



EVENT BRIEFING

Meeting with Minister of Finance about Geohazard funding

Date:	8 April 2024	Priority:	Medium
Security classification:	In Confidence	Tracking number:	2324-2883

Action sought		
	Action sought	Deadline
Hon Mark Mitchell Minister for Emergency Management and Recovery	Note talking points for your meeting with Minister Willis.	8 April 2024

Contact for telephone discussion (if required)				
Name	Position	Telephone		1st contact
Dr Prue Williams	General Manager, Future Research System		Privacy of natural persons	✓
Privacy of natural persons	Principal Advisor, Science Policy			

The following departments/agencies have been consulted

Minister's office to complete:

Approved

Declined

Noted

Needs change

Seen

Overtaken by Events

See Minister's Notes

Withdrawn

Comments



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Meeting with Minister of Finance re Geohazard funding

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Purpose

You are planning to meet with the Minister of Finance, Hon Nicola Willis, to discuss funding for geohazard data, information and monitoring.

This briefing provides you with information about the potential degradation of services if scaled budget options are adopted. Talking points in support of your meeting with Hon Nicola Willis are also provided.

Recommendations

The Ministry of Business, Innovation and Employment recommends that you:

- a **Note** how adopting scaled budget options will degrade geohazard services.

Noted

Dr Prue Williams

**General Manager, Future Research System
Labour Science and Enterprise
MBIE**

08 / 04 / 2024

Hon Mark Mitchell

**Minister for Emergency Management
and Recovery**

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Context

1. MBIE advised you on the funding options for geohazard services being developed for Budget 2024 [briefing 2324-2790 refers]. You have asked for information about the potential degradation of services if scaled budget options are adopted.
2. The products and services currently provided by GNS Science (GNS) through GeoNet and the National Seismic Hazard Model (NSHM) include:
 - The Geohazard sensor network – including the ongoing evolution and maintenance of the land and ocean-based sensor network to provide real-time information about geohazard events.
 - Data processing, management and supply to users.
 - The National Geohazard Monitoring Centre – “eyes on” 24/7 monitoring of geohazard events (earthquakes, tsunamis, volcanic eruption and landslides).
 - Specialised scientific advice to support response to events.
 - The NSHM – models ground shaking by location, which is used for risk management and during event responses.
3. Funding for GeoNet has increased in recent years. These increases reflect a move to a more sustainable, fully-funded model to support maintenance of the network and expected service levels. The investment has enhanced the value and importance of the data and services for both emergency response and risk management, and lifted resilience and responsiveness of the platform.
4. Options developed for the current budget process were cognisant of the need for fiscal constraint. The main options are summarised in **Annex One**.
5. Our understanding is that the Minister of Finance is seeking to reduce funding for geohazard services **Confidential advice to Government**
6. The current fiscal drivers for reduced funding need to be considered alongside the risks to public safety posed by reductions in the quality and comprehensiveness of geohazard data, information and monitoring.

Geohazard funding options

Sustaining the current level of services requires an uplift in funding.

7. The proposed additional funding is needed to take account of both:
 - cost pressures including inflation, salary shifts and ongoing maintenance of sensor network
 - a shift to full-cost funding, recognising that the cross-subsidisation of GeoNet services by GNS is no longer sustainable for GNS.
8. MBIE’s view is that the scaled option presented in the bid is the minimum option to maintain critical capabilities, including “eyes-on” 24/7 NGMC.
9. The NSHM is one area where there is the option to reduce funding for a few years, but it is likely that more funding will be needed in the future to update the Model. Reduced accuracy of the model over time will make decisions about risk management more difficult and may affect access to and cost of insurance.
10. You may wish to present an alternative budget proposal outlined in the table below, that reduces NSHM spending while keeping GeoNet funded at the level in the scaled option.

Stakeholder agencies have indicated they are comfortable with the lower interim NSHM funding.

Confidential advice to Government

Maintaining funding at levels approximately equal to 2023/24 (about \$25 million a year) will result in downgrading of services.

