Community resilience in the face of natural hazards and climate change

Proposal

1. This paper highlights that the current policy settings for managing natural hazards have gaps which make effective responses to events arising from natural hazards difficult, and which fail to incentivise risk reduction and adaptation to changes over the long term. We seek your agreement to develop policy on how to manage risks from natural hazards and climate change, and a narrative to discuss at the next Local and Central Government Forum (the Forum). This will be overseen by a group of Ministers with a portfolio interest.

Executive summary

2. New Zealand is exposed to significant risk from natural hazards. Climate change will increase the frequency and severity of events arising from many of these natural hazards. As well as an increase in sudden events, there is a need to plan for incremental climate change impacts, such as sea level rise, where risks can be anticipated ahead of damage and loss.

3. At the last Forum we agreed we would jointly progress work with Local Government New Zealand (LGNZ) on community resilience and options to reduce risk to lives, assets and costs from natural hazard events, including a response to LGNZ’s proposal for a Local Government Risk Agency.

4. The management of natural hazards is covered by a range of legislation administered by different agencies. However, there are gaps in the policy settings which have led to inconsistent planning and incentives for reducing risk and adapting to changes over time. Current policy settings leave communities exposed to inconsistent and suboptimal management of both existing and emerging risks. The long term effect of these gaps is detrimental to community well-being.

5. The Climate Change Adaptation Technical Working Group (CCATWG) produced a key report in May 2018 on how New Zealand can adapt to climate change. The CCATWG highlighted the impact climate change is already having in New Zealand and signalled the need for immediate action, and to raise the profile and priority of adaptation nationally.

6. If we fail to address increasing levels of risk and more complex management issues, we will face increasing costs and impacts on communities, property and infrastructure. Recent work, such as the CCATWG report, has highlighted the need to ensure that the broad institutional framework of legislation, policy and service delivery remains sufficiently robust to manage risks from natural hazards.

7. We propose to convene a group of ministers to drive a community resilience work programme and prepare for a discussion at the next Forum (June 2019 to be confirmed). There is a pressing need for an all-of-government approach to strengthen
community resilience in the face of natural hazards and climate change. This will require clear leadership across a number of portfolios including: Local Government, Climate Change, Civil Defence, Finance, Building and Construction, Land Information, Environment and Earthquake Commission.

8. The fundamental goal of the programme is to support and enable communities to invest in ongoing risk reduction and adaptation activity. We intend to initiate work on who bears the risks and who pays the costs of reducing or managing risks across property owners, central and local government and insurance and risk markets.

New Zealand has high exposure to a large range of natural hazards

9. In a 2018 study of 43 countries, New Zealand was the second-most vulnerable economy to the impact of natural disasters as a proportion of Gross Domestic Product (GDP). New Zealanders live in a country at high risk from natural disasters.

10. While New Zealand has some well-developed settings and institutions to manage risks (such as the Earthquake Commission (EQC), natural hazards still pose serious risks to New Zealand's natural, financial, physical and human capital stocks. For example, the Canterbury Earthquake Sequence cost New Zealand 187 lives and around 20 per cent of GDP in direct costs, with similar social and environmental costs.

11. A significant number of New Zealanders live in areas which would not be built on today, given the level of risk from natural hazards in those areas. It is likely that property owners have not fully priced or considered this risk when making a decision about buying property. Equally, there is little evidence that property owners are actively investing in risk reduction. This may be because they:
   11.1 are not aware of the risks;
   11.2 assume that homes have been built in safe areas;
   11.3 assume local authorities will continue to invest in structural defences, such as stop banks, to reduce risk;
   11.4 assume insurance effectively provides cover for all risks and for all assets; and
   11.5 expect the government will act as the funder of last resort, covering all financial losses and/or providing financial assistance to enable retreat.

12. Intensifying existing development and expanding new development in high-risk areas will increase the potential losses arising from natural hazards. In some areas the hazards will be further exacerbated by climate change.

Climate change and other factors will increase these risks and their potential impact

13. New Zealand’s climate is naturally variable because of its location in the South Pacific Ocean, its small landmass and mountainous geography. These factors contribute to extreme weather, such as heavy rainfall, storms, coastal inundation and droughts. Climate change will increase the frequency and severity of these events.

14. More frequent and severe weather events are likely to increase recovery costs for serious disruption of critical infrastructure and building stock (including those on our coastal margins). Recovery costs will put pressure on the affordability of infrastructure maintenance and renewal.
15. Adapting to climate change was identified as one of the key areas of focus at the Forum in May 2018. The Forum noted the need for a discussion on how central and local government should work with communities to manage challenges such as increasing awareness of natural hazards, new vulnerabilities from climate change and dealing with the costs of risk reduction or avoidance, including managed retreat.

