



GOVERNMENT INQUIRY
INTO THE RESPONSE TO THE
**North Island Severe
Weather Events**

Report of the Government Inquiry into the Response to the North Island Severe Weather Events





This document may be cited as Report of the Government Inquiry
into the Response to the North Island Severe Weather Events

March 2024

All information is accurate at the time of publication.

Cover image: Hawke's Bay Flooding from the air. Source: NZ Police

Mihi Acknowledgement

**Tu noa ana ngā maunga
whakahī i te riu o te
whenua ia koutou ra ka
ngaro i te ao**

**Ngā manu whititua ka
wehe i roto o ngā iwi**

**Ngā poutokomanawa
o ngā whare maire a o
tātou mātua**

**Ngā whare kura. Ngā
nohoanga māreikura.
E pūao ai, e te ata
huakirangi, i huakina
mai ai te kai tiaki
tatau, ngā tatau maha o
Tikitikiorangi**

**I unuhia atu ai koutou te
hunga mate e te tapu o
Tua Whakarere.**

Tēnā koutou ngā mātāwaka puta noa i te motu, ngā rārangi maunga, tū te ao, tū te pō. Ngā iwi maha me ōnā karangatanga maha, mai Te Hiku o te Ika tae atu ki Te Waipounamu, whakawhiti ki ōnā taha, tēnā koutou, kia ora tātou katoa.

We are grateful to everyone who contributed to this Inquiry.

We acknowledge the courage of the people we met – those who were directly affected and community leaders who wanted to help. We know you still carry the burden of the experiences. In sharing your knowledge and talking to us about what you went through, your strength and generosity shone through.

The information provided by organisations and entities was valuable to understanding the systems, structures, and processes in emergency management in New Zealand. We particularly note the involvement of the National Emergency Management Agency (NEMA), key government agencies, local and regional councils and Civil Defence Emergency Management (CDEM) Groups, critical infrastructure entities, local support services, sector representatives, and local businesses. We know everyone involved in the immediate response undertook their duties with the best of intentions in difficult and complex circumstances.

We also thank the leads of current and past reviews on topics relevant to this Inquiry. The openness and honesty of the conversations ensured this report aligns and complements the significant work to date.

Throughout the course of the Inquiry, we were reminded of the 16 people who lost their lives or are yet to return home. To you and to your families, we give our respect.

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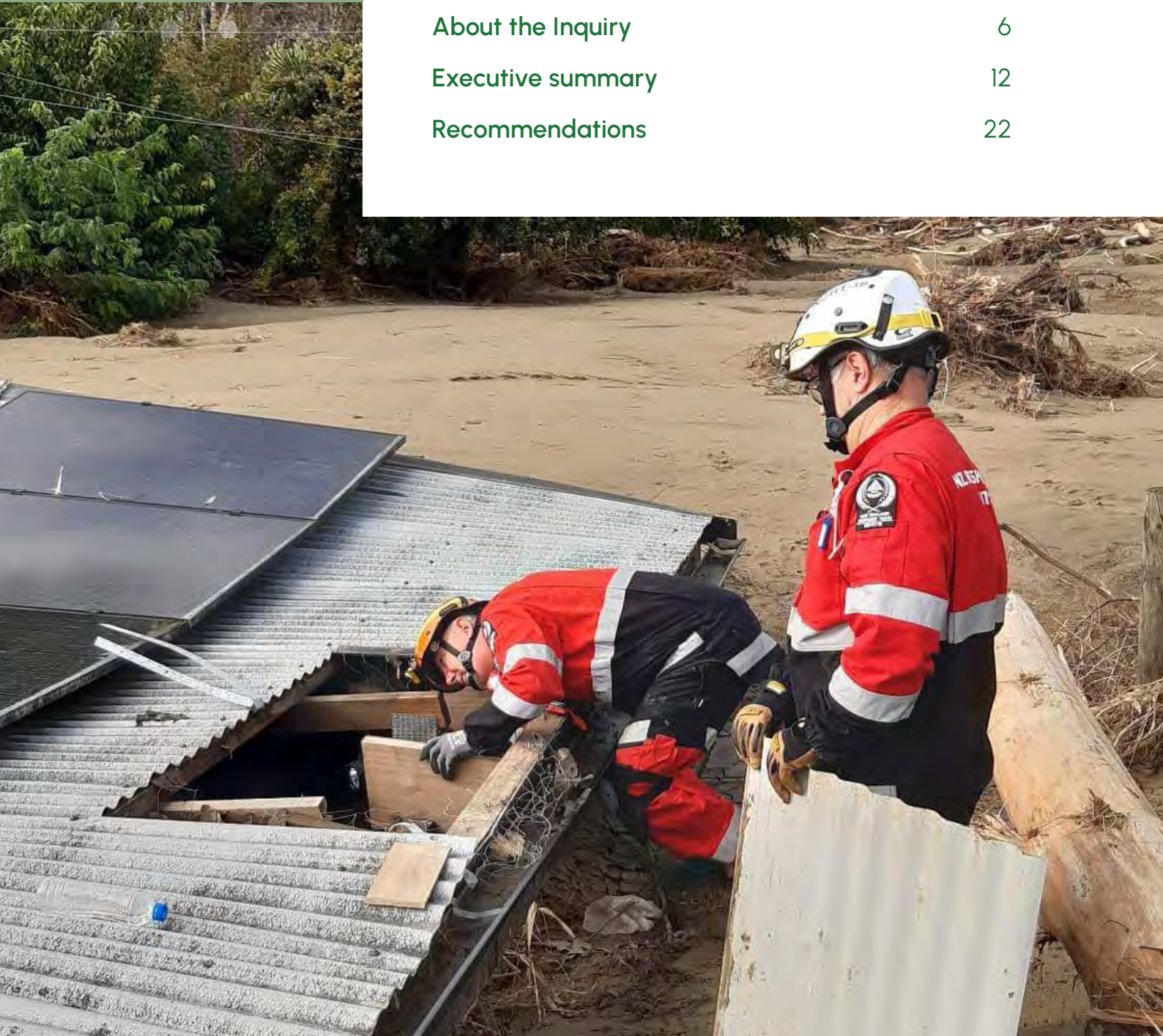
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Image: Search and Rescue search a house in Hawke's Bay. Source: NEMA

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Preface



John Ombler CNZM, QSO, Julie Greene, Sir Jerry Mateparae GNZM, QSO, KStJ (Chair), Rangimarie Hunia

1. In early 2023, three devastating weather events struck the North Island of New Zealand within a six-week period. The impacts of Cyclone Hale, the Auckland Anniversary heavy rainfall, and Cyclone Gabrielle will be felt for years to come. Fifteen people died, one person is still missing, and the lives of many more were forever changed. We acknowledge the gravity of these events, and the seriousness of our task.
2. Over the past eight months, our role was to identify lessons from the severe weather events, and to make recommendations for the design of New Zealand's emergency management system. The aim is to improve our country's readiness for, and response to, future emergencies.
3. The Inquiry takes a high-level view and does not seek to apportion blame to individuals or entities. Where necessary to identify lessons, we have made it clear where we found the actions of those involved fell below what was needed. In doing so, we equally acknowledge that many who had a role in the response did their job with the best of intentions.
4. Seen as a whole, the emergency management system did not enable people to prepare for and respond to the severe weather events as needed. In some places, it failed. Many communities and CDEM agencies were not adequately prepared, communication and warnings were non-existent or insufficient, and the capability and capacity of people and infrastructure was overestimated or lacking.

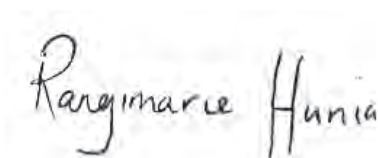
5. There were some successful aspects of the response, particularly in the way communities courageously supported each other. Councils, communities, and organisations that had planned and prepared ahead of time were better placed to respond effectively under the challenging circumstances.
6. As a country, we are not ready to respond to large-scale emergencies. Significant changes to the design, funding and operation of our emergency management system are needed.
7. The wide-ranging recommendations in this report are interconnected and should be considered as a package. We are frustrated that many of these recommendations are not new and are suggested in previous reviews.
8. Even if fully implemented, these recommendations alone will not result in a fit-for-purpose emergency management system. Without adequate investment in risk reduction and readiness, the impacts of disasters will continue to be devastating.
9. We gratefully acknowledge the individuals, communities, businesses, and government agencies who contributed to the Inquiry and shared their experiences. For many, the conversations evoked deep hurt, grief, and frustration. Your contributions were open, honest, and insightful, and we appreciate your generosity.
10. We also thank the Inquiry's secretariat led by Anita Balakrishnan, and Counsel Assisting Esther Watt, who supported us in our engagements and the preparation of this report.
11. It was a privilege to undertake this Inquiry. This report reflects the voices we heard, encourages the change that is needed, and proposes an approach to emergency management that puts people and their communities at its heart.



John Ombler
CNZM, QSO



Julie Greene



Rangimarie Hunia



Sir Jerry Mateparae
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About the Inquiry

12. In July 2023, the Minister for Emergency Management established the Government Inquiry into the Response to the North Island Severe Weather Events under section 6(3) of the Inquiries Act 2013.
13. The Inquiry's Terms of Reference state its purpose is to "ensure that the design of New Zealand's emergency management system is appropriate to support readiness for, and responses to, future emergency events" by identifying lessons from the following three events:
 - Cyclone Hale, 8 to 12 January 2023
 - heavy rainfall from 26 January to 3 February 2023 in the Northland, Auckland, Waikato and Bay of Plenty regions (hereafter referred to as the Auckland Anniversary heavy rainfall), and
 - Cyclone Gabrielle, 12 to 16 February 2023.¹
14. A copy of the Terms of Reference is attached as Appendix A.
15. As required by the Terms of Reference, interim recommendations were provided to the Minister for Emergency Management and Recovery by 6 December 2023. The recommendations in the final report are largely the same in their intent. Any changes improved clarity and accuracy following further considerations and fact checking processes.
16. The Inquiry's findings are based on common or systemic themes. In places, this report comments on the common experiences, challenges or actions of groups or organisations involved in emergency management readiness and response activities. These comments should not be read as referring to all organisations or groups falling within the relevant category. Examples include "councils", "CDEM Groups", "CDEM agencies" or "iwi".

The Inquiry focused on readiness and response

17. New Zealand's approach to emergency management is based on four areas of interconnected activity known as the 4 Rs: (risk) reduction, readiness, response, and recovery.
18. While reduction and recovery are not within the scope of this Inquiry, we have commented on these areas where there is a compelling reason to do so. This reflects that the 4 Rs are part of an integrated approach to emergency management, and improvements in one area can lift performance in other parts.

¹ New Zealand Gazette, "Establishment of the Government Inquiry Into the Response to the North Island Severe Weather Events". 7 July 2023. <https://gazette.govt.nz/notice/id/2023-go3055>

The 4 Rs are:²



Reduction

Identifying and analysing risks to life and property from hazards, taking steps to eliminate those risks if practicable, and, if not, reducing the magnitude of their impact and the likelihood of their occurrence to an acceptable level. For example, flood protection infrastructure such as stopbanks.



Readiness

Developing operational systems and capabilities before an emergency happens; including self-help and response programmes for the public, and specific programmes for emergency services, lifeline utilities and other agencies. For example, community plans.



Response

Actions taken immediately before, during or directly after an emergency to save lives and protect property. For example, swift water rescues.



Recovery

The coordinated efforts and processes used to bring about the immediate, medium-term, and long-term holistic regeneration and enhancement of a community following an emergency. For example, rebuilding a bridge.

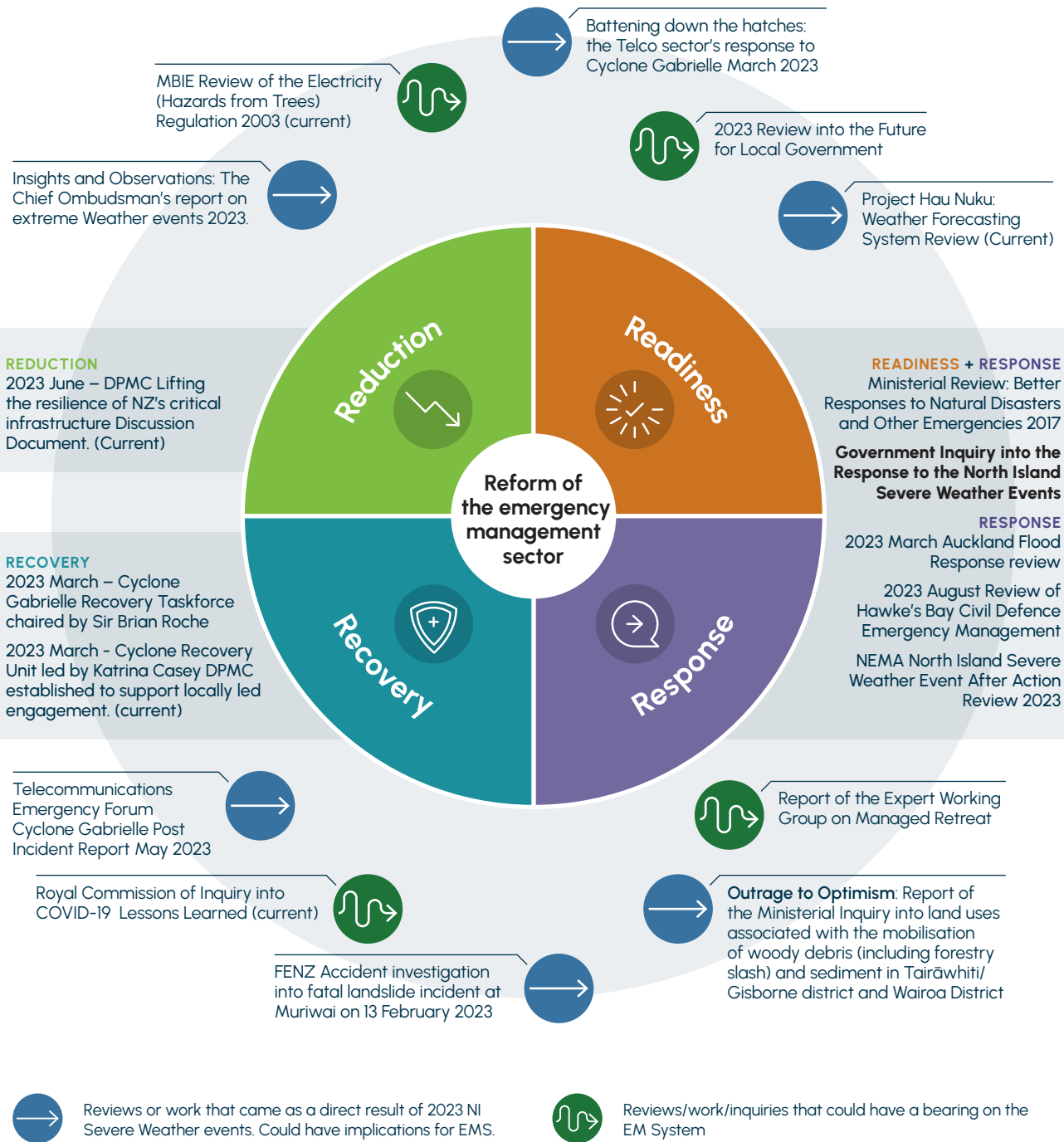
Evidence was gathered through meetings and written information

19. The Inquiry started considering evidence on 31 July 2023, and presented its report to the Minister for Emergency Management and Recovery on 26 March 2024.
20. Between August 2023 and February 2024, we considered over 200 interviews and information requests, received 144 submissions, and conducted desktop research. Appendix B provides a list of those who contributed to the Inquiry.
21. Engagement was a significant part of our process. We visited the regions most affected by the weather events and met with community groups, volunteers, iwi, hapū, sector representatives, and businesses. We interviewed leaders, experts and other staff from the entities involved in the emergency management system, including government agencies, councils, and emergency services.

2 National Civil Defence Emergency Management Plan Order 2015, section 2, 2015.

22. Multiple reviews, undertaken and underway, touch on matters relevant to this Inquiry. We met with the leads of these reviews to ensure we were learning from, and not replicating, the work relevant to this Inquiry. These reviews include:
- Ministerial Review into Better Responses to Natural Disasters and Other Emergencies (2017), chaired by Hon Roger Sowry
 - Ministerial Inquiry into Land Use in Tairāwhiti-Gisborne and Wairoa (2023), chaired by Hon Hekia Parata
 - Auckland Flood Response Review: Independent Review into Auckland Council's response to the January 2023 floods (2023), undertaken by Mike Bush, Bush International Consulting
 - Independent Review into the Hawke's Bay Civil Defence Emergency Management Response into Cyclone Gabrielle (due 2024), undertaken by Mike Bush, Bush International Consulting
 - Royal Commission of Inquiry into Lessons Learned from New Zealand's Response to COVID-19 (due 2024), chaired by Tony Blakely, and
 - Project Hau Nuku: Weather Forecasting System Review (due 2024), led by the Treasury and Ministry of Business, Innovation and Employment.

Emergency Management and the Wider Inquiry Ecosystem



Methodology, natural justice, and fact checking

23. Under section 32 of the Inquiries Act 2013, the Inquiry records are subject to the Official Information Act 1982, except for material that is subject to a nonpublication order, and documents that relate to the internal deliberations of the Inquiry. This is necessary to ensure people feel safe to contribute to the Inquiry in confidence. A non-publication order applies to:
 - all material in written submissions that identifies individuals or discloses confidential information
 - all written submissions where confidentiality is granted or requested
 - notes taken at interviews
 - any communication or material provided to or created by the Inquiry that contains personal information
 - adverse comments of persons or organisations who have not had the opportunity to respond, and
 - commercially sensitive material.
24. Section 14 of the Inquiries Act 2013 requires the Inquiry to take every reasonable step to ensure the report is fair and accurate. A natural justice process provided excerpts containing findings and statements that could be considered adverse were provided to those identified for an opportunity to respond before we finalised the report. No person or organisation received a complete copy of the Inquiry's draft report.
25. The Inquiry has carefully considered all the responses and comments received on the extracts of the preliminary draft report and made amendments as appropriate when producing this report.
26. The Inquiry considered it important to highlight community voices throughout the report. We did this by including peoples' experiences and observations, with their permission. We acknowledge that others may have differing views.
27. To ensure the accuracy of the information contained in the report, we checked material with identified government agencies, community groups, organisations, and submitters. The natural justice and fact-checking processes refined the accuracy and clarity of the report, while reinforcing our analysis of the evidence.

Alternative approaches to the design of an emergency management system

28. The Inquiry's preferred approach for the design of the emergency management system is to put communities and people at its heart. The Inquiry briefly discussed other approaches that could improve the design of the emergency management system.
29. Examples of other approaches include combining NEMA and Fire and Emergency (FENZ) into a new agency to deliver emergency management, creating a fully professionalised civil defence arm of the New Zealand Defence Force to deliver emergency management, emergency management responsibility being undertaken in its entirety by New Zealand Police, or assigning NEMA a permanent presence in each of the 16 regions. This last approach could be by NEMA becoming responsible for management of CDEM Groups within regional structures or, alternatively, NEMA having staff permanently embedded within CDEM Groups.
30. The challenge with these approaches is that they ignore the reality that emergencies happen in, and most affect, communities. They would likely create structural upheaval, shift leadership and management of roles and functions further away from communities, be ineffective, and not generate the necessary system shift. Therefore, the Inquiry did not explore the feasibility with the agencies mentioned.

Executive summary

The severe weather events caused devastation

31. Aotearoa New Zealand uncomfortably sits second on Lloyds of London's list of most exposed countries to natural hazards. It estimates the average cost of natural disasters to New Zealand's economy is 0.7% of gross domestic product (GDP) per year.³ When taken over the past 20 years, noting the impact of the Canterbury and Kaikoura earthquakes, the cost recovering from natural hazards is 4.3% of GDP per year. This cost is forecast to grow. Past and current planning decisions to allow development in medium to high-risk sites means more of our built environment is at risk from earthquakes, tsunamis, sea level rise, eruptions, and unpredictable and more frequent severe weather.⁴
32. Cyclone Hale, the Auckland Anniversary heavy rainfall, and Cyclone Gabrielle were collectively the most severe and destructive weather events in New Zealand's recent history. They resulted in significant devastation to property and ongoing trauma for communities. Most tragically, 15 people died, and a year on one person remains missing. The Treasury estimates the events caused between \$9 and \$14.5 billion of physical damage to households, businesses, and infrastructure.^{5,6}
33. For those outside affected regions, it is hard to comprehend the pace, severity, and scale at which the weather events unfolded, or the fear and uncertainty people felt as flooding, landslides, slash, heavy rain, and winds swept through homes, businesses, towns and cities. We heard many harrowing stories of people's efforts to assist others and survive in the immediate aftermath. We saw the ongoing and devastating grief suffered by so many people, affecting their families, livelihoods, and mental wellbeing. These costs are difficult to quantify and will be felt for a long time.

The emergency management system is not fit-for-purpose

34. Thousands of people participated in the response to the severe weather events. In challenging conditions, the actions taken at a community level were powerful. Iwi, hapū, community groups, businesses, voluntary organisations, and individuals rescued people and animals, repaired infrastructure, cleaned up properties and public spaces, and provided practical and emotional support. At the Civil Defence

3 Lloyds, *A world at risk: Closing the insurance gap*, 2018. <https://www.lloyds.com/worldatrisk>

4 IAG, *Meeting the cost of natural hazards: A briefing to the incoming government*, November 2023.

5 The Treasury, *Impacts from the North Island weather events*, 27 April 2023, 2023. <https://www.treasury.govt.nz/sites/default/files/2023-04/impacts-from-the-north-island-weather-events.pdf>

6 The Treasury, *Half Year Economic and Fiscal Update 2023*, 20 December 2023. <https://www.treasury.govt.nz/publications/efu/half-year-economic-and-fiscal-update-2023>

Emergency Management (CDEM) level, the Inquiry observed that those agencies that had carried out effective readiness planning activities prior to the events were better able to respond under the challenging circumstances.

35. Overall, however, there were significant shortcomings in the way the emergency management system functioned. The effectiveness of the response in each region varied substantially. In some places, warnings were received too late or not at all, Civil Defence Centres were not set up fast enough or did not meet the needs of communities, there was a lack of coordination between key organisations, and communication and decision-making was slow or non-existent. Ultimately, the system did not meet the needs of many New Zealanders.
36. Underlying the issues experienced during the response were several factors, including:
 - a lack of focus on and investment in readiness planning, activities, equipment, and supplies
 - limited emergency management experience, capacity, and capability, including experience managing large-scale events
 - councils not prioritising emergency management as a core function
 - a lack of shared situational awareness across councils, National Emergency Management Agency (NEMA), and emergency responders
 - communities and key organisations not being involved in planning activities
 - an ad-hoc approach to bringing in expertise from around the country, and
 - a significant mismatch between community expectations about what the emergency management response should offer and what it is able to deliver.
37. The Inquiry found the current emergency management system is not fit for purpose. It does not have the capacity or capability to deal with significant, widespread events that impact multiple regions at once.

There is a major disconnect between communities and CDEM agencies

38. We observed a striking disconnect between the way communities and CDEM agencies – particularly councils and CDEM Groups – viewed the response to the severe weather events. Many CDEM agencies had a perception or assumption that communities and volunteer groups knew their role in the immediate response. Often these expectations did not seem to be evident to the communities themselves.
39. Many CDEM agencies told us they already consider communities to be part of the emergency management system. They rely on communities to respond to the immediate impacts of an emergency while the CDEM response stands up. Many councils told us they responded appropriately and to the best of their capability given the extreme conditions and, in the case of the Auckland Anniversary heavy

rainfall and Cyclone Gabrielle, unexpected speed and severity of the weather events. We heard and observed that staff in councils and CDEM agencies worked hard to support communities in their areas, sometimes leaving their families for extended periods.

40. We heard from many community groups who stepped up to support their own communities' needs and gave their support to others without hesitation. This included efforts from Pacific communities and churches, and other ethnic community groups supporting a range of language and cultural needs. Whaikaha – Ministry of Disabled People told us that disabled communities were often well supported by local iwi, who were highly responsive through marae and provided support with minimal, if any, barriers.
41. However, many impacted people and communities told the Inquiry they were not aware they had a part to play. Most had no local community plans to put into action and, for those that did, there was a lack of worst-case scenario planning. We heard repeatedly from many people in affected areas that they felt let down by the CDEM response. Many community leaders told us they did not feel like they were a part of a formal response and were simply stepping up because they saw a need.
42. For many communities and individuals, the CDEM response was perceived to be absent or inadequate. Emergencies happen in communities, and people's experiences of the events are informed by their perceptions or interactions – or lack of – with CDEM agencies and emergency responders over the vital first 24 to 48 hours. There is an opportunity to strengthen the critical role communities play in an emergency response, including through ongoing public education programmes. There is also need for significant improvement within CDEM agencies, especially in readiness activities and community engagement.

