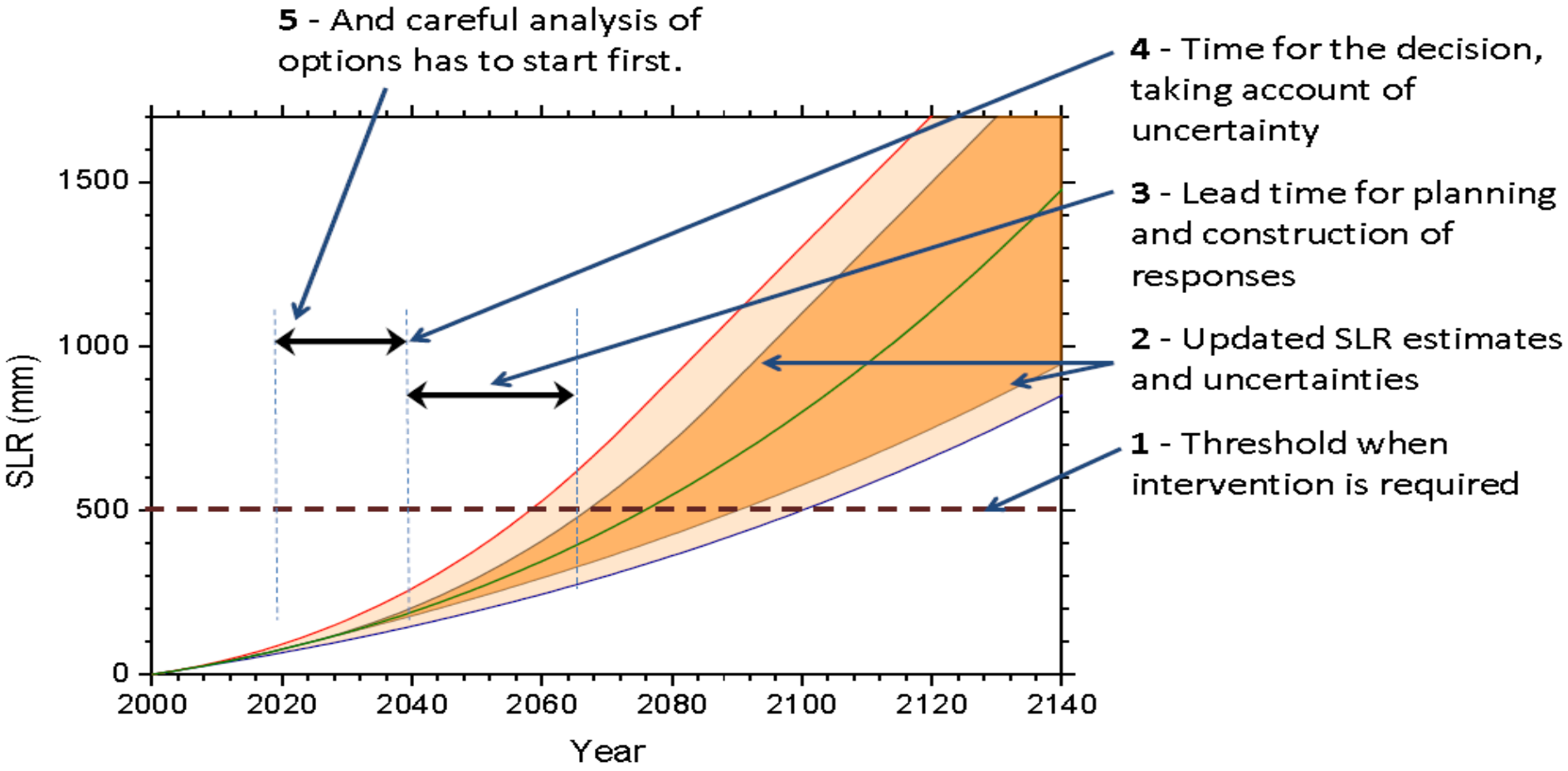
NIWA
Taihoro Nukurangi


Viewpoint: -41°15'35" 174°47'7" 424.4m [Heading: 184.3°]

Impacts

- Rising ground-water and water-tables
- Degradation of the storm-water system
- Coastal margin: natural vs modified environments
- Interactions and interdependencies
- Multiple hazards co-located
- Need for early response decision-making
- Consistent approach between assets and localities