16. Local authorities have a statutory responsibility to identify and manage risks from natural hazards. We are concerned that, as natural disasters increase with climate change, the strain on local government resources will increase as they seek to manage natural hazards, or respond to natural hazard events.

17. LGNZ has recently commissioned Tonkin and Taylor to quantify the cost of local government assets exposed to sea level rise, estimated to be in the billions of dollars. An estimated 44,000 homes valued at $19 billion are at risk from sea level rise by 2050. Increasing natural disasters and extreme weather events will put pressure on insurance premiums for residential and commercial properties. Insurers may choose not to insure some properties.

18. In its final Recommendations Report, CCATWG highlighted the climate changes already experienced in New Zealand. CCATWG signalled the need for immediate action on climate change adaptation and to raise the profile and priority of adaptation nationally. The report recommends 21 actions to be taken to reduce climate change-related risks and build resilience to the effects of climate change.

Government currently addresses some, but not all, aspects of natural hazards and climate change adaptation

19. Natural hazard risk is managed across a variety of legislation, overseen by multiple agencies, but not all aspects are covered. Legislation includes:

Resource Management Act 1991 (RMA)

20. The RMA is New Zealand’s framework for sustainable and integrated environmental management. The RMA is based on the principle of sustainable management, which involves considering the effects of activities on the environment now and in future when making resource allocation and land-use decisions (e.g. planning, consenting). Avoiding, mitigating and remediying the effects of natural hazards are part of this framework. The RMA also gives local government an explicit mandate to have particular regard to the effects of climate change, and makes the management of significant risks from natural hazards a matter of national importance.

Local Government Act 2002 (LGA 02)

21. The LGA 02 sets out the framework for ensuring communities are supported by the effective provision of local government services. The LGA 02 requires that when councils undertake their role they have particular regard for the avoidance or mitigation of natural hazards.

Civil Defence Emergency Management Act 2002 (CDEMA)

22. The CDEMA promotes the sustainable management of hazards, including risks from natural hazards, across the “4Rs”. These are risk reduction, and readiness for, response to, and recovery from emergencies.
Building Act 2004

23. The Building Act provides the regulatory performance framework for the design and construction of buildings and infrastructure. Amongst its provisions, it places limitations and restrictions on buildings located on land subject to natural hazards, and provides territorial authorities with powers to manage dangerous buildings.

Earthquake Commission Act 1993

24. This Act establishes EQC, which administers a natural disaster insurance scheme for homeowners, and facilitates research and education on risks from natural hazards, and methods of reducing or preventing disaster damage.

Policy settings need to better support community resilience

25. Many councils are facing a range of risk factors which, taken together, are beyond their ability to pay. In addition, hazards may not have been adequately identified or planned for. As a consequence, a number of councils are seeking Government assistance to manage costs, particularly in situations where:

25.1 following a natural hazard event properties may be at high risk from natural hazards but property owners are not eligible for insurance payments, as the houses are not damaged; and

25.2 councils or property owners cannot seek legal remedies from owners of land whence the risks emanate.

26. The Government is currently addressing or managing three business cases in Kaikōura, Matatā and Franz Josef:

26.1 Following the North Canterbury Earthquakes in November 2016, Kaikōura District Council identified a number of properties where high risk to life existed from boulders on slopes adjacent to the properties. The Council has received Crown assistance (financial and expertise) to help manage the risk to life;

26.2 In 2005, a debris flow from the Awatarariki stream destroyed 27 homes in the Bay of Plenty town of Matatā. Whakatāne District Council subsequently explored engineering solutions but was unable to find a viable option. Over 13 years later, the situation is not resolved, with residents living in a high risk area; and

26.3 Franz Josef interests have unsuccessfully sought funding from the Provincial Growth Fund with its business case to relocate the whole town away from an area of high risk. Local interests, including the Westland Regional Council and the Westland District Council are now exploring other options to continue work on a business case.

27. In these cases, a natural disaster has occurred placing lives in serious danger from a repeat event, a previously unknown hazard has been identified which places lives at risk levels well above normally acceptable levels, or new research highlights the significance of the hazard. In each case the local council has asked for Crown assistance, as the cost of resolving the risk exceeds the council’s ability to pay.
28. We are aware of other areas, such as Granity, Ngakawau and Hector on the West Coast where councils are exploring using innovative solutions to cover the costs of retreating from areas affected by natural hazards such as severe coastal erosion. We expect the number of situations where councils cannot afford to cover risk mitigation to increase, increased by factors such as pressures from population growth and climate change exacerbating existing hazards.