Urgent system change is required

43. There is an urgent need for improvement. The emergency management system must change to meet the reality that Aotearoa New Zealand is facing more frequent and severe weather events.
44. The Inquiry supports the continuation of locally led emergency management, with regional and national entities playing support and coordination roles. However, our recommendations are for significant enhancements, including:
 - people and their communities as an active, purposeful, and legislated fourth sphere of the system alongside local, regional, and central government
 - a comprehensive and inclusive public education programme and warning system that is easy to understand and includes manual systems when digital technology fails

- a recalibration of NEMA's primary function to lead readiness and response, with additional roles to support recovery, and provide assurance across all 4 Rs
 - an increase in capability at all levels of the system to build depth and breadth of skills and experience, and a leadership framework focused on strong, visible command and control
 - a nationally mandated common operating platform and picture to provide real-time situational awareness across the system that can integrate with III tasking
 - better use of the skills and expertise already in central government, that are drawn on to bolster local responses as required, and
 - a shift in funding and general effort towards reduction and readiness activities.
45. Overall, the changes we propose will elicit an uplift across the entire system, at the community, local, regional, and national levels. This means:
- community groups and individuals are educated and prepared on how to respond in an emergency event
 - councils have sufficient staff well-versed in emergency management
 - more specialists that can be deployed to train and support local CDEM responses, and
 - competence throughout the system strengthened by assurance and stewardship.
46. As drafted, the Emergency Management Bill introduced to repeal and replace the decades-old Civil Defence Emergency Management Act 2002 (CDEM Act) is insufficient as a legislative basis for an effective, future-proof system. Changes to legislation alone will not result in a fit-for-purpose system – many tools and levers will be required.
47. This report sets out the findings of the Inquiry and makes recommendations to the Government to ensure the emergency management system is fit for the future. It includes guidance to the sector at the end of each chapter which can be implemented within the current legislative and organisational framework.

Key structural shifts

Put people and their communities at the heart of emergency management

48. Communities have a significant role to play in the readiness and response to emergency events in their area. They have a deep understanding of their local people, land, and history and are the first to bear the impact of an emergency event. The emergency management system is most effective when individuals, communities and entities are well-informed about local hazards, involved in readiness activities, and embedded in the official response.

49. The locally led, regionally coordinated, and nationally supported approach to emergency management is sound in principle, but overly simplistic. The current application of this approach simply does not work for severe or large-scale events. An inclusive, community-led emergency management model, grounded in legislation and supported by appropriate investment is needed. Local communities should be empowered, educated, and supported to build their own emergency resilience and readiness, including having suitable plans, supplies and assets.

Recognise the role of iwi Māori throughout the system

50. Some of the most effective and rapid responses to the severe weather events were coordinated and carried out by iwi Māori, including iwi, hapū, marae, taiwhenua, trusts, incorporations and whānau. They provided manaakitanga, critical equipment, response and wellbeing support, money, and facilities for welfare to all people in their rohe. Early activation of marae and community structures and networks meant iwi Māori responded more effectively than some councils. In places where the CDEM response was slow or lacking, and in communities of high poverty and isolation, they often stepped in to support the needs of people and utilised broad iwi networks to deploy supplies.
51. Iwi-led civil defence readiness, response and recovery are already in effect, and provide a living example of what can be done in an emergency. However, the inclusion of iwi Māori in formal local government emergency management structures is discretionary and, in some regions, non-existent.
52. Iwi Māori who have the capacity, capability, and desire to be involved in emergency readiness and response should be empowered to take on a greater role. To give effect to this, the role of iwi Māori in emergency management should be formalised and embedded within the one emergency management system, so it is reflected throughout the community, local, regional, and national structures. We endorse the recommendations of the 2017 Ministerial Review into Better Responses to Natural Disasters to recognise iwi contributions and legislate for iwi participation in readiness, response, and recovery.

Local government is at the coalface of readiness and response

53. Under the CDEM Act, local authorities (councils) must plan and provide for civil defence emergency management within their regions. We heard and observed that councils worked hard to support communities in their areas. Staff with emergency management duties often worked long hours in highly stressful situations, which took a considerable toll on their wellbeing and that of their families.
54. The Inquiry considers councils are best placed to understand and respond to the needs of people in their district or region. Local government must therefore continue to hold this important function. However, we observed some councils are actively choosing not to make their emergency management function a priority, and there is not enough focus on readiness activities across the board.

55. Councils need to fully deliver on their responsibilities and prioritise emergency management as a core part of their work. To do this, barriers need to be addressed, including a lack of capability and capacity, clarity about key roles and how they interact, and financial pressures. Some of these can be addressed through effective governance and leadership. However, councils cannot do this alone and support is required from central government.

Make better use of national resources

56. During large-scale emergencies, the emergency response draws on capacity and capability from across central government. Nonetheless, the Inquiry considers this system expertise is underutilised. For example, the logistics and operations capability of the New Zealand Defence Force, and the Ministry of Social Development's (MSD) capacity to coordinate and target welfare support at scale and speed should be drawn upon further.
57. The role of NEMA needs reassessment. It is a small agency that does not have the funding or expertise to undertake the full breadth of activities it is currently tasked with across the 4Rs. We consider NEMA would operate more effectively if its primary focus was on leading and directing readiness and response activities. This includes setting standards, training, and leading worst-case scenario planning. Functional leadership for reduction and recovery should rest elsewhere. NEMA should retain its system assurance role across the 4 Rs but needs support to build its capacity and capability to do this effectively.

Increase the focus on readiness and risk reduction

58. Readiness is about developing operational systems and capabilities before an emergency happens.⁷ Many issues that arose during the response stemmed from a lack of focus on, and investment in, readiness activities prior to the emergency events. It is an area of activity that should be carried out on an ongoing basis, not just immediately before the storm arrives.
59. The levels of readiness prior to the severe weather events varied across councils and other responding agencies. Those that had done more preparation were better off during the response. There needs to be greater emphasis on readiness activities across the entire emergency management system.
60. Increasing the focus on readiness requires intentional and deliberate actions by stakeholders. Councils and other organisations need up-to-date emergency plans. Effective system assurance would ensure plans are in place, achievable and reviewed regularly. A shift in investment towards reduction and readiness would enable councils and communities to better prepare, reduce risk, and build resilience. Targeted investment in reduction and community readiness would lessen the negative impacts on people, property, and businesses during and after an emergency.

7 *National Civil Defence Emergency Management Plan Order 2015, section 2, 2015.*

61. The focus of this Inquiry is on readiness and response efforts. However, even with a gold-standard system, readiness and response can only do so much. If homes are built on flood plains, they will flood. If critical infrastructure is inadequately designed or maintained, it will fail. As such, readiness and response need to be considered as part of an approach that prioritises risk reduction and takes a long term view of infrastructure, community resilience, and environmental needs.

Immediate actions to support system level shifts

Build capability and capacity across the system

62. Specialised skills are needed in an emergency. This includes operational proficiencies like response logistics, welfare coordination, and public information management. It also includes specific skills like carrying out rescues, operating temporary forward airbases, repairing infrastructure, and removing waste. Weather emergencies require specific technical expertise in meteorology and hydrology.
63. There are significant gaps in capability and capacity throughout all parts of the emergency management system, particularly at the local government level. Many councils rely heavily on staff who are not employed in emergency management roles to support an emergency response, some of whom are not sufficiently trained for these duties. Building capability and capacity needs to be a priority for the government, councils, and communities.
64. Even with well-trained staff, additional specialist capacity will need to be brought in to support councils during large-scale emergencies. The Inquiry considers this capacity should be provided through an expansion of the Emergency Management Assistance Team (EMAT). At least three full-time EMAT teams, located in key areas across the country, should be available to support councils and CDEM Groups to sustain the emergency response and provide relief for frontline staff. These specialists would help councils build capability by supporting training activities during the readiness phase.
65. People throughout the system also need the skills and training to ensure all aspects of an emergency response are inclusive, delivered with empathy, and address the practical and cultural needs of diverse communities. Appropriately skilled social and welfare support needs to be available in the months following a severe event.

Provide effective warnings to communities

66. There were issues with the information received by decision makers and the warnings received by the public. The lack of adequate communication between parts of the emergency response meant decisions were not timely, and the public did not always receive the necessary warnings to ensure physical safety and protect property. The challenges were exacerbated by the loss of some communications systems during Cyclone Gabrielle and the lack of back-up systems in places.

67. The sense that warnings were insufficient has undermined public confidence in councils, weather forecasting, and the wider emergency management system. A comprehensive warning system is needed that is flexible enough to cover most, if not all, natural hazards, with a consistent approach across the country. To support the warning system, communities should be empowered with the knowledge and resources to make locally specific decisions about when evacuation or other action is required and appropriate, while having regard to necessary safety considerations.

Improve situational awareness for decision makers

68. The Inquiry heard that a lack of situational awareness and timely, complete, and consistent information contributed to problems with the immediate management of the response in some areas, exacerbated by the lack of a common operating platform.
69. Organisations that had good systems were better able to keep track of the moving parts of the emergency response and deploy resources and expertise effectively. Those that did not have good situational awareness struggled to understand what was happening and where resources should be or were being deployed. This led to confusion, duplication of effort, the inability to get a true picture of the events unfolding in the region, a lack of timely communication to the public, and onerous reporting requirements.
70. A nationally consistent common operating platform is required that is mandated through legislation, funded, and used by all councils and government agencies. It is important that information is consolidated at local, regional, and national levels and shared in real-time between councils, emergency agencies, and NEMA. Relevant tasking from the IIR system also needs to be integrated.
71. The current National Crisis Management Centre (NCMC) is not fit-for-purpose and the back-up NCMC is totally inadequate. A large, purpose-built NCMC is required, with an appropriate back-up centre established outside of Wellington. The back-up centre could build off existing facilities that councils have for their emergency response. Regardless of where it is, the back-up centre must have sufficient provisions to operate as a fully functioning NCMC if the primary centre is unusable.

Restore critical infrastructure and enable the flow of goods and services

72. Cyclone Gabrielle caused significant damage to electricity infrastructure, telecommunications, bridges, roading, water services, and other critical infrastructure. This hampered coordination of the rescue effort. It also caused great distress for isolated communities and made it difficult for goods to be moved in and out of affected regions.
73. Quickly restoring critical infrastructure will better enable rescue efforts and the coordination and supply of emergency provisions. It would also minimise the disruption to domestic and international food and other supply chains and the general continuity of economic activity after an emergency, limiting the impact on New Zealand more broadly.

74. Some positive stories emerged following Cyclone Gabrielle, of utility companies quickly coordinating and dispatching staff, working on a high trust model to enable repairs when communications were down. The challenge arose where some parts of the system prioritised the delivery of non-urgent supplies over the restoration of electricity and communications, without awareness of the negative flow-on effects. The restoration of telecommunications and electricity should be prioritised after addressing safety, food, water, and other urgent needs.
75. The events highlighted the importance for CDEM agencies and other organisations to plan for large-scale emergencies. Councils, key businesses, and critical services such as health providers will be more resilient if plans are in place to function for a time without utilities like communications or electricity.

Fund readiness activities and improve the flow of response funding

76. Councils are largely responsible for funding emergency management activities in their areas. Central government's contribution, while substantial, primarily comes after an event has occurred, rather than to support readiness activities. Councils are already stretched financially, and so the focus is on response spending rather than readiness and reduction investment.
77. The Government needs to focus on funding reduction and readiness activities. Investing before an emergency will help build local resilience, reduce the scale and cost of the response, and ease the transition into recovery. It is the Inquiry's view that the Government should considerably increase the appropriation for the existing contestable fund that NEMA administers, which at the time of this report was just under \$900,000, to better enable councils and communities to build readiness and resilience.
78. Councils can apply for reimbursement of 100% of eligible welfare costs they incur in caring for displaced people. At present, these criteria are too narrow, and the process cumbersome. The welfare funding criteria should be reassessed. The funding could be more successfully administered by MSD, which has the necessary systems and expertise in place.

Image: Damage to Waikare Gorge, Hawke's Bay. Source: NZTA



Recommendations

Emergency management system design and structure

Recommendation 1: Put people and their communities at the heart of an integrated emergency management system

- A. Legislate for and invest in an inclusive, community-led emergency management model that explicitly recognises the knowledge and capability of iwi Māori, businesses, and local communities in emergency management.
- B. Utilise existing community-based emergency management structures and systems, such as those built through the COVID-19 response, to ensure community participation in planning and response.
- C. Build networks of trained and accredited local community leaders and volunteers, which extends beyond the currently recognised volunteer groups.
- D. Develop and invest in a comprehensive and ongoing education and public awareness programme to ensure people have a common understanding of how to prepare for (readiness planning) and what to do in an emergency.

Recommendation 2: Utilise the value of the wider government ecosystem

- A. Expand the New Zealand Defence Force's role to make better use of specialist skills (such as logistics and air coordination) during a significant civil defence emergency.
- B. Note the Inquiry endorses the Weather Forecasting System Review to (among other matters) identify changes in access to weather data.
- C. Require that timely and enhanced weather and hydrological forecasting is provided to and used by all councils and government agencies.
- D. Note the Inquiry endorses the work of the Department of the Prime Minister and Cabinet (DPMC) to lift the resilience of New Zealand's critical infrastructure.

Recommendation 3: Optimise the effort of iwi Māori to benefit all people in an emergency

- A. Note the Inquiry endorses the 2017 Ministerial Review into Better Responses to Natural Disasters and Other Emergencies recommendations:
 - I. *"Recognise the capability that iwi bring to emergency management;*

- II. *Legislate to enable iwi to participate in planning for and responding to a natural disaster or other emergency, and to bring more clarity to their role:*
 - *Appropriate iwi representatives to be part of the Groups Coordinating Executive Group;*
 - *Appropriate iwi representatives to be included on the Group Joint Committee".*
- B. Empower iwi Māori who have the capacity, capability, and desire to contribute to emergency management.

Recommendation 4: Invest in a refocused National Emergency Management Agency

- A. Legislate for and invest in the National Emergency Management Agency's (NEMA) primary function and purpose to hold system leadership for emergency readiness and response. In making these changes:
 - I. responsibility for leadership and coordination of critical infrastructure remains with NEMA for readiness and response only
 - II. leadership for reduction and recovery to be referred to DPMC to request that the Hazard Risk Board considers which agency should hold functional leadership responsibility, and to ensure there is a single point of contact for critical infrastructure entities on reduction
 - III. leadership for welfare coordination should sit with the Ministry of Social Development and NEMA's welfare responsibilities be clarified, and
 - IV. leadership for natural hazards and support for other emergencies remains with NEMA.
- B. Strengthen monitoring and assurance of the system:
 - I. provide NEMA with the necessary authority and powers to set standards and fulfil its assurance functions
 - II. invest in NEMA's monitoring and assurance function to ensure roles, responsibilities, and functions at all levels of the system are performed, and
 - III. require that organisations with responsibilities under emergency management legislation have effective business continuity plans and assets in place, and report to NEMA annually for review.

Leadership, roles, and responsibilities

Recommendation 5: Clarify roles in emergency management

- A. Explicitly clarify the roles of central, regional, and local levels of government in a national state of emergency.

- B. Clarify and strengthen, in legislation, the governance role of mayors and chairs during an emergency.
- C. To strengthen regional and local council governance accountability for readiness and leading response, require that:
 - I. the chair of the Civil Defence Emergency Management Group is the chair of the regional council, or the mayor in the case of a unitary council (noting that a chair or mayor can delegate within the regional or unitary council)
 - II. regional and local authority chief executives become the primary controller and can delegate to suitably qualified individuals, while retaining overall accountability, and
 - III. controllers acting under delegation are employed by, or seconded to, the council, and accountable to the council through the chief executive.

Recommendation 6: Increase capability and capacity in civil defence emergency management across New Zealand

- A. Increase command and control capability in emergency management governance, leadership, and controller roles.
- B. Implement a national programme for emergency management capability-building across New Zealand.
- C. Build a larger pool of skilled and experienced controllers, hydrologists, and other specialists, who provide expert information and can be seconded across New Zealand.
- D. Establish at least three full-time Emergency Management Assistance Teams (EMAT), that can be deployed to emergencies or to build wider sector capability.

Management of the immediate response

Recommendation 7: Build fit-for-purpose National Crisis Management Centres

- A. Move the National Crisis Management Centre to a new, improved, purpose-built facility.
- B. Identify and invest in a back-up National Crisis Management Centre in a city other than Wellington, potentially using an existing purpose-built civil defence emergency management facility.

Recommendation 8: Improve real time situational awareness for authorities in emergency events

- A. Legislate for and invest in a single common operating platform and picture for emergency management to be adopted by every council and NEMA.

- B. Review the I11 system to ensure information relevant to the emergency is shared between New Zealand Police, Fire and Emergency New Zealand, and ambulance providers, and supports efficient tasking across emergency response services.

Recommendation 9: Develop a comprehensive warning system for the public

- A. Develop a comprehensive warning system that is flexible enough to cover all natural hazards and empowers the public to act, even when technology fails.

Recommendation 10: Amend the three-day self-sufficiency guidance

- A. Improve and promote guidance that people and communities need to be self-sufficient for at least seven days (or 14 days for isolated communities).

Supply of goods and services and the place of critical infrastructure

Recommendation 11: Restore power and telecommunications early and improve electricity resilience

- A. Ensure controllers prioritise early restoration of power and telecommunications as a key enabler of the coordination and delivery of emergency services.
- B. Strengthen the Electricity (Hazards from Trees) Regulations 2003 to improve the resilience of the electricity network.

Recommendation 12: Recognise a wider group of critical infrastructure entities

- A. Formally recognise the following as necessary critical infrastructure sectors (in addition to current lifeline utilities):
 - I. supermarkets
 - II. waste management
 - III. stopbank and flood protection systems
 - IV. rural water, and
 - V. river management systems.

Funding settings

Recommendation 13: Prioritise strategic investment in reduction and readiness activities

- A. Increase the appropriation for the existing contestable fund that is administered by NEMA to support a significant uplift in community readiness and resilience across New Zealand.
- B. Note the Inquiry endorses recommendation 13b of the report by the Future for Local Government Review:
 - I. *"In order to prioritise and deliver on wellbeing, central government makes a greater investment in local government through... significant funding to support local priorities, place-based agreements, and devolution of roles."*

Recommendation 14: Update the policy settings, criteria, and process for funding and distributing response costs

- A. Move the administration of welfare related costs to the Ministry of Social Development as the proposed leader for welfare coordination and reassess welfare funding criteria to cover a broader definition of welfare.
- B. Review the current reimbursement process for distribution of non-welfare related response and immediate readiness costs to allow funds to flow more freely (with appropriate oversight).
- C. Allow the Director of Civil Defence Emergency Management to approve ex-gratia payments (subject to clear criteria) for those situations where individuals/groups incurred costs during an emergency.

Image: Flooding across Tangiteroria, Northland. Source: NZ Police



Section Two

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Chapter 1: Introduction

We need to prepare for significant emergencies

1. Cyclone Hale, the Auckland Anniversary heavy rainfall, and Cyclone Gabrielle hit Aotearoa New Zealand in January and February 2023 – three severe weather events in a six-week period. These events impacted many regions at once and put significant strain on the operation of the emergency management system.
2. The severe weather events resulted in 15 deaths, and one person remains missing. They caused loss, anguish and mental distress, and billions of dollars in damage.⁸ A year on, communities and businesses around the North Island are still dealing with the wide-ranging impacts of the events.

“8 months on... where shall I start the nightmares occur frequently. The tears happen when I least expect it. I have to live on my category three property because I can't afford to go elsewhere. I still mourn for my lost / dead animals I am sick of meetings. I hate silt.”

— Pakowhai, Hawke's Bay resident

3. Severe weather events are becoming more frequent and intense with climate change.⁹ Over 30 states of local emergency were declared for severe weather or flooding in the five years from 2018 to 2023, more than double the number of declarations compared with the five preceding years.¹⁰ In addition to severe weather events, natural hazards like earthquakes, tsunamis, and volcanic activity can occur with very little warning. The National Emergency Management Agency (NEMA) has warned that, “While devastating to the communities impacted, Cyclone Gabrielle can be considered as a moderate scale event when compared to what New Zealand could experience”.¹¹
4. Everyone living in New Zealand needs to be prepared for large scale emergencies. The next event could affect any community, turning lives and businesses upside down. By making the system fit for purpose and prepared during “peacetime”, we will be much better placed to respond in a crisis.

8 The Treasury, *Impacts from the North Island weather events*, 27 April 2023, 2023.

9 Ministry for the Environment, *Our atmosphere and climate 2023*, 2023. <https://environment.govt.nz/publications/our-atmosphere-and-climate-2023/state-of-our-atmosphere-and-climate/>

10 New Zealand Gazette, *Establishment of the Government Inquiry Into the Response to the North Island Severe Weather Events*, 7 July 2023. <https://gazette.govt.nz/notice/id/2023-go3055>

11 National Emergency Management Agency, *Briefing to the Incoming Minister for Emergency Management and Recovery*, 2023. <https://www.dpmc.govt.nz/sites/default/files/2024-02/bim-2023-nema.pdf>

Waimārama is focused on readiness

Twelve years ago, after a flood in Waimārama, Richard “Red” Gaddum saw a need for communities to better prepare for emergencies. At the time, Hastings District Council led the civil defence function for its district.

Red played an active role in building resilience in communities around Hawke’s Bay, creating 12 to 15 community civil defence groups, each with an identified leader. The groups met monthly to discuss civil defence matters including how communities could be more resilient, what resources and information would be needed, how communities would cope in an emergency, how to help each other, and how to communicate better. The groups had a strong bond, a good working relationship with Hastings District Council Civil Defence and felt well-prepared.

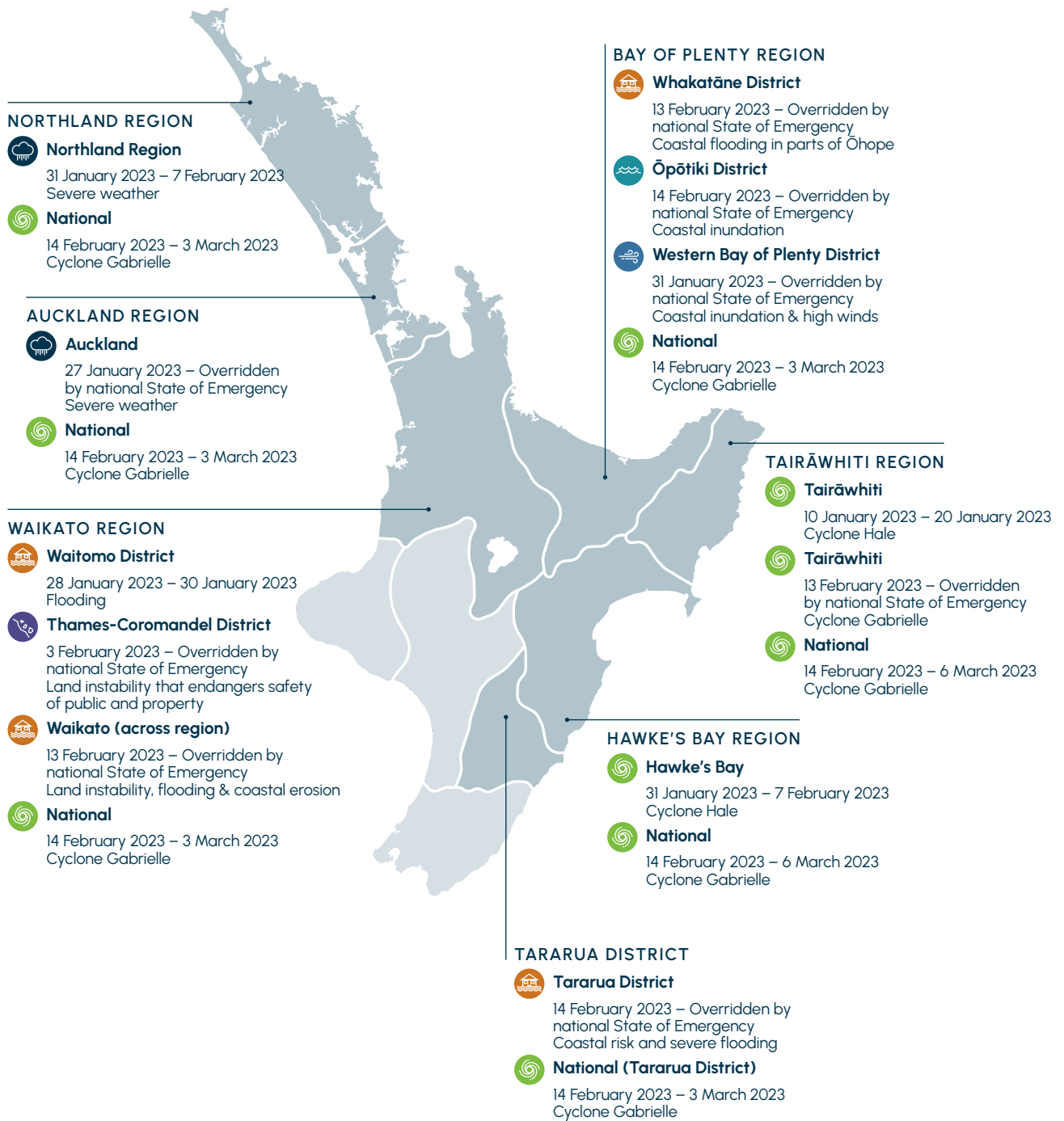
In 2018, reforms in the area saw civil defence responsibility move from the district councils to the Hawke’s Bay Regional Council. Red continued with Waimārama’s focus on civil defence.