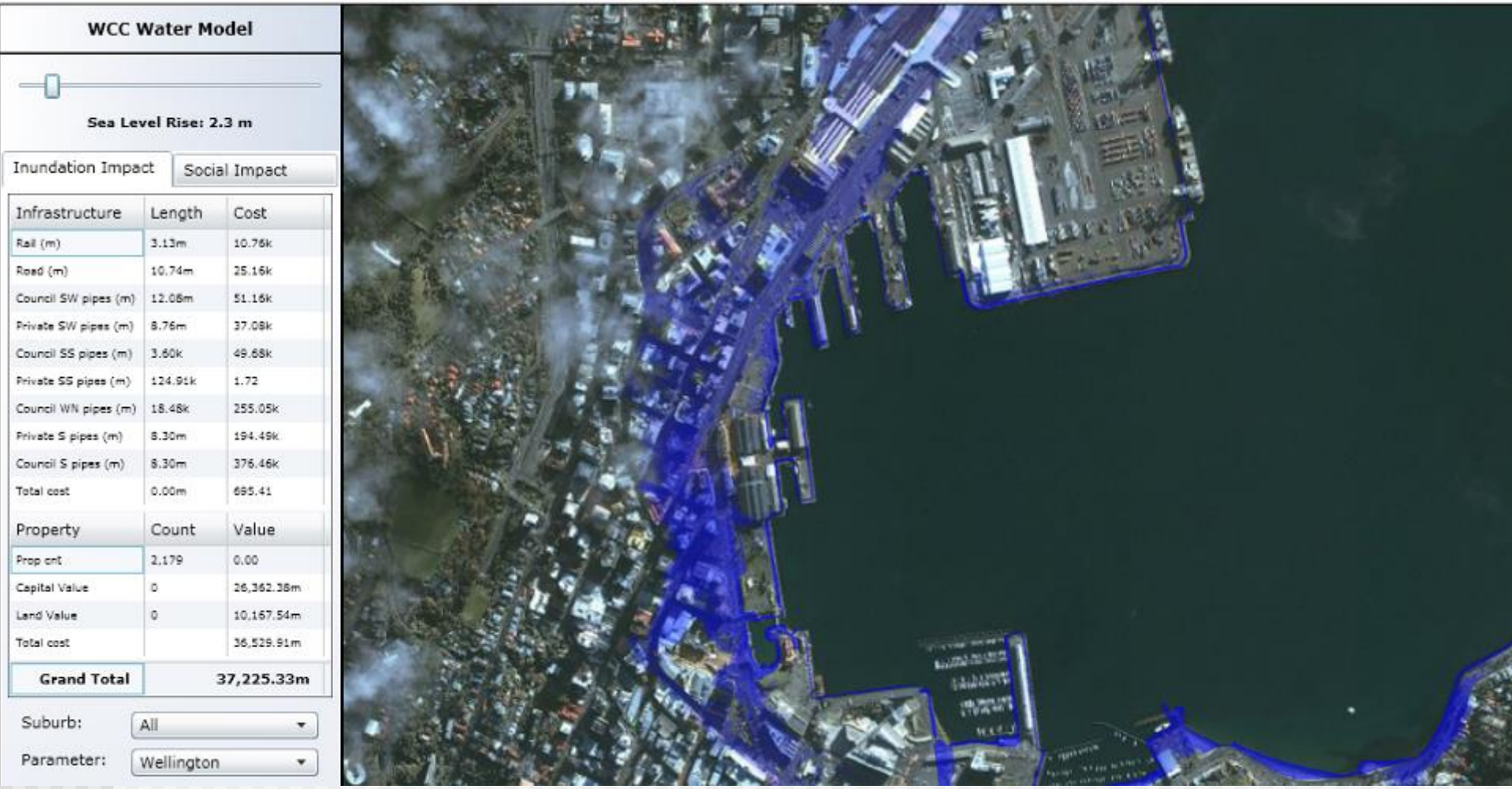
Identify thresholds and work backwards



This is based on:

Reeder, T., and Ranger, N., 2011: *How do you adapt in an uncertain world? Lessons from the Thames Estuary 2100 project.* *http://www.worldresourcesreport.org/files/wrr/papers/wrr_reeder_and_ranger_uncertainty.pdf*