There is no agreed framework to guide central government support for councils

29. Current legislation includes powers to restrict or manage access to buildings where there is elevated risk to life. However, there is no clear process for dealing with situations where a natural hazard risk has been identified after residents have invested in property but the council or owners subsequently want to avoid the risk. The lack of a clear process could lead to undesirable precedents.

30. Central government does not normally get directly involved in assisting property owners who incur losses as a result of natural hazards unless there is an intolerable risk to life\(^1\). Losses from property damaged by natural hazards are usually covered by EQC and private insurance. Local government has a legislative responsibility to reduce and manage natural hazard risk.

31. On the occasions that central government has been asked for assistance to property owners facing intolerable risk to life as a result of natural hazards, officials have drawn on the following principles:
   31.1 a clear, ongoing risk-to-life has been identified and independently verified as being unacceptable;
   31.2 an ongoing risk-to-life that was not reasonably predictable prior to a sudden onset event or has arisen from critical new knowledge about a known hazard;
   31.3 wider strategic and economic benefits to the Crown that offset the costs of providing financial assistance are recognised;
   31.4 a proposal must provide a cost-effective, robust and enduring solution that minimises the risk, and must show that due consideration has been given to alternative options;
   31.5 the Crown is seen to be acting fairly and reasonably, including considering the socio-economic circumstances of the affected community, and whether or not the proposal has been consulted upon and has the community’s support;
   31.6 all reasonable steps to manage, reduce or mitigate the impact of risks have been taken by the landowner and local authority; and
   31.7 no alternative options for funding risk mitigation exist – Crown assistance should be a last resort, and only the minimum amount needed to restore the community’s capacity for self-help.

32. These principles have been applied to individual requests for assistance and central government responses have tended to be ad hoc and situation specific. There is a risk that continuing ad hoc responses will set precedents which will be costly for the Crown to manage and lead to inconsistent outcomes for different communities.

\(^1\) The most significant exception to this position was the Government offers to property owners in the Christchurch red zone which were advanced for a number of reasons including the large number of properties involved, the scale of destruction in Christchurch and uncertainty about feasibility of rebuilding in some areas.
33. Ideally, formalising a set of principles will enable homeowners, businesses, councils and communities to make better risk reduction decisions because they know in advance what the Government’s position is on supporting risk management for natural hazards. Clarification of the roles and responsibilities of the different parties is also needed including central and local government, insurers and private property owners. The principles outlined above should be developed further using current live situations to test their suitability for an agreed framework for central government intervention.

**Current settings lack coherence and leave gaps**

34. While many natural hazards are managed effectively at the local level, gaps remain. If the Government fails to address increasing levels of risk and more complex management issues, we could be faced with systemic problems. Recent work has highlighted the need to ensure that the broad institutional framework of legislation, policy and service delivery is fit for purpose to manage risks from natural hazards.

35. Several bodies (for example the CCATWG, the Insurance Council of New Zealand, and the Technical Advisory Group (TAG) on Natural Disasters and Other Emergencies) have called for greater national coordination to support New Zealand’s resilience to natural disasters. They have noted that New Zealand has not had a strong record in investing in risk reduction. The CCATWG also highlighted the need for a more organised approach to climate change adaptation, including the establishment of an overarching strategy and a clarification of roles and responsibilities.

36. LGNZ released a think piece in 2014 calling for initiatives to provide a nationally-led and supported strategic direction for natural hazard management. Substantial work was undertaken on a proposal for a Local Government Risk Agency to pool and coordinate local government resources and to reduce the risk to assets, and the costs from disasters. This proposal will be considered as part of any work to improve the consistency of how we respond to natural hazards.

37. New Zealand’s management of natural hazards is reliant on communities most affected by a hazard deciding on the appropriate actions to take. Under this system, many risks of national significance are managed at a local level without reference to national risk tolerances and standards.

38. We are concerned that situations increasingly arise which test the ability of local communities to manage risks from natural hazards and, over time, adapt to climate change. Where local capacity is exceeded, assistance from central government is likely to be requested, particularly in the form of financial assistance.

**An all-of-government approach is needed to increase community resilience**

39. The Department of Internal Affairs operates a Central and Local Government Partnerships system function. This has convened an interagency working group on community resilience to manage current natural hazard cases and ensure collaboration between agencies when setting policies related to natural hazards and life risk.