He still works closely with the Waimārama community, which has a civil defence shed with a vehicle, a stinger (a civil defence alert system attached to a vehicle), a satellite phone, and evacuation plans. This includes tsunami evacuation plans, with four marked escape routes. Red continues to seek funding support for emergency container pods for the community. He is a strong advocate for communities to be actively involved in civil defence readiness planning and response.

The severe weather events and their impacts were the most serious in recent history

5. Together, the severe weather events most heavily impacted the Northland, Auckland, Waikato, Bay of Plenty, Gisborne (Tairāwhiti), and Hawke’s Bay regions, and the Tararua district. Each region was affected differently depending on the specific weather patterns and geography in the area and the reduction, readiness and response activities undertaken. The events within the scope of the Inquiry were not the only instances of severe weather in recent years. In the most affected areas, we were told that earlier events had cumulative effects on communities, land, and infrastructure.

Declarations of emergency for the 2023 North Island severe weather events



6. The severe weather events and the impacts were enormous. Cyclone Hale caused widespread flooding and slips, and washed-away slash clogged many rivers in Tairāwhiti. The Auckland Anniversary heavy rainfall brought 200–300mm of rain to Auckland,¹² overburdening the stormwater system and leading to flooding in adjacent areas.¹³ Parts of Northland had 200–300mm of rain, and some higher elevations on the Coromandel Peninsula had 300–400mm.¹⁴ Cyclone Gabrielle was one of the worst storms to hit New Zealand in living history,¹⁵ with a state of national emergency declared — only the third since the Civil Defence Emergency Management Act 2002 (CDEM Act) came into force.¹⁶
7. The Auckland Anniversary heavy rainfall and Cyclone Gabrielle were both under-forecasted,¹⁷ exacerbating their impacts and hampering the response. The Auckland Anniversary heavy rainfall was extremely fast-moving and sporadic, with intense rainfall that arrived like a series of flash floods around the city. Cyclone Gabrielle was forecast well in advance but its impacts, including around flooding and river levels, were severely underestimated in some areas.
8. The human toll of the severe weather events, and the long-lasting effects in communities, is significant. The experience of responding to the events left people traumatised and broken – some people told the Inquiry they did not expect to survive. Four people died during the Auckland Anniversary heavy rainfall. A further 11 died during Cyclone Gabrielle, and one person remains missing a year on. Figures from the Accident Compensation Corporation (ACC) show that as of June 2023, nearly 2,000 claims had been accepted for injuries related to Cyclone Gabrielle.¹⁸
9. Thousands evacuated their homes, many of which suffered significant damage. At the time of writing, 859 houses were red-stickered and deemed unsafe and 3,832 houses were yellow-stickered with access restricted following the three weather events. A further 10,000 require flood mitigation to protect them from future events.^{19,20} The Inquiry was told that homeless people and other vulnerable groups were disproportionately affected during the events, which exacerbated existing inequality.

12 Rainfall statistic provided to the Inquiry by MetService.

13 Auckland Council, Auckland Council Summary Annual Report 2022/2023, September 2023. <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-annual-reports/Pages/current-annual-report.aspx>

14 Information provided to the Inquiry by MetService.

15 MetService, "Tropical Cyclone Gabrielle – Event summary February 2023", MetService Blog, 19 February 2023. <https://blog.metservice.com/TropicalCycloneGabrielleSummary>

16 National Emergency Management Agency, "Declared States of Emergency". Retrieved 5 March 2024. <https://www.civildefence.govt.nz/resources/previous-emergencies/declared-states-of-emergency>.

17 Information provided to the Inquiry by MetService.

18 Public Health Communication Centre Aotearoa, Cyclone Gabrielle by the numbers – A review at six months, Appendix 1, 14 August 2023. <https://www.phcc.org.nz/briefing/cyclone-gabrielle-numbers-review-six-months>

19 Data on red placarded houses provided to the Inquiry by MBIE.

20 Data on flood mitigation of properties from The New Zealand Government, 1 June 2023. <https://www.beehive.govt.nz/release/govt-support-councils-buyout-and-better-protection-cyclone-and-flood-affected-properties>

“The 2023 storms highlighted the double whammy of the ongoing housing crisis and the lack of accessible dwellings as when emergencies strike, there are few alternative options for disabled people to turn to, especially if their homes are rendered uninhabitable.”

— A community group that supported disabled persons during the weather events

10. The recovery from the severe weather events is ongoing, and the effects are far-reaching. As of December 2023, the Treasury estimates damages to households, businesses, and infrastructure of between \$9 and \$14.5 billion.²¹ Initial estimates suggest about half of this relates to public infrastructure, like bridges and water assets.²² Huge losses suffered by primary industries were the dominant driver of an estimated \$400 to \$600 million loss of economic output over the first half of 2023. The financial impacts will be ongoing, with an estimated average \$100 million per annum loss in coming years due to factors like the loss of orchards and damage to crops.²³



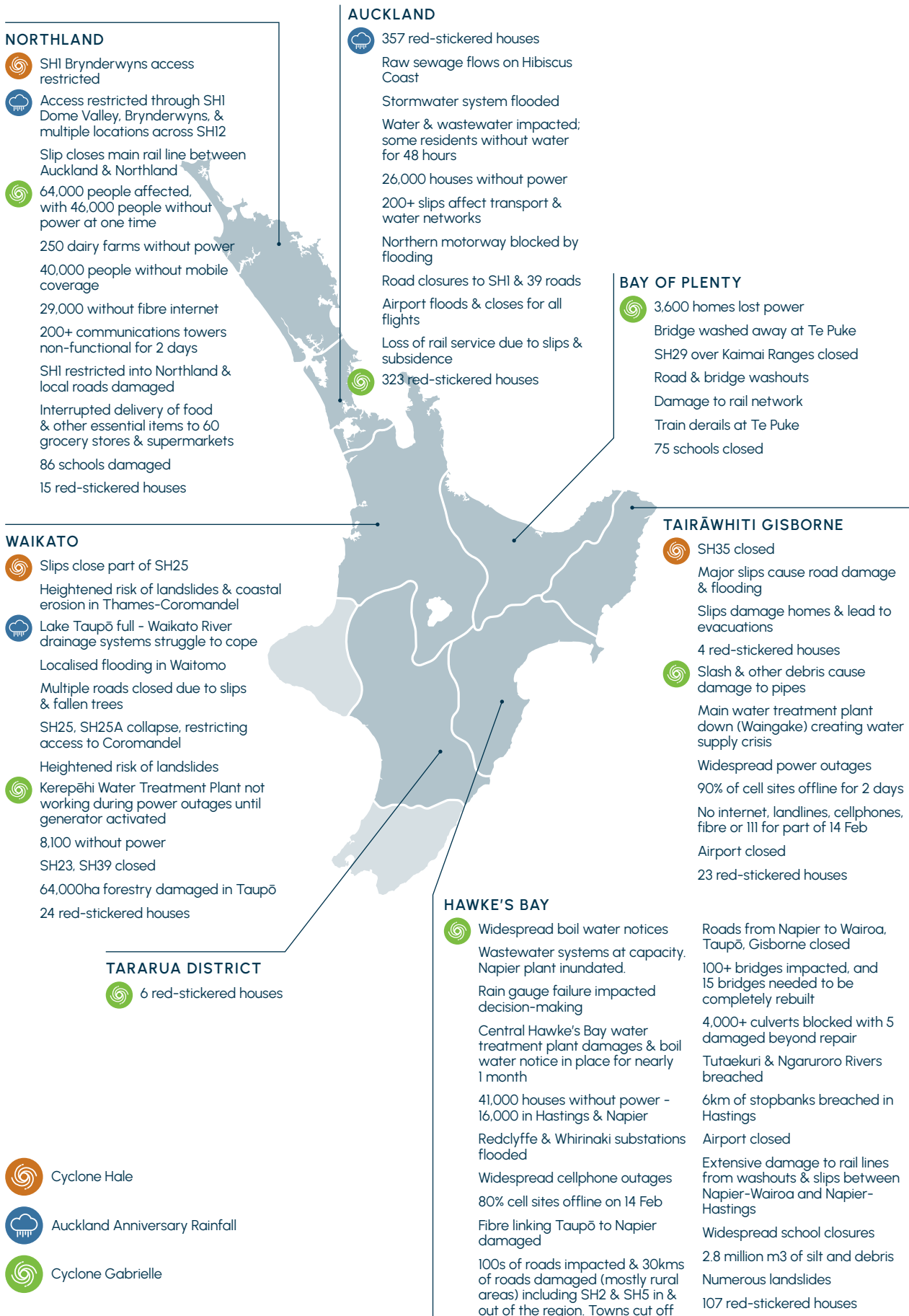
Image: NZDF rescues people from the roof of a house in Hawke's Bay. Source: NZDF

21 The Treasury, Half Year Economic and Fiscal Update 2023, 20 December 2023. <https://www.treasury.govt.nz/publications/efu/half-year-economic-and-fiscal-update-2023>

22 The Treasury, Impacts from the North Island weather events, 27 April 2023. <https://www.treasury.govt.nz/sites/default/files/2023-04/impacts-from-the-north-island-weather-events.pdf>

23 Ibid.

Key impacts of the 2023 severe weather events, as at March 2024



11. The facts above illustrate the scope and scale of the severe weather events. They are not exhaustive, and we acknowledge the individual experiences of the many thousands of people affected.
12. Throughout this report, examples from people and organisations affected by the events provide further detail about the devastating impacts and the heroic actions of the many people who stepped up. The Chief Ombudsman's report on the 2023 extreme weather events includes many more accounts from affected people and communities, further emphasising the toll on people and infrastructure.²⁴

The emergency management system faltered under pressure and failed in places

13. Thousands of people contributed to the response to the severe weather events. A huge range of actions were required to save lives, coordinate the response, support displaced people, and restore critical infrastructure. The Inquiry recognises the efforts made by all those who had a role in such difficult circumstances.
14. The events stretched the emergency management system beyond its limits. The Inquiry considers that, as a country, we are not adequately prepared for severe weather events or large-scale emergencies affecting multiple regions at once. Complacency among the public remains high. Organisations with legislated civil defence emergency management responsibilities lack the depth and breadth of necessary skills and experience to adequately respond in a significant event. More information about the organisational structure of the emergency management system is provided in **Chapter 2**.
15. Many of the issues that arose during the severe weather events stemmed from a lack of focus on, and investment in, reduction and readiness activities during 'peacetime.' Readiness activities across the system can significantly alleviate the harm and adverse consequences of an emergency event and enable a smoother transition into recovery.
16. The emergency management response relied heavily on the goodwill and effort of communities. Neighbours, iwi Māori, faith-based groups, and local businesspeople were often the first to respond. They stepped up to raise warnings, assist with evacuations, rescue people and animals, and provide supplies to people in need. Many people carried out these tasks in what they perceived was an absence of formal response, while Civil Defence Emergency Management (CDEM) agencies considered many of these actions part of communities' emergency management role.

“Living through this experience has brought me closer to my community but really shown me how disjointed, dysfunctional, self-centred, self-serving local and central government and all the groups that are supposed to help us are.”

— **Hawke's Bay resident**

²⁴ Peter Boshier, *Insights and Observations: The Chief Ombudsman's report on extreme weather events 2023*, Office of the Ombudsman, December 2023. <https://www.ombudsman.parliament.nz/resources/insights-and-observations-chief-ombudsmans-report-extreme-weather-events-2023>

17. The official emergency management response at a local, regional, and national level varied between regions and across the events. The Inquiry observed that those CDEM agencies that had carried out effective readiness planning activities prior to the events were better able to respond under the challenging circumstances. CDEM agencies in Waikato, Tairāwhiti, and Bay of Plenty implemented their pre-developed plans and processes, worked from existing dedicated spaces, and had the tools to build effective situational awareness. They were also able to draw on their existing relationships and experience from previous events and exercises.
18. There were, however, also significant issues in some places. The Inquiry found that CDEM readiness and response activities failed to perform as needed in Auckland for the Auckland Anniversary heavy rainfall, and in Hawke's Bay for Cyclone Gabrielle. In Auckland, the lack of planning for the immediate response of a large-scale event exacerbated an already stressful situation. In Hawke's Bay, a lack of public warning systems and public notifications, including evacuation alerts, significantly impacted communities. These issues, and the contributing factors, are discussed further in **Chapter 4**. In both regions, specific reviews of the immediate response were initiated, and we expect these to contribute to improving future responses.^{25,26}

Some ethnic and faith communities did not feel supported

During the Auckland Anniversary heavy rainfall, some local ethnic and faith communities told the Inquiry they did not know what to do or where to seek help.

Some communities in South Auckland found their local evacuation and information centres were not responsive to language and cultural needs or faith practices, such as women having to share sleeping facilities with men. The barriers meant some people chose to remain in their flooded homes, isolated from help and support, and unable to access food and warmth.

Local community groups, like the Fatimah Foundation, stepped in to address some of these gaps. In a South Auckland evacuation centre, they provided translation support across multiple languages, established processes to contact families to ensure updates and instructions were understood, worked with evacuation centres to be culturally responsive, checked on people's wellbeing, and sourced help where needed.

The Fatimah Foundation's efforts made a notable difference in assisting local ethnic and faith communities, particularly women. However, the organisation reflected that its effort was not considered or recognised as a part of the official response.

25 Bush International Consulting, *Auckland Flood Response Review: Independent External Review of Events, January 27-29, 2023*, 31 March 2023. https://ourauckland.aucklandcouncil.govt.nz/media/je3potln/auckland-flood-response-review_january-27-29-2023.pdf

26 Hawke's Bay Civil Defence Emergency Management Group, *Independent Review into the Hawke's Bay Civil Defence Emergency Management Response into Cyclone Gabrielle*, Hawke's Bay CDEM website, n.d. <https://www.hbemergency.govt.nz/cyclone-gabrielle-review/>

19. The Inquiry found public trust and confidence in civil defence was undermined for people impacted by the weather events and those who responded in an official capacity. We heard from many people who believed their civic leaders and the CDEM response failed them. People from vulnerable communities were more impacted than the general population due to Civil Defence Centres that lacked accessibility and did not accommodate language and cultural differences, as discussed in **Chapter 4**.

There is a major disconnect between communities and CDEM agencies

20. Over the course of the Inquiry, we observed a disconnect between the way communities and CDEM agencies – particularly councils and CDEM Groups – viewed the response to the severe weather events.
21. We heard repeatedly from people in affected areas that they felt let down by the response. People we talked to had expected their councils and emergency services to respond quickly to provide resources, share clear information and warnings, and lead rescue efforts. In many cases, these actions were not visible at the community level, or took a long time to arrive. This left people feeling abandoned.
22. In contrast, many councils told us they responded appropriately and to the best of their capability given the extreme conditions and, in the case of the Auckland Anniversary heavy rainfall and Cyclone Gabrielle, unexpected severity of the weather events. We heard and observed that staff in CDEM agencies worked hard to support communities in their areas, sometimes leaving their families for extended periods. We also learned that councils' capacity, and understanding of their emergency management role, is significantly different from what many communities expect.

“There’s a widespread assumption that Civil Defence is a standing army that will come rushing out of the woodwork when the balloon goes up. That’s not how it works.”

— **John Price, Director Civil Defence Emergency Management (NEMA)**²⁷

23. CDEM agencies told us they consider individuals and communities to be part of the emergency management system. They are relied upon, in particular, to respond to the immediate impacts of an emergency while the CDEM response stands up. However, it seems many people are not aware of this expectation. NEMA also told us that many individuals, communities, and non-governmental actors “are not aware they have a role, or of what role they should play”. This was illustrated by some community members we spoke to who felt their actions to help were due to a failure of the official response, rather than because they were a part of it.
24. For many people in affected areas, the CDEM response was either absent or woefully inadequate. Emergencies happen in communities, and people’s

²⁷ Julie Jacobson, “NZ’s disaster readiness red flagged”, 7 February 2024, *The Post*. <https://www.thepost.co.nz/nz-news/350170084/nzs-disaster-readiness-red-flagged>

experiences of the events are informed by their interactions – or lack of interactions – with CDEM agencies and emergency responders over the vital first 24 to 48 hours. If people are expecting help and it does not arrive, it is inevitable they will feel let down.

25. There is an opportunity to strengthen public awareness of the critical role communities play in an emergency response. There is also room for significant improvement within CDEM agencies, especially regarding their readiness activities and engagement with the communities they serve.

Affected aged care facilities during Cyclone Gabrielle

Retirement villages and rest homes faced some common challenges supporting their residents during Cyclone Gabrielle.

Some residents in rest homes and retirement villages were without power and unable to adjust beds, store food and medication safely, or have oxygen administered. Some had trouble opening their garage doors to evacuate.

The Oceania Group and the Summerset Group operate retirement villages in Hawke's Bay. Oceania's Atawhai Village Rest Home and the Summerset Palms in Te Awa, Napier had to be evacuated due to flooding.

Both Summerset and Oceania had plans in place prior to Cyclone Gabrielle for managing an emergency or evacuation, along with resources like food supplies and backup generators. However, the evacuation of residents posed difficulties. Many Summerset Palms residents had moved to Hawke's Bay from other places, and were not familiar with the route to evacuation centres. Some residents in independent living could not find an evacuation centre so returned to their homes. Others returned home as the evacuation centre was crowded and did not cater well for the requirements of older people, with a lack of specialised food, sanitary supplies, appropriate seating, and mental health support.

Atawhai residents were evacuated to two different locations, stretching the capacity of staff to provide appropriate care for bed-bound patients.

Summerset suggested that alternative evacuation plans might be more appropriate for different situations. For example, it might be safer to move residents upstairs in the event of a flood, rather than transporting them to different locations.

Staffing was also a challenge, with some workers not able to reach work with bridges and roads closed. These workers were not considered to be essential workers and could not use restricted access routes between Napier and Hastings. Staff also had difficulty accessing fuel, or cash to pay for fuel. These challenges increased the risks to the safety of residents who needed specialist care.

Urgent system change is required

26. The emergency management system must evolve to meet the reality that New Zealand is facing more frequent and severe weather events. The requirements of communities should be at the heart of how New Zealand prepares for and responds to emergency events. The system needs to enable resources and skilled people from across the country to be drawn on as necessary.
27. The current emergency management system is intended to be locally led, regionally coordinated, and nationally supported, with delivery of emergency management devolved to a local level. This is sound in principle but overly simplistic. The current application of this approach simply does not work for severe or large scale events.
28. The Inquiry proposes significant enhancements across the system, including:
 - people and their communities as an active, purposeful, and legislated fourth sphere of the system alongside local, regional, and central government
 - a comprehensive public education programme and warning system that includes manual systems for when digital technology fails
 - a recalibration of NEMA's primary function to lead readiness and response, with additional roles to support recovery, and provide assurance across all 4 Rs
 - an increase in capability at all levels of the system to build depth and breadth of skills and experience, and a leadership framework focused on strong, visible command and control
 - a nationally mandated common operating platform and picture to provide real-time situational awareness across the system that can integrate with ILL tasking
 - better use of the skills and expertise already in central government, which can be drawn on to bolster local responses as required, and
 - a shift in funding and general effort towards reduction and readiness activities.
29. These actions and others are outlined in our recommendations to the Minister for Emergency Management and Recovery. A few of the recommendations will need legislation to mandate actions by some parties, including CDEM agencies. Others will need legislation to enable actions or further clarify roles and accountabilities. We have also identified many necessary changes that are operational and can be done within the current settings. This guidance to the sector is included at the end of **Chapters 2 to 6**.
30. The Inquiry's scope is not to provide specific advice about how to legislate. However, we note that in June 2023, the Government introduced the Emergency Management Bill (the Bill) which would, if passed, repeal and replace the CDEM Act. The Inquiry considers the Bill, as drafted, does not go far enough, and will not elicit the system-wide change required.
31. We did not consider it appropriate to include an in-depth analysis of the Bill. However, two aspects of the Bill warrant specific note. First, the Bill uses different terminology to previous Acts. While some of the wording changes are well

explained and appropriate, the inconsistent nomenclature could cause confusion. This includes the change from using the terms "local and regional" which aligns with the Local Government Act 2002 to using "area". Secondly, the Inquiry suggests the Bill is amended to remove the Planning Emergency Levels of Service provision, (section 57 of the Bill). This reflects industry feedback that the provision will be unworkable in practice.



Image: Damage to Waikare Gorge, Hawke's Bay. Source: NZTA

Uplifting the entire system

32. Changes to legislation alone will not result in a fit-for-purpose system – many tools and levers will be required. This includes increasing capability, implementing clear operational processes, addressing funding issues, and shifting mindsets. This report outlines a suite of changes at both the system design and operational level. This will make sure we have a more coordinated, responsive, well-led system that better supports people and their communities.
33. Overall, the changes we outline are intended to elicit an uplift across the entire system, from the community to the national level. This uplifted system will have:
 - community groups and individuals educated and prepared on how to respond in an emergency event
 - councils with sufficient staff well-versed in emergency management
 - specialists that can be deployed to train and support local CDEM responses, and
 - competence throughout the system strengthened by assurance and stewardship.

Thinking beyond readiness and response

34. The focus of the Inquiry is on readiness and response. These are vital parts of a bigger picture of how we prepare for and react to emergencies. With good readiness and response systems, some devastating impacts of an emergency can be mitigated. They should provide effective warnings, evacuations, emergency supplies, and a place to keep people and animals safe.
35. But even with a gold-standard system, readiness and response can only do so much. If people build on flood plains, houses will flood. If buildings are not up to standard or poorly located, safety will be compromised and repairing and rebuilding after an emergency will be more expensive. If critical infrastructure is inadequately designed or maintained, it will fail.
36. New Zealand needs a holistic and comprehensive approach to emergency management that extends beyond readiness and response. This includes ensuring critical infrastructure is resilient, climate change adaptation activity is planned and carried out, and local government has sustainable funding.
37. Despite the limitations to what the emergency management system alone can achieve, it is essential we make it as strong and capable as possible. It is a case of when, not if, the next severe weather event happens. Emergency management needs to be embedded in everyone's daily lives, now and for future generations.



Image: A major slip on SH25. Source: NZTA

Chapter 2: Emergency management system design and structure

Overview

38. Aotearoa New Zealand's hazardscape and small size requires an approach to emergency management that harnesses the country's collective knowledge and capability. It will not be sufficient to rely solely on specialised emergency management capability – everyone has a role to play.
39. To ensure the emergency management system is fit-for-purpose and can cope with future events, underlying changes to the system design and structure are needed to:
 - put people and their communities at the centre
 - recognise and enable the role of iwi Māori throughout the system
 - increase local government capability and resources, and
 - more effectively organise and deploy national-level emergency management functions and capability, including by refocusing the role of NEMA.
40. These system-level shifts need to be supported by a broad range of operational changes at all levels. This chapter focuses on the structural and design changes needed to the system. The operational changes required are covered in the remaining chapters of the report.

The current emergency management organisational structure

41. The current emergency management approach is underpinned by the idea that it is locally led, regionally coordinated, and centrally supported. It is a devolved model with three formal levels, outlined at a high level below.
 - Local: local authorities (councils) have responsibility for reduction, readiness, response, and recovery activities in their areas. In an emergency caused by a natural hazard like a flood or earthquake, the relevant council is in charge. If an event is beyond the district or city's ability to manage, they can declare a local state of emergency.