Web-based impacts tool

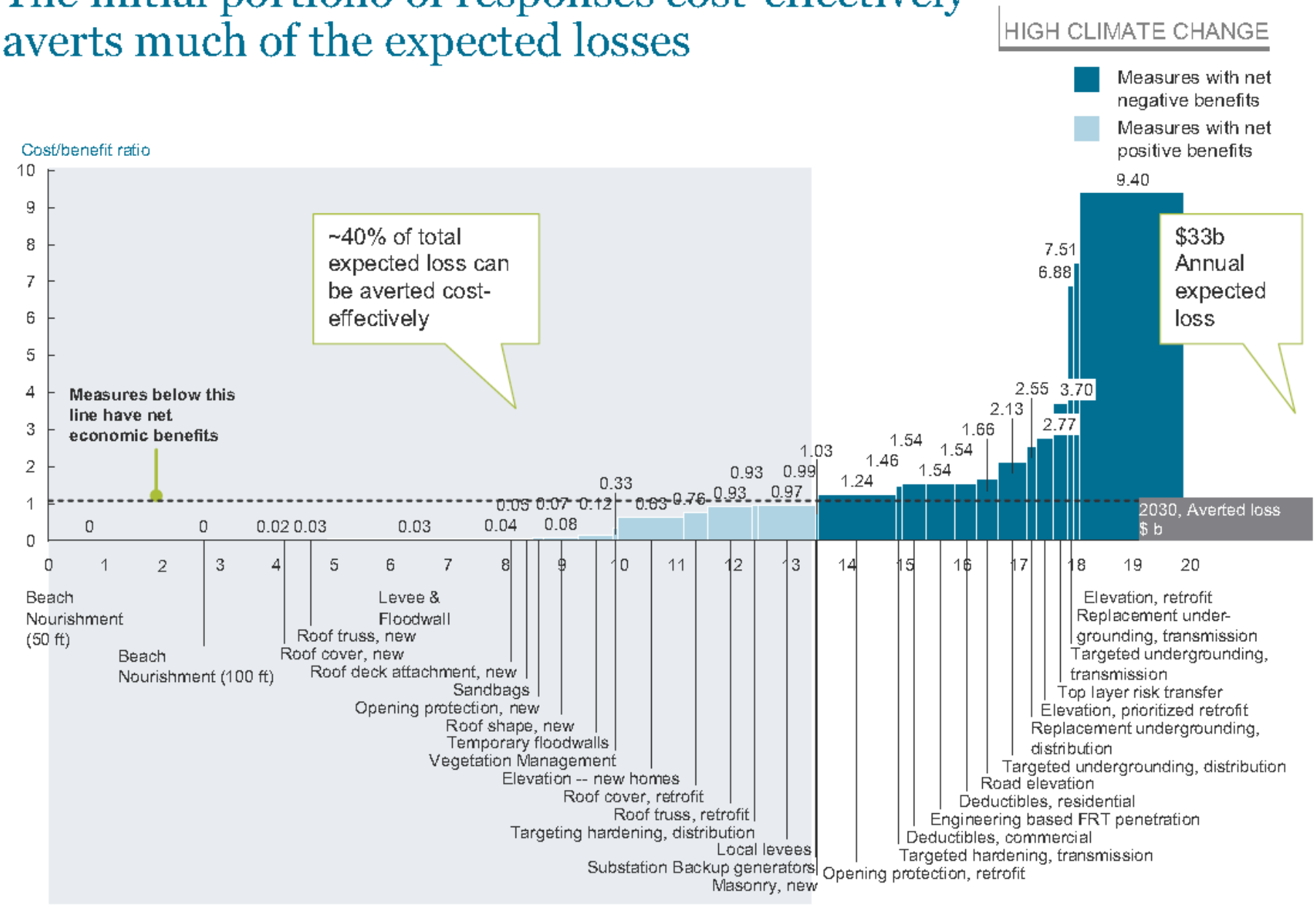


Online Tool Demo

Responses

- What options are available? Timing?
- Becoming increasingly urgent
- Starting early allows for best outcomes
- Guidance on responding is needed
- Risk management approach using scenarios to evaluate impacts and prioritise response options
- Crucial to inform and involve the community
- Involves all levels of government, infrastructure, property owners, industry, citizens, etc
- An opportunity for city leadership