11. MBIE's view is that the option for around \$25 million is possible, noting the need to reduce spending, but has risks, including future costs to the Crown to rebuild the network.
12. This option would result in:
 - limited maintenance of the sensor network, with no upgrades or network adaption in response to new knowledge or technology. Over time this will result in the loss of specialist capability; technology becoming obsolete; risks to data quality, management and accessibility; reduced information available to manage geohazards risks; and degradation of geolocation data to support emergency responses. It will also increase the likelihood of system outages
 - monitoring of alpine fault and volcanic activity remains limited contributing to gaps in emergency response decision support
 - a transition away from 24/7 "eyes-on" monitoring to automated monitoring. NEMA considers that this option poses unacceptable additional life safety risk, due to potential effects on tsunami and volcano warning systems from an increase in the time taken to locate earthquakes, assess tsunami, and identify volcanic eruptions.
 - a smaller NSHM programme, - although sufficient to support confidence in the current model and critical capabilities.
13. GeoNet information is widely used, so the effects will be wide-reaching.

Reducing funding to levels below the current level will require decommissioning of parts of the GeoNet network.

14. If funding was reduced (for example to FY 2022/23 funding levels), there would be further service reductions that would lead to less use of the data and decreased value to NZ, such as:
 - decommissioning features of the public app and website
 - decommissioning on-call teams, making expert advice less available in an emergency
 - no incident management system for emergencies

- no communication and education programme
- no social media
- decommissioning some of the sensor network, for example decommissioning Tier 3 sensors would involve reduction in size of network from around 700 stations to around 200 stations, which would substantially reduce available information about geohazard risk.

The effects of reduced funding will accumulate over time.

15. Reduced data quality and comprehensiveness from a reduced network of sensors will adversely impact the value of the data for geohazard risk assessment for many different users. For instance, reduced data quality for the insurance sector may increase risk weightings, which may then affect access to insurance for people and businesses.
16. Cumulative effects of reduced funding will affect emergency management. The sensor network and data infrastructure required to support an effective geohazard warning system will deteriorate if maintenance and investment in renewal of the network are not sustained.
17. Loss of critical expertise will create long-term reductions in capability that will be difficult to recover without more funding. This represents a growing risk that the system will not be able to adequately support hazard management across reduction, readiness, response and recovery.

Confidential advice to Government

Annexes

20. Annex One: Funding options produced for the budget process.
21. Annex Two: Talking points

Annex One: Funding options produced for the budget process.

The Budget 24 bid for sustainable funding for geohazard data, information and monitoring provided two options.

Confidential advice to Government



Additional scaled options requested by Minister of Finance:

After bilateral meetings with the Associate Minister of Finance, these two additional options were developed.

\$25 million funding profile (similar to current funding levels)

(\$000s)	2024/25	2025/26	2026/27	2027/28 & outyears	Total over 4 years
GeoNet	21,200	22,100	22,000		Confidential advice to Government
NSHM	3,600	3,730	3,860		
TOTAL	24,800	25,830	25,860		

This option will have these effects:

- degradation of GeoNet over time: loss of specialist capability, technology becoming obsolete, risks to data quality, management and accessibility, with reduced information available to manage geohazards risks.
- changes to the National Geohazard Monitoring Centre - a shift to an automated monitoring centre (from a 24/7 operation). This option poses additional life safety risk, due to potential effects on tsunami and volcano warning systems.
- degradation of the GeoNet platform will have negative effects for critical geolocation data.
- the NSHM programme would be scaled back and would not deliver routine updates for the building and insurance sectors without “top-up” funding.

Reduced funding to \$12 million a year

This option represents a significant degradation of the services.

- The effectiveness of GeoNet as a geohazard warning system will be significantly compromised. The geohazards information systems will be significantly downsized, reducing the evidence available to help New Zealand manage geohazards risks and respond to earthquake, volcano, tsunami and landslide events.
- There will be negative effects for geolocation data systems.
- The Crown may face costs to decommission current infrastructure, as well as future costs to rebuild platforms and capability, especially after a significant event.
- The reductions to GeoNet will affect public users of the GeoNet website and app. It will also affect investor confidence (and reinsurance markets) as New Zealand is known to have high natural hazard risks and investors want to see clear information and mitigations in place.

Free and frank opinions