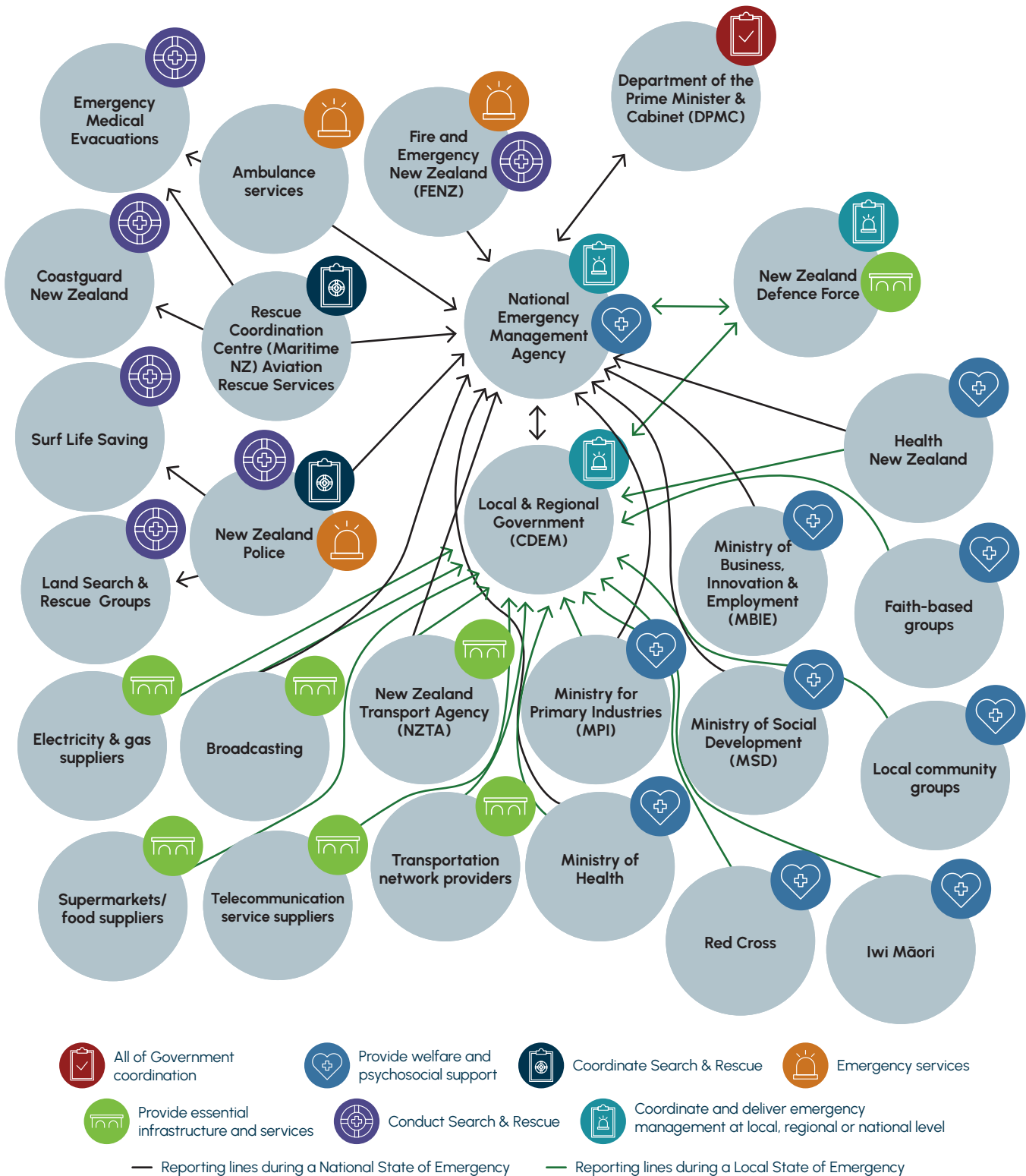
- Regional: each region must have a CDEM Group to provide for and coordinate emergency management in the region. The CDEM Group is formed by all the councils in a region (district, city, regional, unitary). Membership consists of the mayor or chair of each council, or a delegated elected representative. Regional councils also have a role in taking a coordinated approach to managing natural hazards in their regions.
 - National: NEMA provides strategic leadership across the 4 Rs of risk reduction, readiness, response, and recovery. It also has responsibility for coordinating across local, regional, and national levels during an emergency along with other specific roles outlined in the CDEM Act.
42. In the CDEM Act, emergency management roles are distributed across many organisations with shared and collective responsibility. In addition to councils and NEMA, these include lifeline utility providers, government agencies, health and disability services, and emergency services like the New Zealand Police, Fire and Emergency New Zealand (FENZ). In this report, we refer to organisations with legislated emergency management responsibilities as “CDEM agencies”.
 43. CDEM agencies collaborate in a number of ways. For example, each CDEM Group has a Coordinating Executive Group (CEG) which comprises local authority chief executives, a senior representative from the New Zealand Police, FENZ, and a provider of health and disability services, and other members as agreed by the CDEM Group.
 44. The work of CDEM agencies is guided by the CDEM Act and various supporting rules, plans and guides, including the National Civil Defence Emergency Management Plan 2015 (National CDEM Plan) and the Coordinated Incident Management System (CIMS).
 45. Overall, the Inquiry felt the system and the networks of roles, responsibilities, and authorities are complex and hard to navigate. Some of our recommendations aim to address this complexity. The guidance to the sector provided at the end of each chapter includes actions that could improve practice.

A note on local government terminology

46. The CDEM Act places various roles and responsibilities on local authorities (city, district and regional councils, and unitary authorities) that relate to emergency management. These roles are not the same across council types. In practice, the structure of local government varies widely across the country. Given the variability in structure across the areas affected by the severe weather events, the term “councils” in this report refers to all types of local government councils that hold some responsibility for emergency management readiness and response activities in a region. Where comments in this report relate only to a specific category of council, this is clearly stated.

The complex relationships of key organisations with emergency management responsibilities during response phases

The following diagram gives an impression of the complex relationship in the emergency management system. The diagram is indicative, not definitive. The complexity of the system makes it critical there are clear roles and, responsibilities, accountabilities, command and control lines, consistent and shared communications and information, and everyone involved participates in emergency management exercises and practice scenarios.



Shift 1: Put people and their communities at the heart of the emergency management system

47. People and their communities have a significant role to play in the readiness and response to an emergency event. The impacts occur, and the response starts, on the ground: in neighbourhoods, homes, schools, marae, farms, and offices. Every community has specific needs and context that will impact how an emergency is experienced. Relevant factors include the local geography, condition of infrastructure, local government structures, number of short-term residents like tourists or Recognised Seasonal Employer (RSE) workers, socioeconomic factors, and other pressures such as housing shortages.
48. The Inquiry heard CDEM agencies consider communities part of the emergency management system and assume they will step up and fulfil a vital role, especially during the immediate response period. However, people and their communities are often not aware they are expected to be part of the system, leaving them feeling underprepared and underserved by the emergency response.
49. Relationships between communities and CDEM agencies are also critical to ensure a strong response. We observed that the response to the severe weather events was most effective where communities and entities were involved in readiness activities and knew what was expected of them when the emergencies started. We heard that enhancing local relationships and building resilience, particularly within rural communities, remains a critical part of the future readiness work of Police (and other agencies) and New Zealand's ability to navigate a future event.
50. The resources and capabilities already in communities – deployed by neighbours, community groups, iwi, volunteers, and businesses – are essential to the immediate response. If people have what they need to survive and support their own wellbeing without help during the initial emergency response, they can free up the time and energy of emergency services to attend to the most severely affected people and communities. It is important that people know what types of situations they need to prepare for, and that there are plans in place for making best use of community resources in an emergency.
51. We heard from many affected communities that, after the experiences of the severe weather events, they have a strong desire to build their own emergency resilience, undertake readiness planning, and prepare for response. In some towns and cities, we heard this desire for self-sufficiency stems from a perceived lack of leadership or response from authorities. In more rural areas, communities know they must be self-reliant as help is likely to take a long time to arrive. The Inquiry recommends utilising existing community-based emergency management structures and systems, such as those built through COVID-19, to ensure participation in planning and response.

“In this leadership lull, communities grouped and found their own solutions.”

— Tukituki Landcare, Hawke's Bay

52. Community planning work is already happening in some areas, often supported by councils. For example, community response plans have been developed in Northland, iwi have developed plans in Tairāwhiti, and communities in the Wellington region and Hastings district have established plans for community emergency hubs. To support further community readiness, the Inquiry recommends a public education and awareness programme to ensure people have a common understanding of preparedness and expectations in an emergency. In addition, networks of trained local and community volunteer leaders could strengthen community capacity and capability. These networks should extend beyond leadership of currently recognised volunteer groups.

Community planning in the Northland region

There are over 50 local community plans tailored to local risk factors across the Northland region. These plans strengthen the response to repeated weather events. Thirty-four of these plans are specific to the Far North District Council and are regarded by the Council as a key to successful readiness and response.

Across the Northland region, emergency management specialists work with communities to develop plans and build readiness through local planning, despite limited funding and resources. The Far North District Council works with communities to update their local plans annually, with some community response groups self-managing and updating their plans more frequently. The Council feels the communities are well engaged, particularly in remote areas, but it can be challenging when key stakeholders move on.

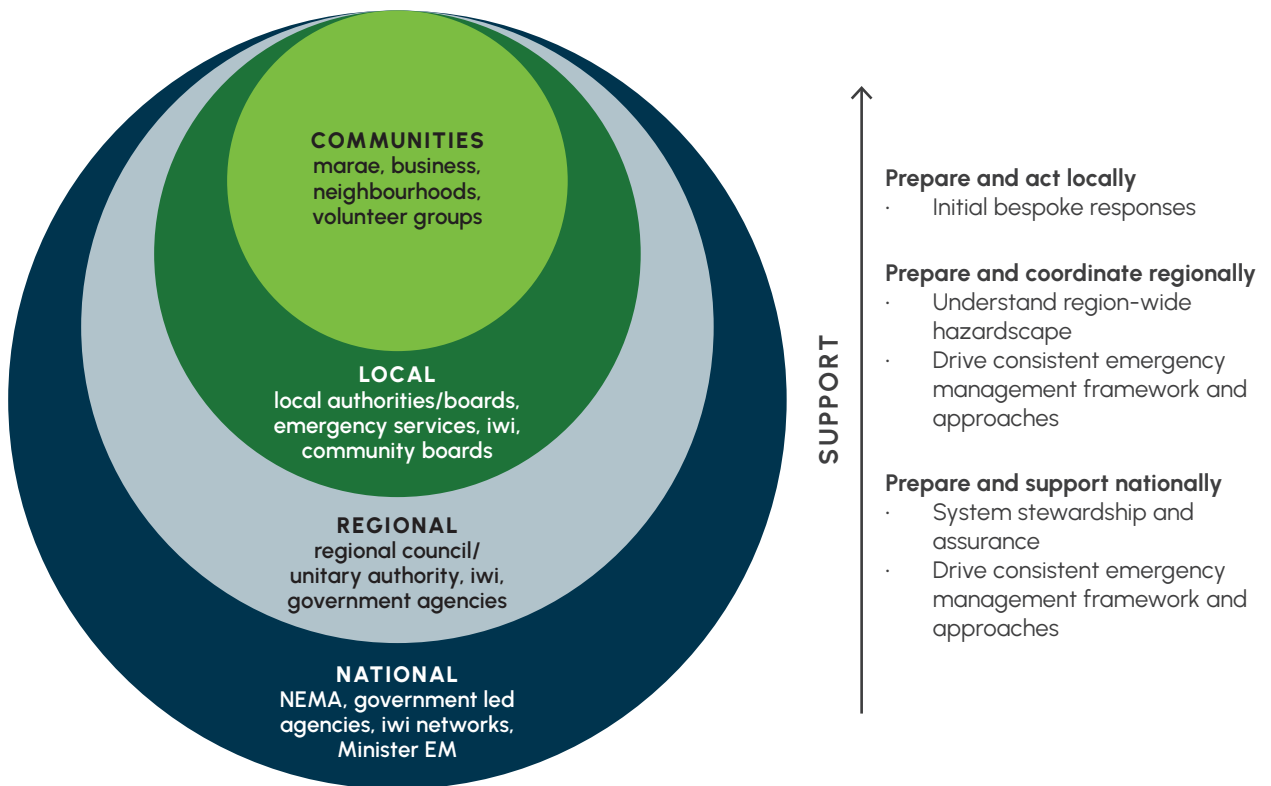
Kaipara District Council staff support communities to create Community Response Plans to prepare for local risks and hazards and increase their resilience using community generated ideas. As with the Far North District Council, this is done with limited funding and resources in the readiness phase.

Formally add a community layer to the system

53. In order to prepare and act locally, the emergency management system itself also needs to be based on a model that has people and their communities at its heart. It needs to explicitly recognise the roles and responsibilities of people and their communities in both readiness and response.
54. This includes elevating and making visible the roles of communities, and ensuring they have the knowledge to make informed decisions before and during an emergency. To support this, the emergency management system needs to be described in a way that clearly articulates the role that communities have. The Inquiry recommends there is a legislative basis and investment for an inclusive, community-led emergency management model so all parts of the system are geared towards supporting community outcomes.

55. The diagram below illustrates the four levels of response the Inquiry proposes. This approach draws on the local-first framework developed by the Future for Local Government Review in its final report to the Government, *He piki tūrangā, he piki kōtuku*. The local-first framework is based on the idea that roles and functions should be led and managed as close to communities as possible, unless there is a good reason not to.

Recommended emergency management structure: a four-tier model placing communities at the centre



Takanini Gurdwara supporting all communities

The Takanini Gurdwara is New Zealand's largest Sikh temple. When the Auckland Anniversary rainfall hit, members drew on their vast volunteer network and connected with other local volunteer groups such as David Letele's Buttabeen Motivation community health service, and the Manukau Māori Urban Authority. This meant resources and meals could be targeted to reach those in greatest need. Funding for the initiative was primarily through contributions from the Sikh community, with additional funding support from Ministry of Social Development.

The Gurdwara's response was not limited to Auckland. Recognising that communities in Hawke's Bay needed support during Cyclone Gabrielle, they sent pallets of food, supplies, and funding. A large outreach programme was provided in Hawke's Bay.

Daljit Singh, President of the Sikh Supreme Society, said while the Takanini Gurdwara had lots of resources to draw on, it could benefit from better connections with local and central government.

"When crisis hits, our community, like many others, will step up to do whatever is needed. During the Auckland heavy rain event we had many volunteers working huge hours – every day you could find over forty women here from 4:00am until 10:00pm preparing food.

We need local and central government to work with us and include us in preparation and planning before it's needed to better leverage off our resources, people, and community knowledge. Imagine what we could achieve if we all worked together?"

Shift 2: Recognise the role of iwi Māori throughout the system

56. Iwi Māori play a vital role in emergency management to support the needs of people, both within their rohe and across the motu. This includes iwi, hapū, marae, taiwhenua, trusts, incorporations and whānau. During the severe weather events they provided manaakitanga, critical equipment, response and wellbeing expertise, money, and facilities for welfare and other services, to people in their areas. Iwi also supported communities that have high deprivation and isolation, and utilised broad iwi networks to deploy supplies. We heard some of the community infrastructure and networks mobilised during the events were built-up during COVID-19 and were able to be activated more quickly than local and regional authority responses.
57. Iwi Māori that opened emergency centres drew on tikanga and kawa already in place. Marae are able to accommodate large numbers of people at very short notice, with everyone having a clear and understood role to play. Manaaki hubs at marae were open to anyone in the area who needed them. They offered a range of services to meet the needs of local communities, including food and hot drinks, phone charging stations, and emotional support. Waipatu marae in the Hawke's Bay,

was a manaaki hub that continued to provide support until early 2024, to people who were unable to return to their homes.

58. Despite their capability and expertise, Māori do not have a formal legislated role in emergency management. Their inclusion in local government emergency management structures is discretionary. We heard that, in some places, the role of Māori is well recognised but in others it is non-existent. The relationships CDEM Groups and councils have with iwi Māori are not uniform. We heard there is a sense of distrust by some iwi Māori towards CDEM Groups and CDEM agencies. In contrast, we note there was considerable Māori support for aspects of the civil defence emergency management response to COVID-19.
59. Iwi-led readiness, response and recovery efforts are already in effect, and provide a living example of what could be done in an emergency. The system needs to support the significant capacity and capability of iwi Māori to be deployed in an emergency.

The experience of Ngāti Porou

In Tairāwhiti, Ngāti Porou took what they learnt from Cyclone Bola (1988) and previous weather events to prepare their iwi and wider community for Cyclone Gabrielle and future disasters.

When Cyclone Gabrielle hit their region, Ngāti Porou mobilised quickly. They activated emergency hubs based with key marae, coordinated the efforts of local civil defence teams across their rohe, and stood up hapū response teams that had previously been mobilised for the COVID-19 response. Wider iwi infrastructure was also activated, such as the utilisation of Ngāti Porou farming and fishing entities for food and essential supply lines, and outreach to iwi across New Zealand for financial support, emergency equipment, fuel, and supplies. This included organising Starlink internet access to ensure communication could continue, and arranging for a credit system so people could access goods when Eftpos facilities were down.

Former Ngāti Porou Chair, Sir Selwyn Parata, said for a region like Tairāwhiti, an iwi-led emergency response approach makes sense for everyone in their community, regardless of culture.

“Events on this scale need leaders [...] We have a responsibility to look after our people and those that live among us in an emergency. We should be given the authority to do so. Gisborne Civil Defence and District Council don’t have the resources or outreach to provide sufficient support to the Coast.”

Notable in Tairāwhiti was the support that was galvanised from outside the region, with iwi and whānau relationships leveraged across the country. In Ruatōria, people put together a list of what was needed and, between intermittent communication outages, texted a photo of the list to whānau in Wellington. This was sent on to whānau, iwi and whanaunga (relatives) across the country who sourced or purchased the supplies. The community also coordinated its own transport and logistics to get the supplies to Ruatōria. The Inquiry was told that with no bureaucratic hurdles, the items reached people quickly and efficiently.

60. Aotearoa New Zealand's emergency management system needs to create and shape stronger alliances with iwi Māori to optimise efforts across the system to the benefit of everyone. The Inquiry considers the role of iwi Māori in readiness, response and recovery must be embedded within one emergency management system, so it is reflected throughout community, local, regional, and national structures.
61. The Inquiry endorses the recommendations from the Ministerial Review: Better Responses to Natural Disasters and Other Emergencies (2017) to recognise iwi contributions and legislate for iwi participation in readiness, response, and recovery. Overall, iwi Māori who have the capacity, capability, and desire to be part of the emergency management system should be empowered to take on a greater role.

Shift 3: Councils must give full effect to their emergency management responsibilities

62. Local government has significant emergency management responsibilities. The statutory functions of CDEM Groups include identifying and managing hazards and risks, risk reduction, developing and implementing CDEM Group plans, and raising awareness and promoting civil defence emergency management in their areas. CDEM Groups are required to provide trained and competent personnel and the supporting organisational structure for effective civil defence emergency management in their area.
63. Fulfilling these functions can place heavy demands on councils, especially in regions where there are regular weather events which require preparation and response. As weather events become more frequent or severe, councils will be under increasing pressure. We heard that emergency management expectations on councils have increased in the recent decade due to severe weather and earthquakes, and the operating environment has become more complex, such as heightened health and safety risks to navigate.
64. Despite the pressures, some councils have embedded emergency management as a core part of their work and are well-prepared for emergency events. This is particularly the case in areas where severe weather events already happen frequently. However, we also observed that some councils have not taken their emergency management role seriously, including not sufficiently implementing and investing in readiness activities. The Inquiry considers all councils around the country need to fully enact their emergency management function. This will include ensuring they have appropriately trained staff and enough capacity to carry out the required roles, as described further in **Chapter 3**.
65. Councils need support to fully enact their emergency management responsibilities. We recognise that many councils have significant funding pressures and competing priorities. Additional funding is required, particularly to support councils' readiness activities, as discussed further in Chapter 6. In addition, the Inquiry considers local capacity should also be strengthened through an expansion of the EMAT approach,

with full-time teams of specialist emergency management personnel available to be deployed around the country as needed. This is discussed further in **Chapter 3** and **Chapter 4**.

66. The Inquiry heard from some councils that they have reservations about local government being tasked with leading emergency management, given the constraints, funding challenges, and health and safety compliance requirements they already face. Nonetheless, the Inquiry considers it is important for the current locally led approach to be maintained. This ensures a 'local first' approach to emergency management that centres the specific needs, knowledge, and assets of each community. Our recommendations aim to ensure locally led solutions can be retained while leveraging additional expertise and economies of scale as required.

Shift 4: Make the most of national-level capability and capacity

67. There are some circumstances when it is appropriate and necessary to have national-level support in an emergency, including support to sustain the local responses. NEMA is a small agency with a broad remit, meaning it cannot realistically deliver on aspects of its current roles and cannot make the most of its strengths. It is the Inquiry's view that NEMA's role needs to be refocused, and the skills and resources of other government agencies should be drawn on more comprehensively.

Refocus and invest in the functions of the national agency

68. NEMA is a departmental agency hosted within the Department of the Prime Minister and Cabinet (DPMC) and the operational lead on natural hazards and infrastructure failure. It is also the steward and assurer of the emergency management system across all natural hazards and risks. NEMA has undergone rapid growth since it was established to replace the Ministry of Civil Defence and Emergency Management in December 2019. By February 2023, it had tripled its staffing levels to 154 full time equivalents.
69. During the severe weather events, the emergency management system, including NEMA, was overwhelmed and unable to respond as needed. We heard from a range of organisations, including some CDEM Groups and central government agencies, that NEMA lacked visible command, control, and coordination of the national response during Cyclone Gabrielle.
70. Part of the challenge for NEMA, and CDEM agencies generally, was the lack of real-time situational awareness about what was happening in affected regions. In part, this was due to communications being down during Cyclone Gabrielle. Of greater concern is the lack of investment in the technology to build a common operating platform that would provide real-time situational awareness. This issue, which is

further discussed in **Chapter 4**, is not new.²⁸ For too long this matter has sat in the 'too hard-basket' – it needs addressing urgently.

Focus NEMA's primary leadership function on 2 Rs rather than 4 Rs

71. NEMA's current staffing levels are inadequate to manage this country's natural hazardscape with confidence. At the time of the events, over half its staff had less than two years' experience in emergency management. Accordingly, NEMA's ability to influence the system and effect change is limited. It is time to be realistic about what can be asked of NEMA across the 4 Rs. This inquiry recommends that NEMA's primary responsibility is to lead and direct across readiness and response.
72. We note that NEMA describes its key functions as steward, operator and assurer of the system.²⁹ As steward it provides strategic leadership for risk reduction, readiness, response and recovery activities, and emergency management capability and capacity. As operator, it leads or supports the response to and recovery from emergencies while also supporting the operation of the system. As assurer it provides assurance that the system is fit-for-purpose.
73. The Inquiry agrees with NEMA's assessment that its lead roles in readiness and response are primarily operative and therefore directive. For reduction and recovery, its role is largely consultative and supportive – not directive.
74. The Inquiry considers there is a gap for strong directive leadership across reduction and recovery, and this role should be played by an entity other than NEMA. For small events, we note that the lead for recovery is usually the responsible local, regional or unitary authority with NEMA providing advice, coordination, and support. In large or severe events, recovery has been led by a separate government agency like the Canterbury Earthquake Recovery Authority (CERA) and the Cyclone Recovery Unit (established following Cyclone Gabrielle). We also heard from critical infrastructure entities who told us of their frustration at the lack of government leadership for infrastructure and reduction activities. At present, regulatory responsibilities are dispersed across multiple government agencies.
75. The Inquiry recommends that DPMC tasks the Hazard Risk Board to consider where the primary responsibility sits for the functional leadership of recovery and reduction. This should happen ahead of the Emergency Management Bill being reintroduced to the House.

Integrate the 4 Rs through assurance and stewardship

76. It is important that the 4 Rs are not in themselves siloed. NEMA's steward and assurance functions across the whole system are critical to maintaining the integrity and coherence of the emergency management system and ensuring that the 4 Rs remain connected and integrated. These functions and proposals to further bolster them, are discussed in **Chapter 3**. Investment in capability is urgently needed, alongside a strengthened mandate that gives NEMA powers to build deep and

28 Refer: Technical Advisory Group, *Ministerial Review: Better Responses to Natural Disasters and Other Emergencies*, Chapter 7, 17 November 2017. <https://www.dPMC.govt.nz/sites/default/files/2018-01/ministerial-review-better-responses-natural-disaster-other-emergencies.pdf>

29 National Emergency Management Agency, "About the National Emergency Management Agency", NEMA website, n.d. <https://www.civildefence.govt.nz/about/about-nema>

broad capability internally and across the system. If implemented well, system assurance will build public trust, confidence, and social licence.

Effectively organise and deploy other national-level capacity and capability

77. There is significant capability and capacity across New Zealand that can be drawn on to support the wide range of activities to be carried out during an emergency, including from a range of central government agencies and from the private and non-profit sectors. By drawing on this expertise and leveraging existing capability and resources, the system will be better placed to respond in an emergency.
78. There are specific areas where centralised expertise and coordination could be better utilised in the system. These are described elsewhere in the report:
 - New Zealand Defence Force (NZDF) having specialist expertise, especially around logistics and operations during a crisis, and providing emergency management support (**Chapter 3**)
 - Ministry of Social Development (MSD) taking on leadership for welfare coordination, including funding functions (**Chapter 3 and 6**)
 - delivery of enhanced weather and hydrological forecasting to all councils and government agencies (**Chapter 4**), and
 - DPMC taking a leadership role in the uplift of the country's critical infrastructure (**Chapter 5**).

Guidance to the sector

CDEM agencies should build strong relationships with local communities to assist them in preparing for a local emergency or to support an adjacent community. This will require a community development approach, including:

- sharing expert knowledge and information on known local natural hazards and risks (for example, land weaknesses, flood plains) with communities so they can develop effective, well-informed readiness plans
- building a framework of local community leadership, and
- funding to train and run exercises with local community volunteers so they know what to do in an emergency.