40. The Community Resilience Working Group (Working Group) comprises the Department of Internal Affairs, Department of the Prime Minister and Cabinet, Ministry of Civil Defence & Emergency Management, Land Information New Zealand, EQC, Ministry for the Environment, Treasury, and the Ministry of Business, Innovation and Employment. LGNZ has also joined to ensure a central/local government approach.
41. The Working Group aims to provide a vehicle for addressing issues arising from natural hazards, and will in part provide the government's response to the CCATWG recommendations report. In particular it is working to develop a policy framework and broad options in order to:

41.1 manage existing high risk natural hazard areas through increased cooperation between central and local government;

41.2 reduce risk to life and built infrastructure vulnerabilities caused by natural hazards; and

41.3 reduce the impact and exposure to events including those exacerbated by climate change.

Proposed all-of-government approach to community resilience work programme

42. The initial focus of the community resilience programme is on intolerable risks to life safety, in particular, situations where people lack a viable pathway for effective resolution. This work will inform the concurrent wider work programme, which will develop policy settings to enable the long-term management of other vulnerabilities caused by natural hazards, including those that may be exacerbated by climate change.

43. The community resilience programme will look more closely at the roles that central and local government are to play in climate change adaptation and natural hazard management, as well as private property owners and insurers. The fundamental goal of the programme is to support and enable communities to invest in ongoing risk reduction and adaptation activity. In consequence, the interagency group will look at the following areas which will help to progress six of the recommendations in the CCATWG report:

Information to better support decision making

44. Having a reliable evidence base about natural hazards and climate change adaptation gives us the best chance of making decisions that provide the improved outcomes for communities. The initial focus would be on analysing the quality and interoperability of current natural hazards data sets and identifying the vulnerability of our communities to risks from natural hazards.

45. Future work would include standardising and making data widely available to ensure future developments can avoid areas of known risk.

Enhanced use of risk assessment

46. At present the level of risk to properties that will be realised in the short term across New Zealand is largely unquantified. This makes it difficult to understand the size and scale of the problem, to promote long-term adaptation and importantly to understand the fiscal risks to communities, local authorities and the Crown, which could be forced to act as funder of last resort. Work to be undertaken includes reviewing LGNZ’s case for a Local Government Risk Agency and reviewing risk assessment practices in New Zealand. The Working Group will also have input into the proposed National Climate Change Risk Assessment development process to be undertaken by government.

47. Future work will also identify options for quantifying the level of risk from natural hazards and climate change to properties across New Zealand. This would also consider tools to support councils and communities to undertake risk assessments.
Alignment and adequacy of regulatory frameworks

48. The current regulatory framework results in inconsistent outcomes and a reluctance to invest in adaptation to natural hazards, both in respect of planning for new development and existing communities. Councils are sometimes using certain regulatory tools inappropriately, which has legal risks. Proposed work includes reviewing existing legislation and policies to identify any gaps, conflicts and inconsistencies, and identifying potential options for better managing natural hazards and climate change adaptation through legislative and non-legislative methods.

49. Future work would also identify options for addressing current legislative and policy gaps, conflicts and inconsistencies, including a longer-term review of the RMA.

Facilitating adaptive responses by communities

50. Adaptive responses are the decisions taken about natural hazard management, either in response to disasters or in anticipation of them. The Working Group has identified two initial priorities: analysing current roles and responsibilities for decision making and identifying gaps; and ensuring new infrastructure investment, including Kiwibuild, takes into account risks from natural hazards and climate change.

51. Future work would include establishing effective thresholds for managed retreat and the role of existing use rights. It will also investigate whether local authorities have tools to respond quickly and effectively to natural hazards. The case for government intervention will also be explored where there are gaps or public good reasons for funding.

Insurance markets and risk financing

52. Insurance is one mechanism that contributes to the management of natural hazards in New Zealand, as it allows New Zealand to transfer the financial risk to international capital markets. It also reduces the exposure of the Crown to the cost of disaster recovery. Insurance also provides incentives to reduce risk, through mitigation of hazards. In fact, some private insurers are moving to higher risk-based premiums and considering the level of insurance they are able to provide in New Zealand. This will have direct and indirect impacts on our ability to effectively transfer our risk offshore and potentially also on our property markets.

53. This work programme area includes analysing the current state of the insurance markets for natural hazards. Future work will evaluate the impact of private insurer risk-based pricing on New Zealand's insurance, housing, real estate and banking markets.