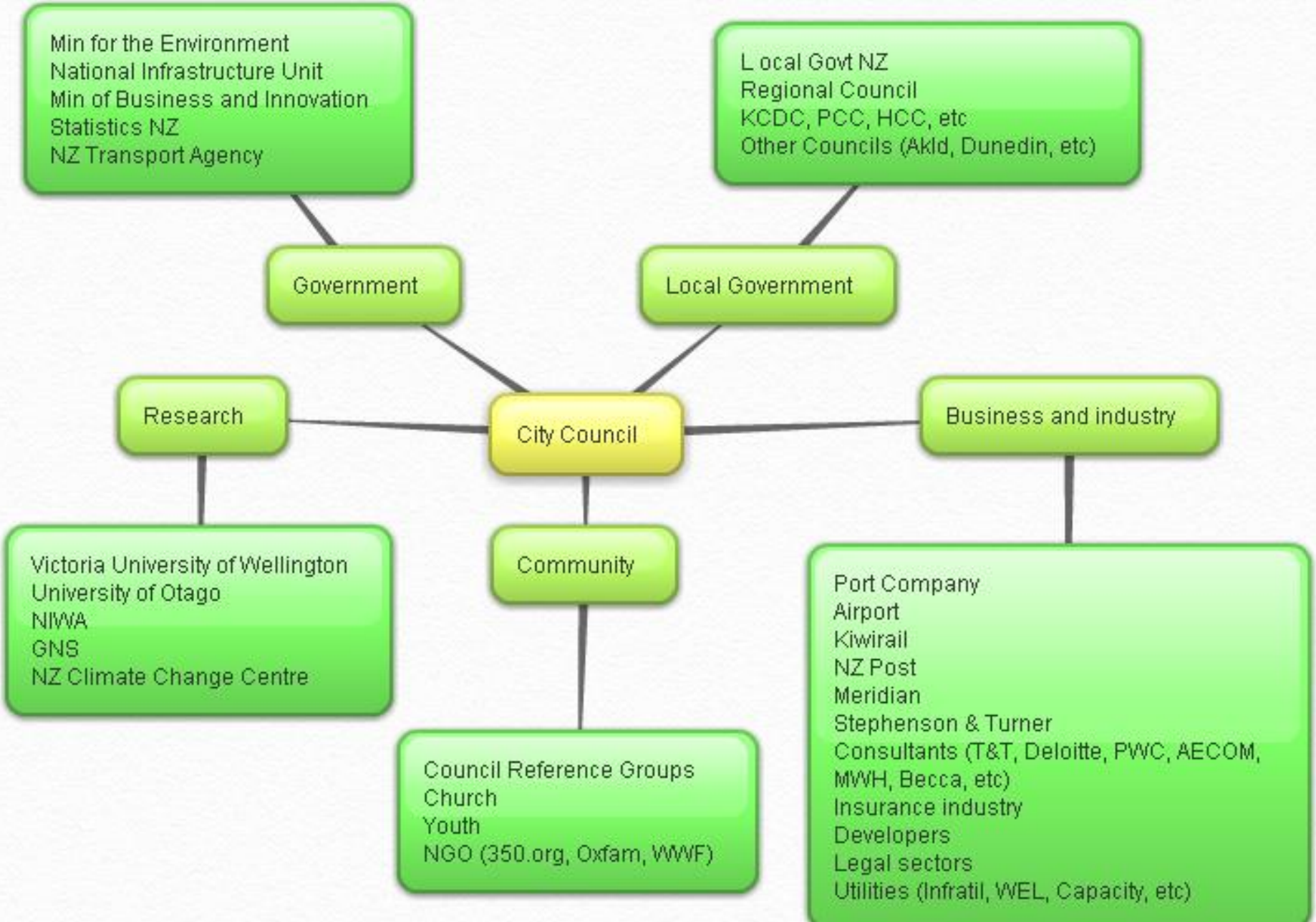
The initial portfolio of responses cost-effectively averts much of the expected losses



Engagement and collaboration

- Council leadership and partnershis
- Awareness raising and community participation
- Comprehensive engagement both internally and externally

Mapping stakeholders



Thank you