Chapter 3: Leadership, roles, and responsibilities

Overview

79. In an emergency, the many people and organisations with a role to play must be clear on what they need to do. Personnel with emergency management responsibilities should be trained and empowered to carry out their roles, and clearly understand how their role works with other emergency management response roles.
80. The response to the severe weather events exposed capability and capacity gaps in many councils, making it harder for the CDEM response to be effectively managed and coordinated. There is significant confusion about roles and responsibilities throughout all levels of the system, along with gaps in governance, consequence management, and system assurance.
81. An uplift of emergency management capability is needed across the system. A focus on building strong relationships during the readiness phase will ensure roles and responsibilities are clearly understood. Clarity in how regional coordination and local delivery work together is necessary, and the relationship between the two tiers needs to be tightened.
82. For some roles and functions, other government agencies have capabilities that could be better utilised to enable effective emergency management. For example, the role of NZDF should be expanded to utilise its expertise including in logistics and air coordination. The leadership of welfare coordination should be moved from NEMA to MSD.
83. Active leadership and stewardship across the system is needed to ensure people and organisations are prepared, equipped, and resourced. This will provide assurance that councils, organisations, and agencies are fulfilling their emergency management responsibilities.

Strengthen locally led emergency management

84. The Inquiry considers emergency management roles and responsibilities across local government are appropriate for the most part, although senior management and governance roles need clarifying and refining. It is the operationalisation of councils' emergency management roles that needs particular attention and investment. Councils need to increase their capability and capacity, and ensure staff are appropriately trained and well-versed in the CIMS framework and other key guidance.

85. There is significant variation in how local, regional, and unitary authorities implement their emergency management functions. Some regions, like the Bay of Plenty, Tairāwhiti, and Waikato, had relatively well established and embedded emergency management processes and ways of working at the time of the severe weather events.
86. In other regions, these processes and systems were virtually non-existent, as in Auckland during the Auckland Anniversary heavy rainfall. *The Auckland Flood Response Review* commissioned after the Auckland Anniversary heavy rainfall found "the Council's emergency management team appeared to lack the command, crisis leadership skills and operational experience to deal with an event of this complexity, particularly in driving mission clarity and taskings during the initial response."³⁰ The Inquiry found this sentiment was confirmed by what it heard.

Wairoa cut off and isolated for several days

Originally a Māori settlement, Wairoa remains predominantly Māori with 67% of the population of Māori descent at the 2018 census. Over the years, the Wairoa district has faced regional decline, socioeconomic challenges, and lack of investment.

Cyclone Gabrielle wreaked havoc in Wairoa, severely impacting the roading network and leaving the town cut off. With no food, water, power, fuel, road access or communications, the residents of Wairoa knew they were on their own and that no one was coming any time soon. Mayor Craig Little issued a personal message to those desperate for news of trapped family members. "Facebook me, private message me, text me". At the time of this report, the Mayor told the Inquiry that he remains unhappy with the lack of support provided to Wairoa at the time.

Tātau Tātau o Te Wairoa mobilised its resources and launched an emergency management response for Wairoa using its own funds.

Working with the Wairoa District Council, Tātau Tātau organised a private helicopter to carry supplies into Wairoa over the first four weeks. Board Director, Shayne Walker, sourced helicopters, food, water, fuel, generators, Starlinks, clothes and storage. Much of what was organised was through personal, iwi, and professional networks and distributed in Wairoa to those that needed help. Tātau Tātau felt it was effective because it wasn't hampered by the red tape of the official emergency response.

According to Shayne, the COVID-19 standups with Region Leads (mayors, iwi chairs, council chairs, chief executives, government agencies, emergency services, and community leaders) kept everyone updated on what needed to happen and who was doing what. Shayne reflected this did not occur over the period he was involved in the response.

30 Bush International Consulting, *Auckland Flood Response Review: Independent External Review of Events, January 27-29, 2023*, 31 March 2023. https://ourauckland.aucklandcouncil.govt.nz/media/je3potln/auckland-flood-response-review_january-27-29-2023.pdf

Build local capability and capacity to carry out roles effectively

87. Specialist emergency management capability is needed to effectively deliver readiness and response functions and activities at both a local and regional level. When a council stands up a response to an emergency, there are a broad range of functions that need to be carried out.
88. The Inquiry heard that most councils have limited full-time emergency management capability and rely on staff from across the council to deliver an emergency response. These staff, who are typically in other substantive roles, have varying levels of training and emergency management experience. The Inquiry heard that councils' capability is impacted by this lack of dedicated emergency management workforce, especially in small councils that cannot hire people in these roles on a full-time basis. For example, Central Hawke's Bay District Council had no full-time emergency management positions for the 12 months prior to the centralisation of Hawke's Bay emergency management in 2018. It currently has access to an Emergency Management Advisor for three days each week employed by the Hawke's Bay CDEM Group, as well as access to Hawke's Bay CDEM staff for other emergency management activities.
89. Most councils struggle to ensure that staff with part-time emergency management responsibilities are trained to the level needed. We heard that high turnover makes it harder to keep staff adequately trained in some councils. Without training, staff can be deployed into highly complex and difficult situations without the skills required to carry out the tasks expected of them. We observed that taking on these responsibilities can have significant mental health impacts. We heard the more serious and prolonged the emergency, the more non-trained staff are relied on to support the response.
90. Councils that had experienced multiple emergencies and developed embedded plans and relationships were better able to respond during the severe weather events. This included councils in the Bay of Plenty and Tairāwhiti, which have experienced CDEM Groups and CEGs respectively, and have implemented lessons from the many previous events that have affected the regions. In many councils, however, there is a lack of emergency management training, worst-case scenario planning and exercising, or work to clarify roles and relationships. This leaves people less well-prepared to execute their responsibilities in an emergency.
91. To improve emergency management at a local level, each council should identify the minimum level of capability and capacity needed to ensure an effective exercise of the emergency management function. It should be standard practice for staff to be recruited knowing that part of their role will be in emergency management. These staff should receive appropriate, ongoing training, including exercises that simulate the experience of operating in an emergency.
92. The emergency management system also needs to be sustainable, which means staff are supported to carry out their roles without burning out. Staff with emergency management duties often work very long hours in highly stressful situations, which can take a considerable toll on wellbeing.

93. Recognising this, increased surge capacity should be provided to councils by emergency management specialists. Some capacity is already available through the Emergency Management Assistance Team (EMAT), a group of experienced on-call personnel with substantive roles in other CDEM agencies. EMAT personnel have expertise in a range of areas and can be deployed around the country, as needed, on a short-term basis. Currently, 105 people from around the country are part of the EMAT team. The EMAT system is administered by NEMA.
94. The Inquiry considers the EMAT approach should be expanded to include full-time personnel with the ability to provide 24/7 assistance to responses, as required. We recommend at least three new teams of full-time personnel are established. These teams should be based in main centres and have skills and expertise in a range of areas related to emergency management. In addition to providing surge capacity as needed, full-time EMAT personnel would train others domestically to grow capability across the system. These full-time EMAT personnel would be in addition to the role of the on-call personnel who make an important contribution to emergency management.
95. To enable scaling up an emergency management response, at short notice, councils could also look beyond the staff and expertise available in house. There is significant knowledge in the private sector and communities that could be further drawn on as required. This could include private companies with vehicles or craft (and fuel supplies) that could transport people or equipment. Plans and memoranda of understanding should be put in place during the readiness phase to enable these skills to be drawn on, as required.

Build understanding of CIMS across local government

96. Council officials' understanding of emergency management roles and responsibilities could be strengthened and clarified through available guidance from the Director of Civil Defence Emergency Management, the CDEM Act and CIMS.³¹ At present, there is significant variation in the extent to which this guidance is understood and followed, both between and within regions. A lack of understanding or implementation of these frameworks can impact the ability of the response to function well.
97. CIMS is the official framework for coordinated emergency management across all responding agencies. All staff with emergency management roles should be familiar with the framework. The Inquiry considers the CIMS structure should be embedded into councils' way of working to reinforce training and build shared understanding and familiarity around how to operate during an event.
98. For example, the CIMS framework is embedded into the way Central Hawke's Bay District Council manages a wide range of incidents, such as infrastructure issues. This means staff, mayors, and councillors are familiar and practised with their roles and functions ahead of an emergency. This was not the case for all councils in Hawke's Bay. In USAID's technical report debriefing its support for the

31 National Emergency Management Agency, "Resources for elected officials", NEMA website, n.d., <https://www.civildefence.govt.nz/resources/resources-for-elected-officials>

severe weather events, it identified that many responders in the National Crisis Management Centre (NCMC) and Hawke's Bay Emergency Coordination Centre were not familiar with CIMS.

“This lack of knowledge and standardization is likely the most detrimental issue the USAID team witnessed on this response; there was no common understanding amongst the New Zealand responders of how a response team was supposed to operate.”

— USAID Emergency Management Support to New Zealand Technical Report, 2023³²

Councils need strong relationships with others who have a role – including communities

99. The emergency management system works best where there are strong pre-existing relationships between all those involved in readiness and response activities and functions at a local level and beyond. This includes interpersonal and organisational relationships that are embedded and formalised through agreements during the readiness phase.
100. Councils should build strong relationships with local communities (whether cultural, business, or geographic) and involve them in planning, readiness, and response activities. This is fundamental to supporting a more effective community-centred response to emergency management. Councils also need a broad range of relationships with other organisations prior to an emergency. This includes iwi, central government agencies, critical infrastructure providers and organisations that have skills and resources that can be drawn on in an emergency.
101. Relationships between CDEM agencies are also vital. The Panel observed that effective CEGs have well established relationships and a wide range of discretionary members. During the severe weather events, CEGs that had strong relationships executed their roles quickly and effectively. The Tairāwhiti CEG is an example of the benefit of role clarity, strong relationships, candid conversations, and a strong knowledge of local communities. It has a wide range of discretionary members including iwi chief executives and officials from the harbourmaster, Kāinga Ora, and MSD. The strong relationships built before the event were particularly important given the many intersecting roles of the CEG members during an emergency. We observed that members of the Tairāwhiti CEG knew each other well and were used to working together, making it easier for leaders and their teams to be effective, even when communications systems were compromised.

32 USAID, *Emergency Management Support To New Zealand Technical Report*, 22 March 2023.

Roles and responsibilities need to be clearly understood and executed

102. Elected officials, council staff and controllers have a critical role to play in emergency management. However, we heard there is not a consistent and shared understanding of what their roles, responsibilities and accountabilities are during an emergency response. These need to be clarified at a local and regional level so everyone involved in emergency response is ready to execute their roles in a coordinated fashion.



Image: Rescuers in Hawke's Bay floodwaters. Source: NZ Police

103. The Inquiry heard and observed that, as elected leaders, mayors felt the pressure and weight of responsibility in the lead up to and during an emergency. There was, however, inconsistent understanding about their role and governance responsibilities once a state of emergency had been declared. We heard that controllers who did not have senior management experience were less aware of the governance roles of elected officials. We also heard that local and group controller responsibilities and accountability lines are ambiguous, convoluted, and not clearly understood.

Mayors

104. Local authority mayors and chairs (or a delegated elected official) serve on the regional CDEM Group and are responsible for declaring a state of local emergency. During an emergency response they retain their usual governance responsibilities and accountability to communities. However, during an emergency there is variation in what the mayors' governance function looks like in practice. This lack of shared understanding left some mayors feeling disempowered or superfluous. The governance role of mayors and chairs, as outlined in NEMA guidance, should be strengthened, and clarified in legislation.

“Presently the Chair and Mayors are the governance on the CDEM Joint Committee and are responsible for all decisions, yet once a State of Emergency has been declared we effectively become redundant! All decisions are then made by the Group Controller or his offsider. So surely there must be a way to retain the governance, for checks and balances?”

—**Mayor of Wairoa, Craig Little**

105. Mayors need to be clear on the specifics of their local governance roles and how to best serve their communities during an emergency. This includes how they work with, and are supported by, the controller and other key roles, including the Public Information Management function.
106. Mayors are a known name and face in their communities and can provide a high level of trusted reassurance during an emergency. People look to their mayor or regional council chair for information and leadership. They need to be visible and provide good quality, timely, accurate communication to their communities and media, and respond proactively to mis- or disinformation.
107. Some mayors leaned into this leadership role during the severe weather events. They offered strategic communications, leveraged community contact networks, updated their local communities and wider audiences on what was happening, gathered intelligence on local needs and situational development from their local communities, and shared information with the controller to inform tasking decisions. However, the approach of mayors was not consistent across regions, and they received differing levels of support from the Public Information Management function.



Councillors

108. The Inquiry heard councillors face some of the same challenges and confusion as mayors, including a lack of clarity around their role. Councillors can perform many of the same visible community leadership and communication tasks as mayors and need to have clarity about their governance role in an emergency. They are expected to provide reassurance to communities and dispel misinformation, as well as identify high-level community needs, serve as a conduit between communities and emergency management, and liaise with other groups.

Controllers

109. The operational response to an emergency is led by a controller. Controllers provide advice to the person responsible for declaring an emergency. Following a declaration, they become responsible for the operational response. This includes directing and coordinating the use of personnel, information, services, and other resources. They have powers of evacuation, requisition, tasking, entry, and transport control.
110. The roles and accountability lines of the local controllers and group controllers are confusing and convoluted, reflecting their multiple reporting lines and layers of accountability. For example, group and local controllers are appointed by a CDEM Group and employed by the relevant local authority. Group controllers are often employed by a regional council, while local controllers are usually a local council employee with controller responsibilities in addition to their substantive role. This means controllers are accountable to the CDEM Group for their emergency management responsibilities but also have an employment relationship with the local authority that employs them. In addition, the Director of Civil Defence Emergency Management has a role in monitoring the performance of group controllers. In a national state of emergency, the Director and the National Controller can set the priorities to be followed regionally and locally.
111. In general, controllers with senior management roles had more effective working relationships with mayors and the council. The Inquiry heard they were able to lead more effectively and exert sufficient authority with senior managers and elected officials. In addition, controllers need to take account of the management of future consequences of their decisions, which means they need to understand budgetary management and the ongoing responsibilities of elected officials.
112. The Inquiry recommends that council chief executives become their organisation's primary controller, having overall responsibility and oversight for emergency management responses. Chief executives should set their response approach with the mayor or chair and retain overall accountability for the council's emergency response. However, they can delegate operational responsibility to other controllers. We saw this approach used by the Tararua District Council and consider this should be standard practice nationally. Along with additional clarity around roles and accountability, support pathways for controllers are needed to build their emergency management skill set, including command, crisis leadership, and operational training.

Image: Search and Rescue and Surf Life Saving New Zealand carry out a rooftop rescue in Hawke's Bay.
Source: NZ Police

Clarity of official roles helped the Tararua District

The Mayor of the Tararua District, Tracey Collis, reflected that the council's clearly defined roles for staff and officials helped the district operate smoothly during Cyclone Gabrielle.

Her role as Mayor and spokesperson remained unchanged from a non-emergency arrangement, while the Chief Executive took on the role of primary controller. The Chief Executive set up the arrangements for managing the emergency, before delegating to an experienced staff member to lead the ongoing emergency response.

Relevant staff are trained in CIMS and use it on a regular basis on a range of incidents. This means they are familiar with roles and can move smoothly into an emergency management response.

Elected councillors know they are responsible for ensuring two-way communication between communities and the emergency operations centre. During Cyclone Gabrielle, this helped communities to have accurate and regular updates on the emergency and response.

Clarity of roles between local and regional tiers of response

113. There also needs to be clarity about roles and accountabilities between the regional and local levels, including group controllers, CDEM Groups, regional council chief executives and chairs. This lack of clarity reduced the regional oversight of hazards and muddled effective implementation of the emergency management system.

Clear and empowered roles across the system

114. In addition to local government's responsibilities for emergency management, many other groups and organisations have vital roles to play to support the safety and wellbeing of people and communities. These include iwi, emergency services, health and disability services, lifeline utilities companies, search and rescue groups, government agencies, goods and services suppliers, and community organisations.
115. During the severe weather events, there was a lack of clarity about the specific roles of some groups and whether the response made best use of the expertise and resources available. Knowing where the key skills are in the community is essential to build readiness and trust. This includes having connections around food chain logistics, water infrastructure, engineering needs and equipment provision.
116. To ensure CDEM responses can draw on capability and capacity from groups and organisations around the country during an emergency, relationships and agreements should be set up ahead of time. Two specific areas where capability can be better recognised, and roles clarified, are set out below. More information about the role of iwi Māori in the system, and the need for this role to be better recognised and supported, is in **Chapter 2**.

Utilise New Zealand Defence Force capability

117. The NZDF made a valuable contribution during Cyclone Gabrielle, carrying out a wide range of tasks including planning, and were also embedded in incident management teams.³³ At the height of the emergency, the NZDF had over 1,000 personnel involved in the response. We heard from communities that these personnel were a reassuring presence.
118. The NZDF is recognised as a support agency in the National CDEM Plan. There are provisions for it to provide appropriate support to government authorities during an emergency, while maintaining its other operational outputs and missions. The NZDF has highly skilled personnel across a broad range of areas including intelligence, logistics, planning, operations, and aviation and temporary forward airbase coordination (see **Chapter 4**).
119. The NZDF expressed frustration in relation to the lack of clarity about its roles in the response. It noted to the Inquiry, “a lack of clarity in command and control in the ‘locally led and nationally supported emergency response framework’ created confusion, at times it was unclear who was the lead and responsible”. It also felt there was a mismatch between councils’ and communities’ expectations of the NZDF and what the NZDF had the capacity to provide.
120. The NZDF also told the Inquiry it received short notice requests for support when Emergency Coordination Centre (ECC) shifts were ending, as ECCs were not set up to be staffed for long duration operations. It noted this could have been mitigated “through a formalised handover process that, after a pre-determined period of time, staff could have seen staff deployed from around New Zealand to support the local response”.
121. There needs to be greater clarity and agreement prior to an emergency about what roles and types of tasks the NZDF is equipped to carry out, and the process for making the most of the resources available. The Inquiry recommends the Government establishes a stronger mandate for the NZDF to provide emergency response specialist skill sets during severe weather events and other emergencies related to natural hazards and infrastructure failure. We also recommend establishing the NZDF as the agency responsible for temporary forward airbase coordination in severe emergencies.

Shift leadership for the welfare function

122. Welfare services support individuals, whānau, and communities to be ready for, respond to, and recover from, emergencies.³⁴ There are many groups that coordinate or deliver welfare services. Specific welfare responsibilities and processes are set out in the National Civil Defence Emergency Management Plan 2015 and CIMS. The provision of welfare services begins in response and continues into recovery.

33 New Zealand Defence Force, “Response to Cyclone Gabrielle”, NZDF website, n.d.. <https://www.nzdf.mil.nz/media-centre/story-collections/response-to-cyclone-gabrielle/>

34 *National Civil Defence Emergency Management Plan Order 2015*, Section 62(1).

123. Welfare services are delivered at the local level and coordinated and supported at CDEM Group and national levels. At a national level, there are a range of agencies with a role to play. NEMA is responsible for leadership of the welfare function, supported by other agencies with specific areas of responsibility. For example, the Ministry for Primary Industries (MPI) is the support agency for animal welfare, and the Ministry of Business, Innovation and Employment (MBIE) is the agency responsible for the coordination of the provision of temporary accommodation for people who must leave their homes as the result of an emergency.
124. It is currently confusing to understand which agencies and organisations are involved in undertaking welfare activities, both during and immediately after an emergency. In particular, it can be unclear how the leadership of the welfare function and delivery of welfare services fit together. There is an opportunity to strengthen national and local levels of service delivery, clarify interdependencies, and increase coordination to ensure the model for providing services is sustainable and coordinated.
125. There are some challenges with NEMA being the agency responsible for the coordination of all welfare services. It has a wide remit, making its capacity for carrying out this function limited. It currently takes a narrow view of welfare which does not include the wide range of welfare needs and considerations for communities. This means that gaps are filled by other agencies.
126. There is an opportunity to better utilise the expertise and capacity already in the public service to carry out leadership of welfare coordination. MSD already has a regional presence and memoranda of understanding with service providers across the country. The Inquiry heard that MSD has the capacity to respond at scale across multiple geographic regions using systems already in place. MSD also has strong links to government agencies and iwi and can distribute funds at speed in an accountable manner.
127. The Inquiry recommends that MSD is given responsibility for the leadership of welfare coordination. This responsibility would not replace the need for locally led provision of the welfare function but would support a joined-up approach and help to build system capability. With this shift of leadership responsibility to MSD, it may be appropriate that NEMA retains some specific areas of responsibility for welfare delivery. By removing leadership of welfare coordination from NEMA, capacity would be freed up for NEMA to focus on readiness and response, as outlined in **Chapter 2**.

Embed health and disability services

128. Health and disability providers have a role at a local, regional, and national level before, during, and after emergencies. This role includes ensuring the continuity of care for patients, supporting surging demand for physical care, providing psychosocial and mental health services, and leading the response for secondary health impacts. The role of health and disability services continues into recovery and beyond. The health and wellbeing impacts of emergencies on people and their communities are long-lasting. For example, in February 2024, a year after the

severe weather events, Hawke's Bay Health announced a \$2 million health and wellbeing package for Hawke's Bay residents affected by Cyclone Gabrielle.³⁵

129. Health and disability services have a legislated role in emergency management, but the Inquiry heard there is a need to strengthen the way this role is carried out and integrated into the wider system. The chief executive or a senior member of a provider of health and disability services is required to be a member of the CEG in each council or unitary authority. Relationships in the health and disability sector (including Health New Zealand) and other CDEM agencies need to be well established before an emergency event. This was not always the case during the severe weather events. The Inquiry heard there was a particular breakdown of the relationship between Health New Zealand and the Hawke's Bay CDEM Group Emergency Coordination Centre during Cyclone Gabrielle, which led to a critical gap in situational awareness for health officials.
130. We note at the time of the severe weather events, there was transitional change happening in the health sector, following the establishment of Health New Zealand in July 2022. This meant some key national and regional roles were still being developed. This timing impacted the organisation's ability to respond, and the relationships and communications with other organisations were not as strong as they should have been. In its post-incident report, Health New Zealand noted to the Inquiry that, "Participants were in new roles with new responsibilities, and it can be assumed that some internal and external relationships between individuals and departments were not as strong or as organised as they would have been otherwise. In some cases, relationships were formed during the emergency response itself."
131. We consider that the role of the health and disability sector needs to be strengthened and better integrated into the emergency management system prior to the next emergency event. This includes ensuring the roles and responsibilities of sector organisations are clarified ahead of time and they have strong relationships with local CDEM Groups.

System-wide leadership and stewardship

132. Emergency management is a complex system with many people and organisations, each with differing and intersecting roles and responsibilities. For it to work well, there needs to be a steward of the system that has line of sight across all CDEM agencies, can provide support for locally delivered approaches, and gives assurance that the different parts are all performing as they should.
133. NEMA has responsibility for monitoring and assurance that CDEM Groups and people with responsibilities under the CDEM Act, such as lifeline utilities, have the systems in place to carry out their emergency management responsibilities. However, this function is not currently being undertaken or resourced by NEMA due

35 Te Whatu Ora Health New Zealand, "Over \$2m Of Health Funding For Hawke's Bay As Anniversary Looms", Scoop, 1 February 2024. <https://m.scoop.co.nz/stories/GE2402/S00001/over-2m-of-health-funding-for-hawke-s-bay-as-anniversary-looms.htm>

to other priorities.

134. The Inquiry considers NEMA needs to significantly increase its focus on system assurance, including identifying improvements local councils, agencies, and other organisations can make to build their emergency management capability and fulfil their responsibilities. This will support NEMA to set standards and build a national picture of how well the emergency management system is working, and where there are gaps and good practice. The Inquiry considers NEMA should have sufficient authority and powers to enable it to fulfil its assurance function.

Guidance to the sector

- CDEM Groups and councils should ensure they have internal clarity on how they manage their joint accountability responsibilities for controllers.
- A strong, effective CEG is critical to managing the response to an emergency. CDEM Groups need to ensure their CEG members are practised in large scale emergency scenarios and have a strong understanding of each other's roles.
- The NEMA website contains useful guidance for mayors and councillors that helps clarify roles and expectations before, during and after emergencies.
- CIMS is the official framework for effective coordinated emergency management across all responding agencies, and its structure should be embedded into councils' way of working.
- As part of readiness planning:
 - CDEM Groups need to ensure all essential workers are identified during readiness, and systems are set up for their easy identification as essential workers once an event has happened. This includes residential care workers and utility repair crews,
 - councils need to consider how they prioritise training for staff with emergency management responsibilities, and plan how to manage staff fatigue during an emergency, and
 - relationships should be formalised (for example, through publicly available memoranda of understanding) between government agencies, local and regional councils, CDEM Groups, communities, iwi Māori, Sector Coordinating Entities, critical infrastructure entities, and local businesses.