54. An all-of-government approach would complement a number of existing initiatives which develop community resilience. These initiatives include EQC’s forthcoming Resilience Strategy, MCDEM’s National Disaster Resilience Strategy and the DPMC National Risk Register framework. It would also complement the Government’s response to the TAG report by improving Government’s support for communities to manage risks from natural hazards and adapt to climate change.
Next steps

55. We propose to convene a ministerial group to oversee work on how to strengthen community resilience in the face of natural hazards and climate change. This work will be reported back to the Committee by the end of April 2019 with a suggested narrative, key issues and a broad set of options for discussion with local government at the next Local and Central Government Forum along with anticipated next steps.

56. The work would build on the principles detailed in paragraph 31 for a cross government approach to existing high-risk natural hazard areas drawing on the current natural hazard case studies and will address:

56.1 clearer assignment of roles and responsibilities across the system (including local government);

56.2 clarity around who bears risks and who pays the costs of reducing or managing risks across property owners, central and local government and insurance and risk markets;

56.3 increased coherence within the regulatory framework, and between regulatory and financial incentives; and

56.4 more consistent use of risk management and reduction approaches, including more coordinated use of information and data.

57. The ministerial group will include Ministers in the following portfolios: Local Government; Building and Construction; Climate Change; Civil Defence; Finance, Environment; Land Information and Earthquake Commission.

58. The issues discussed in this paper will affect a number of different sectors and stakeholders. As well as input from the ministerial group, the report to the Committee in April 2019 will require clear line of sight with other related work affecting local government such as the Three Waters Review and Productivity Commission Inquiry into local government funding and financing.

Consultation

59. The Ministries for the Environment, Business, Innovation and Employment, and Civil Defence & Emergency Management, the Treasury, the Department of the Prime Minister and Cabinet (Policy Advisory Group), Land Information New Zealand and the Earthquake Commission have been consulted on this paper.

Financial implications

60. There are no financial implications relating to this paper.

Human rights

61. There are no human rights implications arising from this paper’s recommendations.

Legislative implications

62. There are no legislative implications arising from this paper’s recommendations.

Publicity

63. No publicity has been planned for this paper.
Recommendations

64. The Ministers of Local Government and Civil Defence, and the Minister for Climate Change recommend that the Economic Development Committee:

1. note exposure to natural hazards is increasing due to growth in population, property and infrastructure and that risks to life and assets will also be exacerbated by climate change;

2. note that in the absence of an agreed framework, there is no consistent approach to cases where natural hazards cannot be adequately managed by property owners and local authorities and, as a result, central government intervention has been sought to address natural hazards at Kaikōura, Awatarariki (Matatā) and Franz Josef;

3. note that at the May 2018 Local and Central Government Forum, it was agreed that the Government would jointly progress work with Local Government New Zealand (LGNZ) on community resilience and options to reduce risk to lives and assets, and costs from natural hazard events, including a response to LGNZ’s Local Government Risk Agency proposal;

4. note that the Department of Internal Affairs is leading a Community Resilience group comprising the Ministry for the Environment, Ministry of Civil Defence & Emergency Management, the Treasury, Department of the Prime Minister and Cabinet, Land Information New Zealand, Ministry of Business, Innovation and Employment, the Earthquake Commission and LGNZ, to develop a policy framework and broad options to:
   4.1 manage existing high risk natural hazard areas between central and local government;
   4.2 reduce risk to life and built infrastructure vulnerabilities caused by natural hazards; and
   4.3 reduce the impact and exposure to events including those exacerbated by climate change;

5. agree that the work programme will focus on how communities can best be supported to manage risks from natural hazards and adapt to climate change through agency coordination and development of policy in the following areas:
   5.1 information to better support decision making;
   5.2 enhanced use of risk assessment;
   5.3 alignment and adequacy of regulatory frameworks;
   5.4 facilitating adaptive responses by communities; and
   5.5 insurance markets and risk financing;

6. note this proposed work programme will also progress six recommendations made by the Climate Change Adaptation Technical Working Group, and the NZ Productivity Commission Inquiry into Local Government funding and financing is considering the costs of climate change on local authorities;

7. note that the Ministers of the Environment, Local Government, Climate Change, Civil Defence, Finance, Building and Construction, Land Information and the Minister responsible for the Earthquake Commission each have interests in the management of natural hazards and climate change;
8. **agree** that the Ministers of Local Government and Civil Defence and the Minister for Climate Change convene the Ministers in recommendation 7 to coordinate and drive the community resilience work and prepare for a discussion with local government at the next Local and Central Government Forum along with anticipated next steps;

9. **invite** the Ministers of Local Government and Civil Defence and the Minister of Climate Change to report back to the Cabinet Economic Development Committee by the end of April 2019 with a suggested narrative and broad set of options for discussion with local government at the next Local and Central Government Forum along with anticipated next steps

Authorised for lodgement

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Hon Kris Faafoi  
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