Chapter 4: Management of the immediate response

Overview

135. The actions taken in the lead up to an emergency, and the first 24-48 hours after it starts, are critical in establishing how effective the response will be. It is often in this window that decisions are made about declaring an emergency, warnings and information are sent to communities, emergency centres are activated to provide shelter and services, and evacuations and rescues take place.
136. Overall, a piecemeal approach was taken during the immediate response to the severe weather events – many aspects lacked coordination and situational awareness was poor. The Inquiry found that some immediate response activities failed to perform as needed in Auckland for the Auckland Anniversary heavy rainfall, and in Hawke's Bay for Cyclone Gabrielle, exacerbating the trauma felt by communities. Many people we heard from, particularly in Auckland and Hawke's Bay, felt abandoned and let down by their council and the immediate CDEM response. Some councils pushed back against this perception. The Inquiry observed that there is a striking disconnect between communities and their councils in some places.
137. Councils and communities that had carried out effective readiness planning activities prior to the events were better able to respond under the challenging circumstances. To ensure an effective response to future emergencies, CDEM agencies need to make coordinated, timely decisions, supported by accurate information and common operating procedures. Communities need to be empowered to act based on clear, timely warnings and information and have resources to support themselves for days or weeks after an emergency.
138. Over the course of the Inquiry, most of our engagements with communities pertained to the immediate response. We heard repeatedly about the trauma people faced, especially in the first few days of the emergency. The disconnect described in **Chapter 1** between the views of some community members and those of many CDEM agencies, highlights the need for education, better relationships between communities and councils, and more focus on readiness throughout the system.
139. There is significant room for improvement of readiness activities to support the management of the immediate response to significant emergencies. However, it is important to note the severe weather events subject to this Inquiry happened at a speed and scale that would have resulted in significant damage and stress regardless of how well the immediate response went.

Definition of immediate response

140. For the purposes of this report, the immediate response to an emergency starts when notice is given that an event is likely and preparatory actions begin. The immediate response finishes when the threat to life has passed and the situation has reached the point of stability.³⁶

Rescued from floodwaters in Pakowhai

Pakowhai, between Napier and Hastings in Hawke's Bay, sits between the Tutaekuri and Ngaruroro rivers. When Cyclone Gabrielle hit, the rivers burst their banks, flooding the fertile plains and submerging houses.

On the morning of 14 February 2023, Pakowhai resident Lynley Halpin checked the local Facebook page and saw the bridge on the Tutaekuri River at Vicarage Road in Puketapu had washed away at 5:00am. Lynley and her husband, Dave, headed up the road to check on their horses, only to be faced by a wall of water. Having received no warning, Dave went to help his parents who lived nearby, while Lynley did what she could do to prepare their home for flooding.

Dave soon found he was unable to return home through the flooded roads. With still no warnings issued, Lynley became aware that the opportunity to evacuate had likely gone, and her neighbours wouldn't know about the imminent risk. She alerted as many neighbours as she could and opened the gates to give her horses the best chance of survival.

At 10:00am, as floodwaters rose, Lynley and her teenage daughters made their way onto the roof of their two-storey shed and waited to be rescued. Just after 3:00pm, they saw the horses swim past them in the flooded waters below.

Lynley and her daughters were finally rescued by a jet boat at 5:30pm.



Image: Lynley Halpin's horses survived being carried away through floodwaters. Source: Dave Halpin

36 This is based on the definition of immediate response in CIMS 3rd edition, August 2019.

Esk Valley – community action central to the response

During the early hours of February 14, 2023, the Esk River burst its banks. A flash flood swept through the valley, submerging properties under seven metres of water, and burying homes in silt up to roof lines.

Local LandSAR and Hawke's Bay Coastguard volunteers, Jessie Kyle and Henry van Tuel, were on the frontline of the emergency response from the early hours of the morning until late at night. They had to quickly adapt to the constantly changing situation and felt they were responsible for potentially life-changing decisions.

Jessie reflected that the situation was "worse than any scenario that could have happened. It would have helped to have access to situational information to direct where people needed to go and what hazards to avoid. Training exercises with all the agencies that I would work with in an emergency prior to the flooding would have been really helpful to build those relationships and understand how we can work together as a team, before we needed it."

Henry agrees. "There are so many things that I think everyone who helped respond to the emergency needs to be praised for, and the sense of our community working together was phenomenal. Communication is key in any crisis, and at times we struggled with receiving the right information at the right time. Ensuring we're all working from the same page within a cohesive structure like CIMS, using trusted and checked information flows, is vital."

On day three of the emergency response, with power still out and people isolated, Quent Swain attended a meeting at the King George Hall, along with over a thousand other locals. Quent quickly found himself taking a leadership role when it became clear there was no clear plan or way forward for the Esk Valley.

"I looked at the skills and resources we had across our community. We started mapping out where we knew people were, what they needed, and how we were going to get supplies in. We knew we needed some coordination."

Other community members also stepped up. Paul Simmonds used his local knowledge to evacuate and rescue people, deliver supplies, and check on people who were cut-off. Paul worked closely with emergency management response teams like the NZDF and Police to help them navigate their way around the Valley. He expressed frustration that some response teams from outside Esk Valley did not draw on community members' local knowledge.

"Those of us that have lived here for a while know this valley like the back of our hand. We knew the best way for the army Unimogs to get through to isolated people, but they didn't always take our advice which was really frustrating, when we knew people needed help urgently. There was no time to waste, but that's what it felt like happened."

The public needs accurate, timely warnings and information

141. The public needs to receive timely, accurate warnings and information they can understand and act on during an emergency. For a severe weather event, this includes information about potential weather and flooding, whether evacuation is required, infrastructure issues, areas to avoid, and where people can go if they cannot return or stay home.
142. Public warnings and information about severe weather events primarily come from:
 - local or national CDEM who provide hazard warnings (with NEMA providing information to CDEM to share with their communities), and
 - MetService, which is the sole government-contracted provider of severe weather warnings and gives 'orange' or 'red' warnings depending on the severity and expected impact of events.
143. Warnings can be communicated through a range of channels including broadcast and print media, official websites, social media, and the Emergency Mobile Alert system. The Public Information Management function of CIMS manages information for the response and shares relevant messages with the public through a range of channels.
144. The Inquiry notes the transmission of warnings and information during Cyclone Gabrielle was made much harder by widespread internet and mobile outages. Consequently, people in unaffected parts of New Zealand often had a better idea about the severity and impacts of the events as they transpired than those in many affected areas.

Warnings were insufficient and ad hoc in places

145. The Inquiry heard that the public considered the CDEM warnings, notifications, and provision of information were insufficient in Auckland during the Auckland Anniversary heavy rainfall and in Hawke's Bay during Cyclone Gabrielle. Issues included an ad hoc approach to delivering evacuation advice and notices (for example, notices to prepare for evacuation or to evacuate), advice being issued too late to be safely actioned, and advice not being translated into languages relevant to the affected communities.

“Evacuation alerts were unclear, hard to interpret, and didn't really indicate the seriousness of what was happening and what could happen... [the notice] didn't communicate the damage and danger.”

— **Hawke's Bay resident**

146. In some places, people's expectations regarding warnings and what they received were mismatched. For example, some communities were expecting Emergency Mobile Alerts or tsunami warning sirens to signal action was required, but these

were not deployed. In most cases, there were no manual backup systems for circumstances where communications systems were compromised to the level experienced during Cyclone Gabrielle.

147. Having emergency support information and communication only in English made a challenging experience even harder for mainly RSE scheme workers supporting orchardists in Hawke's Bay. With information not available in other languages, some RSE workers did not understand what was happening, what they needed to do and where they needed to go during the crisis.
148. The Inquiry heard about the challenges faced by the Hawke's Bay CDEM Group when making decisions and communicating warnings in an event of the scale and speed of Cyclone Gabrielle. To issue evacuation warnings to flood-affected residents, they needed credible information to justify the decision, the means to issue the warning in an effective manner, and confidence that evacuation was the safer course of action. In Hawke's Bay, the forecast rainfall for Cyclone Gabrielle was much less than what fell, and the systems that capture rainfall data and water levels (and which inform emergency management staff to a change in the situation) were compromised by loss of internet and power outages. The loss of internet service and power outages also compromised some channels through which warnings or notifications were communicated.
149. Beyond the warnings themselves, weather forecasts sometimes included technical or unclear language. For example, terms like "1 in 100-year storm" and "atmospheric river" were used without further clarification about what it meant in practice. Simplifying this language would be useful for the public and those working in emergency management. Some council staff the Inquiry spoke with did not understand what this terminology was trying to convey.



Image: Severe flooding in Northland. Source: NZ Police

The Tairāwhiti region's DJ Bevan Chapman

DJ Bevan Chapman hosts the Bevan for Breakfast show on More FM's Gisborne station. During Cyclone Gabrielle he stayed on air to keep Tairāwhiti communities informed while telecommunications were down. He was the only announcer on air for four days, sleeping on a mattress on the floor of the station.

Bevan read out locally specific civil defence media releases, business updates, and community messages that were passed under the door of the station. By doing so, he provided information and comfort to locals who had no other way to get information about what was happening. He worked closely with council staff who were based nearby and arranged for the Mayor to speak on air regularly.

Bevan received a Civic Award from Gisborne District Council, which called him a 'radio legend' and said he was "instrumental in keeping Gisborne locals connected, informed and updated 24/7 after Cyclone Gabrielle wiped out telecommunications".

A comprehensive and consistent approach to warnings is required

150. The Inquiry considers councils should issue warnings and public information to communities as early as possible when a potential hazard is identified. A comprehensive warning system is needed that is flexible enough to cover most, if not all, natural hazards, with a consistent approach to warnings across the country. The Inquiry considers this should be developed as a priority for implementation across the country.
151. A comprehensive warning system should see a consistent but locally tailored approach implemented across the country. It should enable messages to be sent as early as possible after a potential hazard has been identified, have one source of truth from authorities and be clear on what actions are required from community members. Trusted messengers like mayors, chairs, councillors and community leaders should be utilised to share messages, which should be translated into languages spoken in the community. There needs to be a range of channels for sharing warnings, including well-tested manual systems to use if communications are down. There also needs to be an ongoing national public education programme to ensure people know what kinds of warnings to expect and the actions required in severe weather events.
152. Consideration should be given to ensure regular, locally specific updates are available. National-level radio broadcasts provide vital advice and information. However, communities also need specific detail about what is happening in their local area. The Inquiry heard from some communities that they were often not provided with detailed regular information. Mis- and disinformation sometimes filled that void, particularly via social media. For example, rumours spread that the Waitangi bridge in Hawke's Bay had collapsed, and that people were trapped or injured, when in fact the bridge was closed for a safety assessment. It is important to have a reliable source of truth for information about local impacts. The Public Information Management function needs to proactively provide truthful and regular information to the media and others, and correct rumours if needed.

“The amount of misinformation spread, largely via social media, was destructive, unhelpful and genuinely counter-productive.”

— Hawke’s Bay resident

153. While an effective warning system is important, the Auckland Anniversary heavy rainfall showed that the onset of a weather event can be rapid and hard to forecast. In other emergencies like an earthquake, there may be no warning at all. Therefore, councils need to ensure their communities understand the local hazardscape and know what to do ahead of time so they can take immediate action.

Timely council decisions support communication with the public

154. An effective warning system relies on timely decision-making, including decisions about whether to declare a state of emergency and if evacuation is required. To support this, decision-makers need accurate and current advice and information.
155. There are many readiness activities that need to be carried out before an emergency that can support timely decision-making during an event including:
 - having maps of evacuation areas prepared and ready to be deployed when needed, and
 - ensuring the mayor or delegated person is clear on the process for declaring a state of emergency and the key considerations they need to make.
156. We heard from several councils that the requirement for a physical signature on the declaration of emergency paperwork led to difficulties, especially in situations where travel was unsafe. The process for declaring a state of emergency should be reviewed to ensure it can work smoothly in all circumstances. This includes when a physical signature is not practical to obtain, or telecommunications are not working.
157. There are a range of other factors throughout the highly interconnected emergency management system that impacted councils’ ability to make decisions and provide warnings to the public in a timely manner. This includes the capability and capacity issues outlined in **Chapter 3** and the need for accurate weather and hydrology information outlined later in this chapter.

Empower the public to act on information they receive

158. Warnings are more effective if people know ahead of time what information they can expect and how to act on it. To ensure people are ready and able to act in an emergency, planning is required by councils, CDEM Groups and communities during the readiness phase. This can include ensuring councils and communities are ready to stand-up civil defence and community-led centres when required, that people have plans for their families and pets, and that people have the resources to leave their homes and get to safety when necessary. People may

face barriers to taking the recommended action, which should be recognised and planned for where possible.

Build community resilience and preparedness

159. During a large-scale emergency, whānau, neighbours and the wider community will need to rely on themselves as the first line of response. There are not enough resources for the formal system to individually support everyone, and some critical infrastructure takes time to be re-established.
160. A year on many impacted communities have a strong desire to build their own emergency resilience and readiness plans. This community-led activity should be supported and encouraged. CDEM should lean into this readiness work as they have technical information and specialist knowledge to assist community plans to be as robust and as effective as possible. In some remote communities these plans need to include back up electricity and communications systems (to replace phone and internet) for situations where infrastructure damage means communities need to rely on their own resources for extended periods of time.
161. Communities will need to have the resources to look after themselves if goods and services are not available for a prolonged period. The on-the-ground response will be more effective if there are strong relationships between neighbours and within communities ahead of time. This includes people having awareness of who in the community can contribute different resources, like generators and tools, and skills like first aid expertise.
162. The Inquiry heard that emergency pods were extremely useful to the marae and communities that had them. The pods included provisions like tents, water treatment supplies, generators, medical supplies, and food for 100 people for up to four weeks. Several agencies commissioned pods, including Te Puni Kōkiri (TPK), Whānau Ora, and MPI. For some iwi, including Ngāti Porou and Ngāti Kahungunu, these were established as part of their planned readiness activities.



Image: An example of an emergency pod. Source: EPOD New Zealand Limited

163. However, not all communities will have the resources and capacity to lead readiness work or afford individual preparedness supplies. There needs to be coordinated, funded readiness initiatives to ensure people who cannot afford to build up emergency food and water supplies, and people who are displaced from their homes, are appropriately supported in an emergency.

Revisit the “three-day” rule

164. Many people affected by Cyclone Gabrielle had three days’ worth of food and water available at their homes, reflecting the guidance people are familiar with.³⁷ However, these supplies alone were not always sufficient, either because communities were cut off from supply routes for longer periods of time or because people were displaced from their homes where supplies were kept.
165. The experience from Cyclone Gabrielle demonstrated that the commonly understood advice to have three days of emergency food and water available may not be sufficient and needs review. The Inquiry considers at least one week of emergency provisions is more appropriate for urban areas and two weeks for more remote or rural areas.

Pre-plan centres to meet specific community needs

166. In an emergency, councils and communities can establish centres for people who cannot return home or need to access information and welfare services. While these are referred to by many different names, there are two main types, as set out in the Director of Civil Defence Emergency Management Guideline:³⁸
- **Civil Defence Centre:** facility established and managed by CDEM to support the community. These may be used for any purpose depending on the needs of the community. This includes providing public information, evacuation and welfare or recovery services.
 - **Community-led centres:** community-based organisations may establish and operate other centres that offer support to the community. These centres do not fall under the direction of CDEM but may operate alongside.
167. During the severe weather events, a combination of Civil Defence Centres and community-led centres were established. The Inquiry recognises the contribution of iwi and many other community and faith-based groups who established centres across affected areas to meet the specific needs of their communities. In particular, the community-led centres established by many iwi at marae provided substantial value to communities and the response more broadly. Pacific community groups also stepped up to provide culturally appropriate support to affected people in their communities, at times leveraging relationships with agencies and using lessons from their COVID-19 response. More information about the role of iwi in providing community-led centres is in **Chapter 2**.

37 For example, the NEMA website states “Aim for a minimum of three days’ food and water” on its web page about emergency supplies. <https://www.civildefence.govt.nz/cdem-sector/consistent-messages/readiness/have-emergency-supplies>

38 Ministry for Civil Defence and Emergency Management, “Welfare Services in an Emergency Director’s Guideline for CDEM Groups and agencies with responsibilities for welfare services in an emergency”, 2015. <https://www.civildefence.govt.nz/cdem-sector/guidelines/welfare-services-in-an-emergency/welfare-services-in-an-emergency-directors-guideline>

“Our own whānau and community opened wardrobes, linen cupboards, pantries, water tanks and anything we could to support anyone in need.”

— Waipatu Marae Response Lead, Hawke’s Bay

168. The Inquiry heard there were a range of issues with Civil Defence Centres in places, including:
- some were planned in areas that became flooded, meaning delays in being able to support evacuated people
 - some were not adequately provisioned to meet community needs, including those of diverse communities
 - the needs of elderly people and those with dementia and other complex health needs were not properly planned or catered for, and
 - delayed establishment of centres due to staff not being available to open them.
169. The Inquiry found serious shortcomings in Auckland Emergency Management’s planning of Civil Defence Centres prior to the Auckland Anniversary heavy rainfall. *The Auckland Flood Response Review* report, completed by Bush International Consulting, found that some potential Civil Defence Centre locations on a pre-prepared list “were not sorted for specific hazard contingencies. Some were clearly unsuitable locations in a flood or storm event.”³⁹ The Inquiry considers the failure to identify suitable locations for centres ahead of a potential flooding event was unsatisfactory. However, we recognise that the flooding that occurred – including the flash flooding – was unprecedented and unpredictable. The Inquiry heard from Auckland Council that sites that had not experienced flooding in previous events were compromised.
170. We note that Auckland, as a super city with one unitary council, has a strongly centralised model of local governance which differs from other parts of the country. While 21 local boards provide governance at a local level, the council’s emergency management function was heavily centralised at the time of the Auckland Anniversary heavy rainfall. Local Police noted there was “no sense of them knowing the ground. They’ve lost local knowledge, such as what schools were flooded and if the roads were flooded. This was because the control has been centralised.” It is the Inquiry’s view that Auckland’s local boards should be funded and supported to develop and implement their community plans in more meaningful ways.

39 Bush International Consulting, *Auckland Flood Response Review: Independent External Review of Events, January 27–29, 2023*, 13 March 2023. https://ourauckland.aucklandcouncil.govt.nz/media/je3pot1n/auckland-flood-response-review_january-27-29-2023.pdf

171. Selection and preparation of Civil Defence and community-led centres need to be thought out as part of council and community readiness activities. This includes planning locations that are appropriate in a range of emergencies and ensuring people know about them. It also includes ensuring that resources and people are available to activate them at short notice.
172. In addition, a one-size-fits all approach is not appropriate, and plans need to be in place for centres that meet the specific cultural and practical needs of communities. For example, this could include planning for the needs of elderly or disabled people who require specific care, ethnic and faith communities, or workers hired under the RSE scheme. We also heard examples where the CDEM response did not consider how best to serve the Pacific community and should have leveraged the community's expertise when developing emergency response plans, to ensure the emergency response would be accessible and effective from a cultural perspective.
173. Councils have responsibility for establishing Civil Defence Centres in their area. Their planning should include iwi, community and faith-based groups, retirement communities, and members of the public. Councils should enable a network of community-led and Civil Defence Centres that can be scaled depending on the emergency. This will allow communities to make the most of resources and skill sets and empower groups to act. It will also ensure the specific needs of local communities can be identified and planned for.

Māngere evacuation centres in the Auckland Anniversary rainfall event

The Māngere Memorial Hall was initially set up by Auckland Council as a Civil Defence Centre to provide information and services to the community, with opening hours between 8am and 3pm. Local Councillor Alf Filipaina quickly realised this was not suitable, and repeatedly asked Auckland Emergency Management to provide 24-hour access to the centre as a place for people to shelter, as homes were flooded and uninhabitable. Auckland Emergency Management did not extend the opening hours.

Two days after the flooding, Councillor Filipaina and Local Board Chair Tauanu'u Nick Backulich, with support from Pacific health leaders, converted the venue into an emergency response centre with space to house those who were displaced. Demand was so high that on the third day the response centre was moved to a larger venue at the Māngere Moana Nui-a-Kiwa Pool and Leisure Centre. Eventually, Auckland Emergency Management provided funding for water coolers, food, and air conditioning.

The centre provided clothes, food, and help from support services, including government agencies like the MSD and Kāinga Ora. It also provided a place to sleep for people whose homes had flooded. MSD brought in its own generator for computers, and employees worked for 15 days at the centre.

Information for decision-makers

Improve real time situational awareness for authorities

174. The Inquiry heard that a lack of situational awareness and timely, complete, and consistent information contributed to problems with the immediate management of the response in some areas. CDEM agencies and responders require timely and accurate information about what is happening across their areas to respond quickly and effectively. NEMA also needs information across all affected regions so it can fulfil its role in either supporting or directing the response and keeping Government ministers and the Prime Minister informed and updated.
175. Reliable situational awareness comprises end-to-end capacity for data collection, reliable and efficient data communication, common platforms for data processing and interaction, and trained staff with capabilities to interface with this data and interpret it for the relevant purpose. A common operating picture – a continuously updated overview compiled from local, regional, and national data shared between integrated communication systems – is a vital part of enabling situational awareness needed during an emergency. The Inquiry considers the system design does not currently enable this kind of coordinated information collection, interpretation, and sharing.
176. Currently, NEMA and councils collect information in a range of ways, resulting in information sets that are not easily compared or collated. They then use a range of different operating platforms to collate data and information to form operating pictures of what is happening in districts and regions. This approach may be adequate for small-scale local-level events but causes difficulties when trying to piece together an understanding at a regional or national level. For example, the differences in how welfare needs assessments are made across regions means information cannot be easily aggregated to aid planning or to build a national picture.
177. The lack of coherence across the system also made it more challenging for EMAT personnel, brought in from outside affected areas, to access the information they required to hit the ground running. For example, a South Island CDEM group manager was seconded to act as local controller for part of the Far North District Council's Cyclone Gabrielle response. Despite being an experienced controller, he found it difficult to use the Far North District Council's operating model and reporting frameworks as they were different from what he was used to. It took time to get up to speed and be effective in the role, and he had to lean more on the local team.
178. We heard that NEMA made regular requests for information from regional and local CDEM coordination centres and authorities to meet the legitimate information needs of Ministers and other decision-makers. Without a common operating picture, information had to be repeatedly requested rather than being provided automatically. We heard these requests swamped many regional and local coordination centres, drew capacity from elsewhere and affected their ability to manage their crisis response.



Image on left: Search and Rescue check a house in Hawke's Bay. Source: NEMA
Image on right: A team coordinating response efforts. Source: NEMA

179. The Inquiry strongly recommends the Government invest in a common operating platform for CDEM agencies and NEMA to use. A common operating platform is the technological infrastructure or system used to support the creation, management, and dissemination of the common operating picture across different stakeholders involved in the response. There should be central funding for this platform, and its use should be legally mandated.
180. The common operating platform needs to be supported by consistent information management practices and capabilities across the sector, while supporting privacy and intellectual property requirements. This would ensure councils have equitable access to effective systems as well as supporting good situational awareness at a multi-regional and national level. Where possible and appropriate, relevant information from emergency services including Police and FENZ should be incorporated into the system.
181. It is out of scope for the Inquiry to provide specific advice about the type of technology and supporting information standards that would make up a common operating platform. However, we suggest the Government considers scaling systems that have already been developed and adopted by some councils, rather than building a new bespoke technical system.
182. Establishing a common operating picture was a recommendation of the 2017 Ministerial Review into Better Responses to Natural Disasters and Other Emergencies. The then Government agreed to invest in the technology to ensure a fit-for-purpose common operating picture, however, the Inquiry understands that a business case developed in 2019 was not progressed.

Build a fit-for-purpose National Crisis Management Centre

183. All-of-government emergency responses are led from the NCMC, situated in the sub-basement level of the Beehive. The Inquiry considers the NCMC is not fit-for-purpose, with issues including ineffective physical layout, size, communications, and connectivity.
184. The 2017 Ministerial Review into Better Responses to Natural Disasters and Other Emergencies recommended the development of a new NCMC facility. We endorse the recommendations and would like to see progress in the actions agreed by the Government in its formal response.



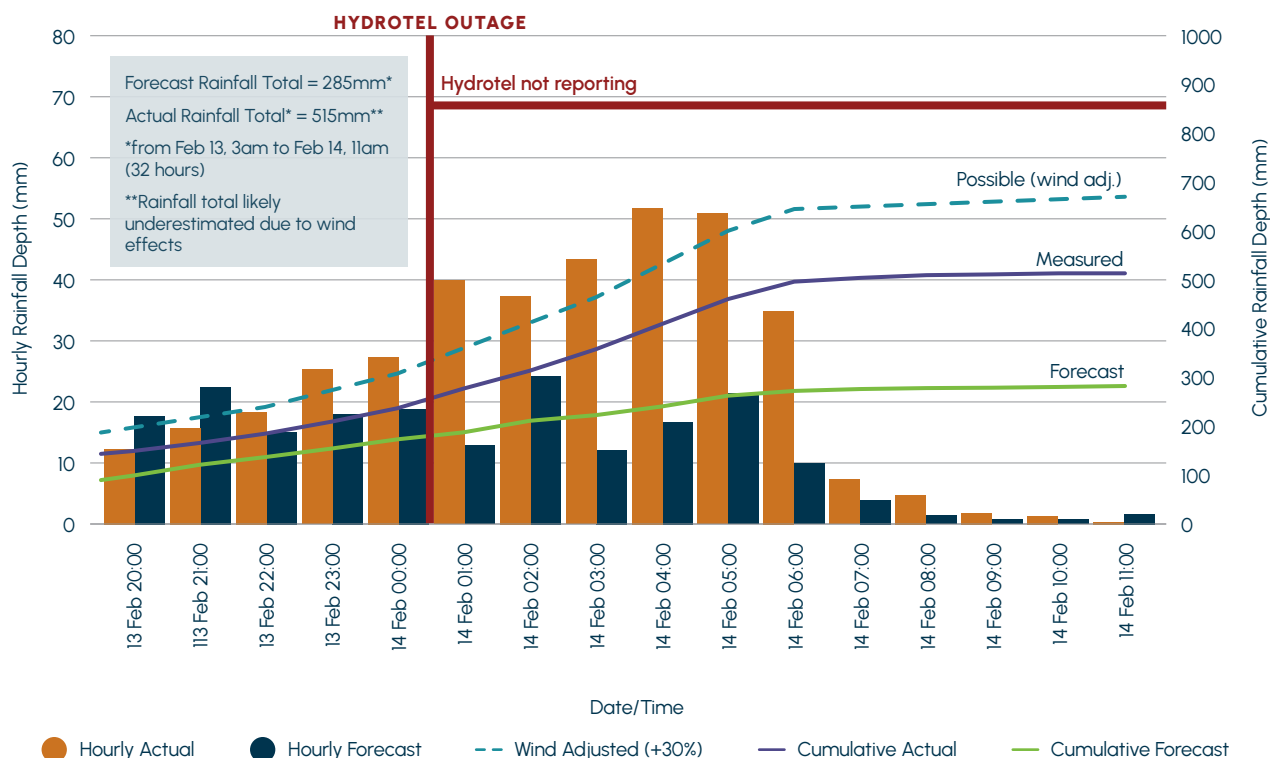
The back-up National Crisis Management Centre. Source: NEMA

185. There is a backup arrangement for a NCMC to be stood up in Auckland if the Wellington venue is inoperable. The Inquiry considers these provisions are inadequate and will not meet requirements. The back up arrangements only provide for computer hardware and desks, in a venue that requires four hours' notice to set up. In addition, there are insufficient trained staff ready to stand-up an alternate NCMC at short notice.
186. The Inquiry recommends an appropriate back-up NCMC centre is established in a location other than Wellington. This does not need to be a purpose-built facility. There is the potential to use an established regional centre that can quickly take on the role of the NCMC if required. For example, Hamilton has an established centre and is in a low-hazard location. In addition, we consider that councils should, where possible, consider investing in purpose-built emergency operations centres.

Provide and use enhanced weather and hydrological information

187. In an emergency, people leading councils' emergency management responses need to make a wide range of decisions and communicate key information to the public in an ever-changing environment. To make good decisions and communicate effectively, councils require timely, accurate information about hazards and their potential impacts, and the capability to interpret this data and apply it to the local context. For weather-related emergencies, weather and hydrological information are particularly important.
188. A high number of emergency events in New Zealand are due to extreme weather and flooding. Weather and hydrology forecasts are two of the most important types of information councils need to inform their decision making. Local expertise and capability are needed for accurate interpretation of forecasts, and assessments of localised impacts.
189. Councils receive information about weather and national-level hydrology from a variety of sources which may include MetService, NIWA, and others including private weather modelling companies. This information is analysed and translated by council-employed hydrologists, who can provide context about local-level impacts on river levels, tidal impacts, runoff, and flooding risks. Some councils have access to better or more accurate information sources than others, including different access to forecasting from MetService and NIWA, depending on the level of information they purchase.
190. During the severe weather events, there were issues with access to accurate information to inform decision-making. All participants in the weather forecasting system significantly underestimated the amount of rain for the Auckland Anniversary heavy rainfall, including MetService's severe weather warnings. MetService advises us that this reflects weaknesses in all known weather prediction models (both local and international) during the event and limitations in scientific understanding of this type of weather system.
191. The United Nations World Meteorological Service stresses the importance of the 'single authoritative voice' of a national meteorological service. At the time of writing, there is a review underway led by the Treasury and MBIE to identify and recommend the optimal arrangements and allocation of responsibilities for the weather forecasting system. To improve the quality of information that councils receive and ensure they can make well informed decisions, the Inquiry recommends that all councils NEMA and relevant government agencies have access to the best available weather and hydrological information.
192. In addition to adequate weather forecasting, the design of the emergency management system needs to provide for sufficient specialised hydrologist expertise with local-level knowledge. Supporting and providing access to a national-level networked pool of hydrologists is likely to alleviate pressure on individuals and improve the quality of skills and resources nationwide. Hydrologists need to be sufficiently integrated into civil defence emergency management systems to ensure there is an effective feedback loop between hydrologists and CDEM responses.

An example of the difference between forecast, possible, and actual rainfall during Cyclone Gabrielle - taken from rainfall measurements at Glengarry, Hawke's Bay



Source: Hawke's Bay Regional Council

Having the most accurate and up-to-date rainfall information is imperative for decision-makers in emergency situations. The graph shows the speed and scale of rainfall in Cyclone Gabrielle over a 32-hour period, and the difference between what was expected and what eventuated, coupled with an outage of a key system that captures rainfall data. The lack of access to accurate information had an impact on the quality of decisions that were able to be made.

Managing the impact of lawlessness

193. The Inquiry heard multiple reports of lawless and anti-social behaviour in Hawke's Bay following Cyclone Gabrielle. These included looting of businesses and homes, fights breaking out between members of the public and patched gang members, and individuals using stand-over tactics towards customers exiting supermarkets. We heard that looting was a particular issue in some rural areas. At least one business had to hire additional security to prevent further looting from its premises. Those affected told us these experiences caused additional trauma for people in what was already a very stressful situation.

194. We were advised that the Police were not anticipating people to take advantage of the situation as quickly as they did. During an emergency, Police decide how to prioritise deployment of local resources between emergency service activities and business as usual activities. In the early days of Cyclone Gabrielle, due to the loss of communications infrastructure in Hawke's Bay, Police did not have a clear picture of the scale of theft and anti-social behaviour. As the need for additional resourcing,

particularly in relation to missing persons and community reassurance, became clear, police mobilised additional staff into the region.

195. Police have advised that, for future similar situations, proactive deployment of staff for community reassurance will be an early priority. The Inquiry endorses this approach.

Improving coordination of rescue efforts

196. There was a significant search and rescue component to the response to the severe weather events. People involved in these efforts included personnel from professional and voluntary organisations, and members of the public. The Inquiry notes the risk involved in undertaking rescues and the importance of preserving the safety of rescuers and those being rescued.
197. Professional and volunteer organisations that may be involved in search and rescue operations during an emergency include Police, FENZ, search and rescue organisations, Surf Lifesaving New Zealand, and NZDF. During Cyclone Gabrielle, the rescue requirements were particularly broad and complex, with land, water and air rescue expertise all required. Many community members who did not have a formal role in the response also assisted in the rescue effort, using boats and helicopters to bring people to safety.
198. Due to the many organisations involved and the different protocols and processes they followed, there was some duplication of effort and lack of clarity around priorities. The Inquiry considers there needs to be clarity of roles and responsibilities at local, regional, and national levels, in relation to the search and rescue function. Where possible, there should be common processes in place and shared terminology and national standards for training. In addition, all the organisations with a role to play during the search and rescue operations need to be involved in the CDEM planning and readiness activities.
199. There is a growing need for specialist flood rescue capability. FENZ has some specialist expertise in swift water rescue that it is developing. Surf Lifesaving New Zealand has some expertise in floodwater rescues that were deployed in the severe weather events. However, as a volunteer organisation, Surf Lifesaving needs the appropriate support to ensure it has the capability and resources to sustainably contribute to emergency efforts. **Chapter 6** further discusses the need for funding to be available to reimburse relevant costs that organisations such as theirs incur during an emergency response.

Coordination of the aviation response after Cyclone Gabrielle

200. The aviation response during Cyclone Gabrielle was the largest in the country's history, and it took place under very challenging circumstances. A rescue operation of the scale seen in Hawke's Bay had not been planned for or practised. Many flights were required to conduct urgent rescues, send crews to repair critical infrastructure, and deliver goods and personnel to affected areas. We heard from

a range of people about the management of the airspace and aerial operations. While the operation was ultimately successful, the Inquiry considers it did not go as well as it should. The lack of communications exacerbated the issue, as did a lack of pre-established roles, processes, and planning for this scale of event.

Air rescues

201. A wide range of CDEM agencies were involved in coordinating aviation activity in Hawke's Bay. There was also a significant contribution made by people outside the emergency management system - especially for air rescues.
202. For the CDEM response, FENZ initially undertook the coordination of air rescues and deliveries tasked through the emergency management system, which is outside FENZ's general responsibilities. Air rescue coordination was later transferred to Maritime New Zealand's (Maritime NZ) Rescue Coordination Centre in Lower Hutt, at the request of the Police and National Controller, with urgent aeromedical response remaining the responsibility of the Hato Hone St John airdesk.
203. The Rescue Coordination Centre's usual focus is on Category 2 search and rescue such as missing aircraft or ship, land-based emergency locator beacons, and offshore searches. The transfer of air rescue coordination to Maritime NZ meant it also took over Category 1 search and rescue operations from Police – which is usually a locally coordinated role that includes rescues on land, inland waterways, and close-to-shore. Therefore, the Rescue Coordination Centre became the overall lead coordination agency for aviation supporting search and rescue across the country, and in particular in the Hawke's Bay region. They did this for a 96-hour period starting midday on 14 February 2023.
204. Maritime NZ told the Inquiry that the situation on the ground was incredibly challenging by late morning of 14 February 2023. It noted that urgent rescue needs were at an unprecedented level, communications were severely impacted, and local actions to meet urgent rescue needs were well underway but lacked overall direction and coordination. Maritime NZ's Rescue Coordination Centre, with the assistance of other key search and rescue partners, established a process to collect and triage calls for assistance, and then tasked the carrying out of rescues. By late evening on 14 February 2023, the Rescue Coordination Centre was confident all requests for assistance had been actioned.
205. The Inquiry also heard from those at the forward operating base in the Hawke's Bay, who had a different view of the situation. They told us that the process of transferring airspace coordination responsibility for search and rescue to Maritime NZ also caused a lot of confusion for those in the air and on the ground.

Delivery of goods and personnel coordination

206. In addition to urgent rescues, multiple flights were needed for the delivery of goods and personnel to affected areas and the repair of critical infrastructure. This requires the ability to set up air bases, organise transportation of goods and personnel, and to control and coordinate the flow of urgent supplies that are needed into regions affected by emergencies. In Hawke's Bay following Cyclone Gabrielle, FENZ took on the role of managing temporary forward airbase assets and deliveries, despite this not being part of their core function.

207. The Inquiry considers that the NZDF should have overall responsibility for establishing temporary forward airbases and for logistics and coordination of deliveries during a large emergency event, and this should be part of readiness planning. There also needs to be clear delineation of roles at a local, regional, and national level, including clear coordination of movement of goods by flight and effective communication between the three levels to ensure it is clear who is the lead at any point. In future, there should also be consideration of the use of all available resources during an aviation response at scale, including the use of fixed-wing aircraft where they can be utilised effectively.

Review the 111 system to ensure it is effective in an emergency

208. The Auckland Anniversary heavy rainfall and Cyclone Gabrielle stretched emergency services beyond their ability to adequately respond. During both events, there were more 111 calls than emergency services were able to respond to. In Hawke's Bay, some people could not connect to the 111 call-taking service when outages were experienced across the power and fibre networks.
209. We heard from many community members in Hawke's Bay that they felt let down by the emergency services response system. They told us that:
- some calls were not answered by emergency services operators
 - emergency services operators told callers "You are on your own"
 - people were told help was coming and it never arrived
 - there was no indication given of when help could be expected, and
 - a lack of empathy or information was provided to callers by emergency services operators.
210. Spark NZ is responsible for the Initial Call Answering Platform, which answers all calls to 111. It then forwards calls to the appropriate emergency service: Police, FENZ, or Hato Hone St John. Spark NZ advised the Inquiry that 20,000 calls were taken between 5:00pm on 12 February 2023 and midnight on 15 February 2023. Ninety-four percent of those calls were answered within 15 seconds, with the longest caller wait time before a response being 45 seconds. Almost 80% of calls directed to Police were answered within 60 seconds. It is apparent that, due to the volume of calls, the capacity of emergency service providers was exhausted and the ability to have a coordinated response was severely constrained.
211. These issues were further exacerbated as each emergency provider has their own system with no way of integrating or reconciling tasking between them. Police have advised they use a Computer-Aided Dispatch (CAD) system where all requests for help and events from the 111 service can be recorded and prioritised. Similarly, each emergency service provider has their own events recorded in their own systems.
212. The emergency management systems utilised in a civil defence emergency do not have access to emergency service providers' CAD systems or vice versa - adding complexity to the situation. In Hawke's Bay, requests for help came through many channels: 111, walk-ins to both police and fire stations, social media, and through

emergency locator beacons, with no systems in place to collate information from these channels. This made it difficult to identify new tasks, such as notifications of missing persons. Those seeking help (and not receiving it) were trying all avenues available to them to get urgent assistance. This saw the same requests going to multiple organisations, including different emergency service providers, and it was not clear which requests were being actioned or by whom.

213. The Inquiry's observation is that the emergency 111 system is complex and confusing. It is difficult to ascertain where responsibility for 'ownership' of the system sits. The problem is not in the disaggregation of 111 calls to Police, FENZ and Hato Hone St John, but rather the lack of interoperability between these systems in a major or severe event. Situational awareness and the ability to respond was compromised leaving many people and communities fearing for their safety and that of their families.
214. A better system, and improved planning and testing of that system, needs to occur in the readiness phase to ensure it can manage in large-scale events. In addition, FENZ, Police, and ambulance services should be able to share information relevant to the emergency response to the maximum extent possible.
215. The Inquiry recommends the Government commission a comprehensive review of the 111 system to ensure an effective, transparent, and interoperable service that can effectively draw on the resources of all emergency services, even in times of high demand. Any improved 111 system should be able to interface with the common operating platform for emergency management that the Inquiry is recommending. This will ensure the best situational awareness possible in emergency events.



Image: Cyclone relief distribution centre at Hastings Showgrounds. Source: NEMA

Guidance to the sector

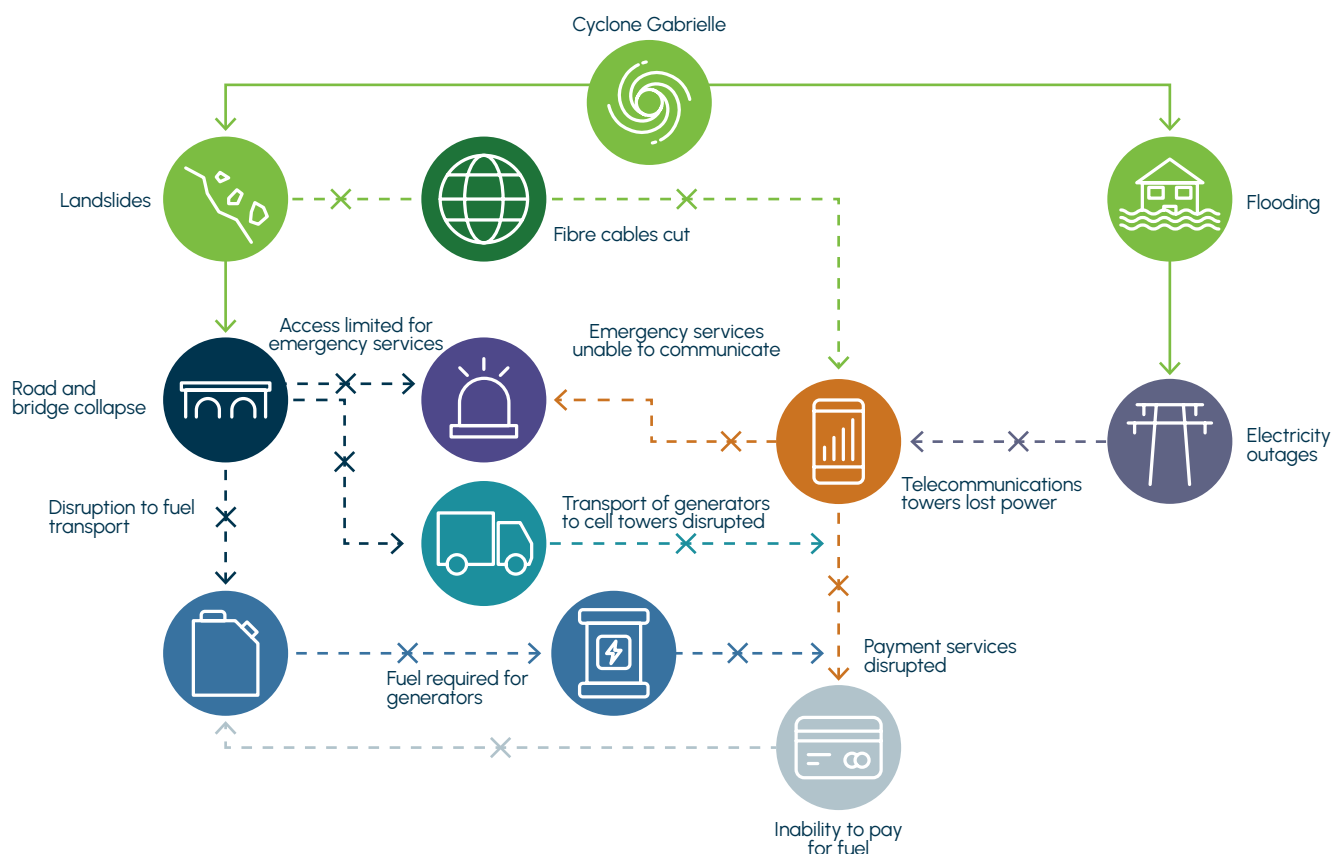
- Government agencies should take a joined-up approach (coordinated by NEMA) to supporting the readiness needs of communities.
- Councils should develop an effective needs assessment and registration, with guidance from NEMA, for Civil Defence Centres, using good examples already in use.
- Councils need to plan and establish Civil Defence Centres that reflect the needs and make-up of their communities.
- An effective warning system should include consideration of the following components:
 - start as early as possible once a potential hazard has been identified
 - be based on a well understood community plan
 - have one clear source of truth from authorities
 - tell people when to evacuate and where they can go
 - utilise trusted messengers like mayors, chairs and councillors
 - ensure messages are understandable in the languages widely spoken in the community, and
 - use multiple channels with clear plans in place in the case of phone and internet outages.
- The PIM should ensure all the appropriate public communication channels, including social media channels, are being used and proactively monitored in an event.
- The roles and responsibilities across search and rescue organisations need to be clarified as part of readiness planning. This includes airspace management and temporary forward airbase coordination in emergency management planning, and scenario and exercise planning.
- The process for declaring a state of emergency should be reviewed to ensure it can work smoothly in all circumstances. This includes amending the template for declaring a state of emergency to allow for simpler ways of obtaining authorisation.

Chapter 5: Supply of goods and services and the place of critical infrastructure

Overview

216. Critical infrastructure like roads, telecommunications and electricity are key components of a well-functioning emergency management response. They enable information to be shared, help with resource coordination, support businesses to keep operating, and allow the movement of people, goods, and services. Critical infrastructure systems are complex and interdependent – outages in one sector can quickly cascade across the entire system.⁴⁰

Fragility of an interconnected system



Source: DPMC

40 Department of Prime Minister and Cabinet. "Lifting the resilience of New Zealand's critical infrastructure", DPMC website, 13 June 2023. <https://www.dPMC.govt.nz/news/lifting-resilience-new-zealands-critical-infrastructure>

217. Aotearoa New Zealand's infrastructure is ageing, and much of it is not sufficiently resilient to handle extreme weather or even day to day wear and tear. The Inquiry was told that continued underinvestment in roading and rail makes it more fragile in emergencies. During the severe weather events, there were significant critical infrastructure failures and outages – particularly electricity, telecommunications, bridges and roading. This hindered the emergency response and affected community wellbeing.
218. The impacts of infrastructure failures and outages were exacerbated by insufficient joint readiness planning between CDEM agencies and critical infrastructure entities. Ineffective prioritisation of some critical infrastructure restoration activities led to delays in the timely restoration of power and communications. Gaps in communication meant critical infrastructure providers were at times disconnected from or frustrated by CDEM agencies. The frustration was shared by NEMA during the national state of emergency.
219. Better coordination and prioritisation of critical infrastructure restoration should be incorporated into response plans. Critical infrastructure entities need to be included in planning and readiness activities.
220. Organisations must also be prepared to continue their operations until services are reinstated. This includes having strategic plans for emergencies, backup options for power, fuel and communication, and appropriate supplies to fill the gap while network services are down. For example, the New Zealand Lifelines Council suggests having "local alternatives to lifelines services at customer sites (e.g., rainwater tanks, barbeque gas bottles, battery packs for cell phones) and at community level (e.g., emergency water storage sites)".⁴¹ People and communities also need to have plans in place so they can survive until help arrives.
221. As part of a robust emergency management system, infrastructure resilience needs to be improved and invested in. These changes are essential to ensure communities can get access to the help, goods and services they need after an emergency, and so businesses can continue to operate and support economic continuity and recovery.

41 New Zealand Lifelines Council, *Aotearoa New Zealand's Critical Infrastructure: A National Vulnerability Assessment*, 2023 Edition, 2023. https://www.nzlifelines.org.nz/site/assets/files/1019/nva_part_a_summary_v1_0_sept_2023.pdf

New Zealand's ageing and interdependent infrastructure exacerbates risks

222. There were many infrastructure failures and outages during the severe weather events, which had compounding and overlapping impacts. For example:

- In **Northland** 64,000 houses were without power and in the Far North, some households were without power for a week or more.⁴² Damage to the North Auckland rail line led to its extended closure.
- In **Auckland**, the Auckland Anniversary heavy rainfall led to:
 - multiple road closures due to slips and flooding
 - 26,000 homes across the city left without power, and
 - Auckland Airport being closed due to flooding.
- In **Waikato**, State Highway 25A between Kōpū and Hikuai – a key route into the Coromandel – suffered significant damage during Cyclone Hale.⁴³
- **Hawke's Bay** experienced severe and widespread infrastructure failures following Cyclone Gabrielle:
 - the Redclyffe substation failure and other outages left 41,000 households without power, some for a week
 - 6km of stopbanks were breached
 - widespread road closures cut off Wairoa and Napier
 - over 100 bridges were impacted and 15 bridges needed to be completely rebuilt⁴⁴
 - 80% cell sites were out on 14 February 2023,⁴⁵ and
 - the Napier wastewater treatment plant was inundated.
- In **Tairāwhiti**, the Waingake Water Treatment plant and pipes were damaged, reducing the available water to 25% of normal supply. For two days, 90% of the region's cell sites were offline and residents faced widespread power outages.

223. The power outages following Cyclone Gabrielle were the longest associated interruption to supply that New Zealand has experienced.

42 Northland Civil Defence Emergency Management, *Cyclone Gabrielle and Tai Tokerau Northland Stories of community resilience and messages of support for the rest of Aotearoa New Zealand*, 2023. https://www.nrc.govt.nz/media/dqvgudn5/cyclone-gabrielle-stories-of-resilience_uvn_1.pdf

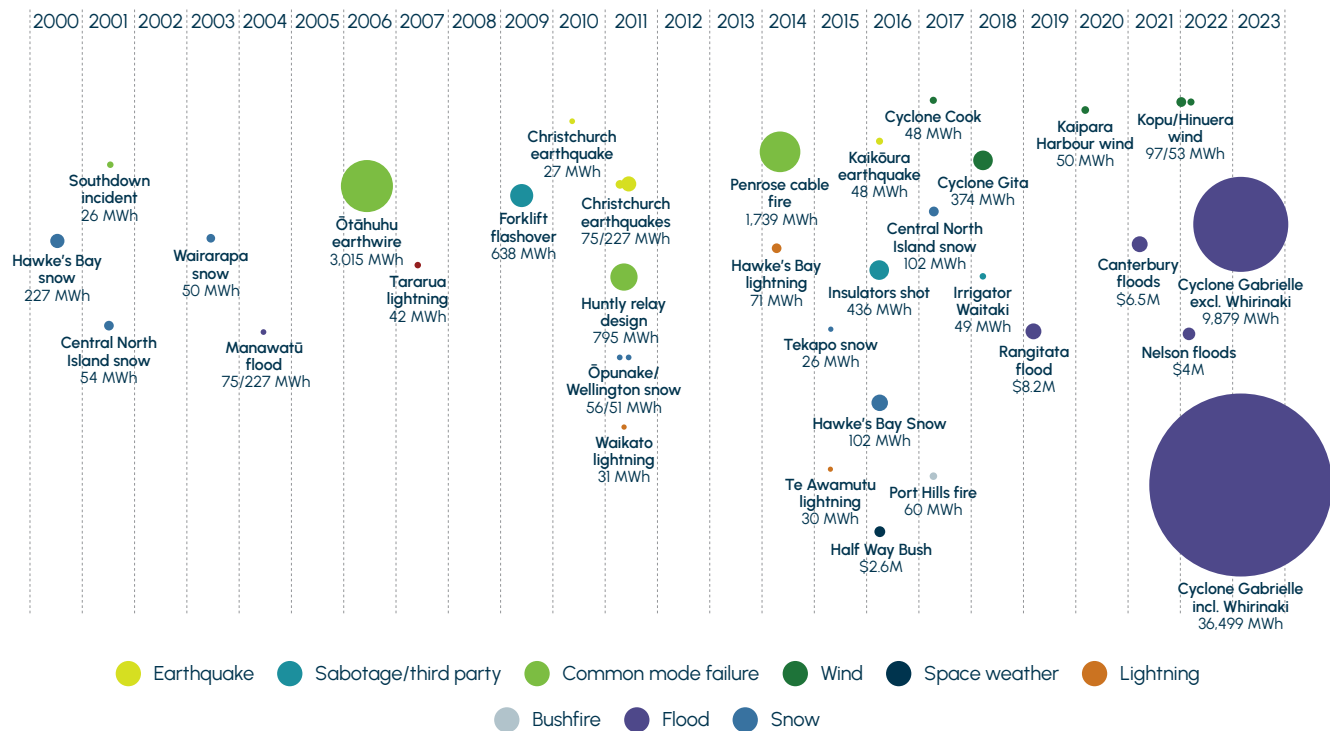
43 Waka Kotahi NZ Transport Agency, n.d. "SH25A Taparahi rebuild", Waka Kotahi NZ Transport Agency website, n.d. <https://www.nzta.govt.nz/projects/sh25-sh25a-thames-coromandel/sh25a-taparahi-rebuild/> Accessed 3 March 2024.

44 Hastings District Council, "Bridge Information Ngā pārongo o te ara whakawhiti wai", Hastings District Council website, n.d. <https://www.hastingsdc.govt.nz/services/roads-and-streets/bridge-information/> Accessed 3 March 2024.

45 NZ Telecommunications Forum. 2023. *Telecommunications Emergency Forum Cyclone Gabrielle Post Incident Report May 2023*, 2023. <https://www.tcf.org.nz/news/2023-tef-incident-report-cyclone-gabrielle>

Resilience history

The bubbles indicate the amount of energy unserved, which is a measure of the energy demand that could not be met due to the event. Where there was no loss of service the cost of the impact is shown. The bubble size is made relative using a standard value of lost load of \$25,000 per MWh.



Source: Transpower

224. The New Zealand Lifelines Council notes that many of the damaged critical infrastructure assets were already known to be vulnerable.⁴⁶ In addition, less well-resourced regions tend to have poor infrastructure, making them more vulnerable in emergencies, for example the road networks in Northland and Tairāwhiti.
225. The Inquiry heard from several infrastructure entities that the central government approach to infrastructure lacks coherence. The policy, regulatory, and operational responsibilities are scattered across core public service departments and Crown entities. This includes DPMC, NEMA, MBIE, Ministry of Transport, New Zealand Infrastructure Commission Te Waihangā, and the New Zealand Transport Agency (NZTA). The distributed nature of these responsibilities may be appropriate. However, at present, leadership is unclear, and the Inquiry heard that the sector has difficulty engaging with central government without a single point of contact.

46 New Zealand Lifelines Council, *Aotearoa New Zealand's Critical Infrastructure: A National Vulnerability Assessment*, 2023 Edition, 2023. https://www.nzlifelines.org.nz/site/assets/files/1019/nva_part_a_summary_v1_0_sept_2023.pdf

226. The Inquiry endorses the work that DPMC is leading to increase the resilience of New Zealand's critical infrastructure to be ready for natural and other hazards, and to support wellbeing, economic growth and save money. DPMC references that the New Zealand Institute of Economic Research has found that "early investment in infrastructure resilience is cheaper than the cost to repair after an event".^{47, 48}
227. Before the 2023 weather events, Lloyd's assessed New Zealand to have the second-highest disaster loss risk as a percentage of GDP in the world, behind Bangladesh.⁴⁹ DPMC is developing options to improve the government's regulatory approach to delivering resilient infrastructure, given there are limited tools available now. This will also support the Infrastructure Commission's first Infrastructure Strategy.

Effectively coordinate and prioritise the restoration of critical infrastructure

228. The emergency response to Cyclone Gabrielle was hampered by ineffective prioritisation of some critical infrastructure restoration activities, and gaps in communication throughout the system. This was particularly evident in the Hawke's Bay.
229. Decision-makers need to be ready to restore critical infrastructure in an order that best serves the system and communities. To identify priorities, they need up-to-date information on key locations such as first responder bases, hospitals, rest homes, and other critical infrastructure. During the events, information on key locations was not always available and restoration decisions were sometimes ad hoc.

Restore telecommunications and power early

230. The Inquiry heard that during the response to Cyclone Gabrielle, NEMA and CDEM controllers sometimes prioritised the provision of non-urgent supplies to communities over the timely restoration of power and communications. This order of operations made it harder to determine what help was needed where, and who was providing it.
231. After addressing immediate risks to safety and providing the necessities of life, restoring telecommunications and power should be the next priority. These utilities enable other aspects of the response to occur and allow for the flow of essential goods and services, such as prescription medicines. Electricity and fibre networks keep phone services and the internet running and allow electronic payment

47 DPMC, *Strengthening the resilience of Aotearoa New Zealand's critical infrastructure system Summary discussion document*, 2023. https://consultation.dPMC.govt.nz/national-security-group/critical-infrastructure-phase-1-public-consultation/user_uploads/dPMC--summary-dd--strengthening-the-resilience-of-ci.pdf

48 New Zealand Institute of Economic Research, *Investment in natural hazards mitigation Forecasts and findings about mitigation investment. Report to the Department of Internal Affairs*, August 2020. NZIER-Natural-hazards-mitigation-report-2020.pdf (dia.govt.nz) dPMC--summary-dd--strengthening-the-resilience-of-ci.pdf

49 Lloyds, *A world at risk: Closing the insurance gap*, 2018. Accessed from <https://www.lloyds.com/worldatrisk>

systems to stay online. Telecommunications improve situational awareness and allow teams to coordinate an effective response and share vital information between communities, responders, and officials. Communications also help people confirm that their loved ones are safe, get clarity on the number of people missing and reduce panic and anxiety.

232. Many power outages were caused by trees falling on power lines, particularly in Tairāwhiti and Northland during Cyclone Gabrielle. Trees planted too close to powerlines increases the risk of outages. The Inquiry suggests strengthening the Electricity (Hazards from Trees) Regulations 2003.



Image: Uprooted trees damaged power utilities in Pouto, Northland. Source: Northpower

Improve coordination across the system

233. Much of the work to restore critical infrastructure is already coordinated at a regional and local level by utility providers and their various Sector Coordinating Entities covering cash, fuel, gas, transport, telecommunications, electricity and water. Sector Coordinating Entities can draw on utility providers from one region to provide support in another region. Additional local, regional, and national resources are sometimes deployed to support the restoration of infrastructure. Overall, the weather events showed that better pre-planning and communication between utility providers, Sector Coordinating Entities and emergency management decision-makers improves coordination across the emergency management system.
234. NEMA does not have the capacity or depth of technical or local knowledge to effectively manage and coordinate critical infrastructure restoration across the country. Sector Coordinating Entities and critical infrastructure entities can assist in organising timely restoration in a way that responds to local conditions and

populations, with the support of local Emergency Operations Centres. The Inquiry proposes that NEMA retains oversight for leadership and coordination of the critical infrastructure response with operational support from the relevant Sector Coordinating Entities.

235. During the severe weather events, lifeline utilities with obligations under the CDEM Act worked hard to restore services. They often went beyond their obligations to “do the right thing” for their communities. They prioritised reinstatement of services for large population centres and medically vulnerable communities before moving outward to restore service in other areas.
236. Many lifeline utilities already have business continuity plans in place, and some established additional strategies for Cyclone Gabrielle. This advance planning was vital to enabling a rapid and effective response. For example, Unison – a Hawke’s Bay-based fibre and electricity company – placed staff, vehicles, and equipment on both sides of rivers before the cyclone in Hawke’s Bay to speed up responses if bridges were unusable. However, lack of communication and coordination between different parts of the system slowed down utility providers.

Unison’s experience in Hawke’s Bay

Unison reported that staff in branded vehicles in Hawke’s Bay were repeatedly turned away from routes only accessible by first responders. This slowed Unison’s ability to restore power after major outages occurred following Cyclone Gabrielle.

Unison staff were able to get accredited by CDEM to use the access routes after 24 hours. However, this information was not passed on as shifts changed at the access routes, which led to further delays for Unison staff. Advance accreditation for Unison personnel would have assisted.

237. It is important the CDEM response recognises that utilities staff (and other essential workers) may need special access in an emergency, along with the likes of Police and FENZ. To enable an effective response, infrastructure providers need to be included in planning processes, with a seat at the table during emergency readiness and response coordination. Lifeline utility providers also need to be supported by an accreditation system that verifies their role as essential workers.
238. Sector Coordinating Entities can be drawn on to play a more active coordination and advisory role in the civil defence emergency management system before and during an event. Sector Coordinating Entities and others involved in coordination should ideally have a clear plan for where initial effort should be prioritised after the preservation of safety and provision of essential supplies.
239. We heard the Emergency Management Bill’s proposed critical infrastructure Planning Emergency Levels of Service, currently in section 57, are unworkable and found this would likely lead to the lowest possible standards being set. The Inquiry suggests the Emergency Management Bill is amended to remove this provision.

Invest in resilience

240. Investing in resilient infrastructure is not only important to ensure the ongoing supply of goods and services to communities but is also vital for business continuity and the economic health of regions and the country. In 2022, then-president of Local Government New Zealand (LGNZ) Stuart Crosby stated, "Reliable infrastructure is the backbone to creating healthy, thriving communities and a resilient local economy." Crosby was emphasising the importance of a proactive approach to infrastructure.⁵⁰
241. Underinvestment in publicly and privately provided infrastructure meant many critical systems were less robust during the severe weather events. *Aotearoa New Zealand's Critical Infrastructure: A National Vulnerability Assessment* noted that resilience projects that would have mitigated many of the infrastructural failures during the severe weather events had been identified, but not prioritised or funded.⁵¹ For publicly funded and maintained infrastructure, many councils have existing funding challenges that make it difficult for them to prioritise resilience investments in their area, bringing additional vulnerability to the system.
242. The levers for critical infrastructure often fall outside the emergency management system, possibly because of commercial drivers. It may not be in commercial interests to invest in improved resilience and readiness. Ageing infrastructure built to lower standards or in unsuitable locations is costly to replace and companies may have other pressing priorities. The government may need to look at ways to incentivise, support or require this investment when considering amendments to the current design of the emergency management system.
243. Central government has a key role in providing certainty of requirements and standards, so companies can invest in more resilient infrastructure with confidence. Many infrastructure providers are eager to invest in resilience or new technology to be better prepared for future emergencies. However, resilience activities are often costly, and the private companies that provide lifeline utilities need certainty that their infrastructure improvements will meet standards set by the government.
244. The resilience of supermarkets is also important as they play a key role in supplying goods and services to the public and responders during severe emergencies. The Inquiry considers supermarkets should be treated as critical infrastructure providers. The Inquiry heard from several supermarkets that operated during, and immediately after, the severe weather events. Some had invested in their resilience and back-up plans. Pak'nSave Tamatea in the Hawke's Bay was able to open and operate smoothly the day after Cyclone Gabrielle due to its investment in a large and new generator, fuel, and working fuel pumps.
245. Those supermarkets that did open initiated COVID-19 protocols such as purchase limits and limiting the number of people inside the store. By doing so, some

50 LGNZ "Infrastructure thinking must be long term", LGNZ website, 2 May 2022. <https://www.lgnz.co.nz/news/media-releases/infrastructure-thinking-must-be-long-term/>

51 *New Zealand Lifelines Council, Aotearoa New Zealand's Critical Infrastructure: A National Vulnerability Assessment, 2023 Edition, 2023.* https://www.nzlifelines.org.nz/site/assets/files/1019/nva_part_a_summary_v1_0_sept_2023.pdf

supermarkets were able to actively manage and prioritise the distribution of goods and fuel (where it was available), to support emergency workers. In some areas, memoranda of understanding between supermarkets and local CDEM Groups helped establish expectations about stocking up prior to emergency events, and the requirement that supermarkets will stay open wherever possible following an event.

Organisations should be prepared to operate until services are restored

246. Extended outages to power, communication, roading, waste, and other systems are to be expected during some emergencies, even with best efforts to get them reinstated. Organisations must prepare for infrastructure outages, particularly to be without power and communications. As demonstrated by the severe weather events, organisations may need to operate for a week without these services in urban centres, or two weeks in rural or remote areas. Planning and preparation are particularly important for essential services (such as hospitals, fire and police stations, councils, and government departments), medically vulnerable populations, and remote communities.
247. The Inquiry found a lack of preparedness for communications and power outages by some CDEM agencies, including government departments, emergency services, local authorities, and lifeline utility providers. Many organisations did not have the assets needed for business continuity following power and telecommunications outages. For example, some Police stations had business continuity plans in place, but did not have back up communications systems or generators on site, despite their key role in emergencies. In some cases, power and communication backup tools that were previously available had been withdrawn.
248. The Inquiry was told this lack of readiness was often due to financial pressures faced by organisations and local authorities. We heard that, since the severe weather events, many organisations have invested in improved back-up telecommunications equipment such as Starlinks, newer satellite phones, and very high frequency (VHF) radios. This should be encouraged, and progress checked as part of an enhanced monitoring and assurance function by NEMA. Communities also need to undertake readiness activities, as further outlined in **Chapter 4**.
249. To improve preparedness, organisations such as government agencies, supermarkets, petrol stations, rest homes, and hospitals should be aware of their local hazardscapes and have long-term strategic plans in place that include planning for emergencies. They should be prepared with their own adequate source of emergency back-up power, means of communication, and access to food and water. Councils need to have sufficient back-up power and communications to ensure Civil Defence Centres can be stood up, and to support iwi and community organisations to have the infrastructure they need to operate as community-led centres.

Challenges and opportunities across different sectors

250. Each critical infrastructure sector faced different challenges during the severe weather events. The work to reinstate service and restore the flow of goods and services depended on the resilience of the infrastructure, the specific weather impacts in places across the country, geography and coordination between the sector and other groups.



Telecommunications

What happened: Telecommunications infrastructure is vulnerable to power outages, slips, and damage to roads and bridges. Many regions lost phone and internet connectivity during the events which was detrimental to the response and created panic and anxiety. The 111 service uses the same networks, and people in affected areas were temporarily unable to get through. Access to communications via satellite phones, VHF radios, marine radios, satellite internet, satellite messengers, and personal locator beacons was not readily available, including for some first responders.

What worked well: Cell tower battery back-ups were useful in providing connectivity in the first eight hours immediately after power went out. The Telecommunications Emergency Forum was activated during Cyclone Gabrielle to coordinate restoring connectivity as fast as possible, with telecommunications companies around New Zealand supporting each other. Power companies that have a telecommunications arm informally provided information about where power was due to be restored, which was useful in deciding the cell sites to place generators.

What did not work well: NEMA and CDEM groups sometimes prioritised the provision of non-urgent supplies to communities over the timely restoration of power and communications. Some generators placed at cell towers were stolen.

Looking forward: The NZ Lifelines Council National Vulnerability Assessment 2023 identified rapidly evolving technology and power dependence as the key vulnerabilities for telecommunications. The sector wants to pursue investment in longer-lasting cell site batteries but needs government direction on the standards. Providers need access to real-time information about where and when power is likely to be restored to enable them to prioritise placement of generators at cell sites, and they need access to the sites via road, air, or by boat. It is pleasing to see that business continuity planning to operate during telecommunications outages has improved in many places following the events.



Image: Broken road sign next to rail line on SH2 at Esk Valley between Wairoa and Napier. Source: NZDF

Transport

What happened: Many state highways, bridges and local roads were closed following Cyclone Gabrielle. Closures enabled the NZTA and council staff to undertake safety checks and repairs, and clear downed trees. Bailey bridges (portable, prefabricated, truss bridges) were used as temporary replacements, including those which were damaged by slash. Some communities were cut off for extended periods, for example in Wairoa and Northland. The rail system was damaged in many locations, and the Northland to Auckland line is still closed following the events. This has had flow-on effects for ports and the economy. Rail and state highway damage has put additional pressure on local roads, many of which were already in poor condition, on unstable land, and under pressure from forestry activity. Some state highways are particularly vulnerable, such as SH1 at the Brynderwyns which connects Auckland and Northland and SH35 in Tairāwhiti. Airports were closed in the Auckland Anniversary heavy rainfall and Cyclone Gabrielle.

What worked well: Pre-agreed detour routes, empowered local teams, and clear online information from NZTA proved useful during the events. Two teams working in 10-hour shifts were able to build Taparahi bridge and reopen a safer and more resilient SH25A to quickly reconnect the Coromandel by Christmas. The Northern Transport Alliance proved a useful mechanism for the four Northland councils and NZTA to deliver roading services strategically in the region, including in the recovery from the events.

What did not work well: Roding repairs following severe weather events are undertaken in a high-risk environment and require care and time to undertake safely. We were told that pressure to speed up the response could create conflict for local decision-makers when balancing against health and safety considerations. Separately we also heard that some airports did not have alternative means to pump fuel during power outages.

Looking forward: The NZ Lifelines Council National Vulnerability Assessment 2023 identified land stability as the key risk for roads and rail. It commented on the inadequate state of local roads as viable alternative routes to state highways. We heard there is economic pressure to improve transport infrastructure, such as roads, to allow for the transport of goods and services in areas like Northland (some of which is partially funded by local councils who are struggling financially). We heard that “building back better” is not financially viable for many routes. With regards to air, we also heard that the aviation response relied too heavily on helicopters. Fixed wing operators said they should have been better utilised, to free up helicopters and reduce the tasking backlog.

Electricity

What happened: During Cyclone Gabrielle over 225,000 homes were without electricity, some for more than ten days – the largest interruption for 20 years. Companies tend to restore power to main centres first, meaning remote communities can be without power for quite some time. Power outages are particularly problematic for first responders, local government, hospitals, rest homes, the medically vulnerable, prisons, dairy farms, essential businesses, and telecommunications. Many of these entities and individuals were not prepared for outages. Power cuts were the main cause of telecommunications interruptions. Trees falling on power lines and slips were the main causes of electricity outages, particularly in Tairāwhiti and Northland. The flood-hit Redclyffe substation failure heavily impacted Hawke's Bay, despite it previously being identified as needing improved flood protection.

What worked well: Power companies generally had good business continuity plans in place and worked quickly to restore power, but it can take some time to restore electricity to areas at the margins of the network. Transpower was able to rapidly reconfigure the network to work around the Redclyffe substation failure. Locations with alternative power sources automatically became hubs.

What did not work well: Many organisations did not have alternative power sources in case of electricity outages. Sourcing generators was problematic as they were in high demand. Some power company staff were turned away from restricted access roads as they weren't seen as critical or pre-accredited as essential workers.

Looking forward: The NZ Lifelines Council National Vulnerability Assessment 2023 identified trees as a risk for electricity. Many trees are planted too close to powerlines which increases the risk of outages, and power companies are seeking a change in the Electricity (Hazards from Trees) Regulations to increase the corridor around power lines and put more responsibility onto forestry owners. Power providers whose staff are vital to restore power need to be recognised as essential workers. A process to have accredited workers identified ahead of an emergency is needed. Improved business continuity planning is needed for electricity users to prepare for power outages.



Image: Power lines down in Napier. Source: Unison

Gas

What happened: The natural gas transmission network did not suffer any breakages during the events. Gas continued to be transmitted to critical users such as hospitals. Some households could continue cooking and heating water, where ignition was not reliant on electricity. Gas-powered electricity generators were used in some places.

What worked well: LPG tanks were portable and easy alternatives to electricity during the events. They were well-used by marae and proved to be a useful food preparation and heating back up for those who could use them. The LPG sector donated LPG and gas cookers in Tairāwhiti and Hawke's Bay following Cyclone Gabrielle. NZDF transported LPG cylinders into inaccessible areas.

What did not work well: People reported that they had not considered storing full LPG tanks for an emergency. The rush to fill tanks resulted in long queues when the roading network was already under pressure.

Looking forward: The NZ Lifelines Council National Vulnerability Assessment 2023 identified the Maui gas line as a possible single point of failure.⁵² Underground gas pipelines are remarkably resilient during severe weather and earthquakes as they are generally shielded from high winds, rainfall and falling debris (except when carried over bridges or in some cases where land is moving or unstable). Bridges are a key shared risk across many types of infrastructure.



Image: Moving supplies (including LPG bottles) across floodwaters in Hawke's Bay. Source: NEMA

52 New Zealand Lifelines Council, *Aotearoa New Zealand's Critical Infrastructure: A National Vulnerability Assessment, 2023 Edition*, 2023. https://www.nzlifelines.org.nz/site/assets/files/1019/nva_part_a_summary_v1_0_sept_2023.pdf

Fuel

What happened: There was difficulty accessing both aviation fuel and diesel to supply generators during power outages. Power outages hindered access to fuel as pumps and Eftpos facilities require power for fuel payment. As regulations prevent fuel being transported inside helicopters, some pilots flew fuel in drums carried underneath, but there was a shortage of the drums needed to do this.

What worked well: Some petrol stations were prepared and had generators onsite or were wired to receive a generator if needed. Some organisations included fuelling vehicles and storing fuel prior to emergencies as part of their planning. The Fuel Sector Coordinating Entity was activated for Cyclone Gabrielle and was able to draw on the National Fuel Plan which provided a readiness and response framework.

What did not work well: Many organisations and communities did not store fuel for emergencies. Businesses did not have sufficient business continuity plans in place to deliver services for extended periods of time without networked power supplies. The impact of power outages on the ability to pump fuel came as a surprise to some petrol stations and airports which were unprepared for operations during extended outages.

Looking forward: The NZ Lifelines Council National Vulnerability Assessment 2023 identified limited fuel storage and dependence on electricity and road networks as key fuel sector vulnerability points. MBIE is working on a package of fuel resilience policies. Improved business continuity planning is needed by fuel retailers and users of fuel, and cash held to pay for fuel. A store of drums ready to transport fuel in emergencies would be useful for future events. Diversity in types of fuel available can increase resilience.



Image: Petrol station buried under silt in Esk Valley, Hawke's Bay. Source: NZDF

Supply of goods

What happened: Many New Zealanders were not able to purchase food and other necessities while stores were closed or Eftpos was down. Some open supermarkets faced additional challenges with increased anti-social and criminal behaviour. Some stores, retirement villages, iwi and banks flew in cash until electronic payments resumed. It is difficult for some households to afford to hold enough food and water to be self-sufficient in anticipation of an emergency event. Additional preparedness support for these households is needed.

What worked well: Some CDEM groups have close relationships and memoranda of understanding with local supermarkets, which meant additional stock could be arranged prior to events through their expertise and networks. Many iwi were exceptionally effective at using their networks (including pan-iwi networks) and resources to support those in their communities. They sourced and purchased food and other basic supplies during the events, and in some cases guaranteed the repayment of tabs at local shops. Wider community groups also played crucial and important roles to support people with the supply of food and means of payment.

What did not work well: Many supermarkets were not asked to stock up or have agreed opening hours prior to the events and some did not feel supported by civil defence or first responders.

Looking forward: There are opportunities to improve business continuity planning, including by banks, and to remind households to hold small quantities of cash for emergencies. There is also an opportunity for supermarkets to be defined as critical infrastructure with requirements to open wherever possible or when required, and to be included in readiness planning. NEMA has set up a Cash Industry Sector Coordination Entity to support the provision of cash to affected communities.



Image: Puketitiri pop-up supermarket. Source: NEMA



Water and waste

What happened: Water infrastructure lacks resilience. Properties were inundated with thousands of cubic metres of silt following Cyclone Gabrielle. In Gisborne the main water treatment plant pipes were damaged in multiple places and repaired in just six weeks.

What worked well: Water New Zealand, supported by the Water Services Managers Group, was activated for the first time for Cyclone Gabrielle, helping coordinate and access resources. The water treatment plant in Napier which was inundated in Cyclone Gabrielle has been repaired in a way that adds resilience.

What did not work well: Potable water was a challenge, particularly in rural areas, and some septic tanks failed. Where tank water was compromised people had to boil water. While rural water is considered part of the water to be managed in an emergency, there are funding challenges. In the short term this is covered by welfare funding, but longer-term potable water solutions are the responsibility of property owners in rural areas. Stopbanks are also absent from the current lifeline utility definitions, despite being critical in lessening the impacts from severe weather events. The high water levels maintained by dam owners and hydropower operators prior to and following the events were criticised by some downstream local communities who were flooded. An independent review is underway in Wairoa.

Looking forward: The NZ Lifelines Council National Vulnerability Assessment 2023 identified asset resilience and climate change as the key sector vulnerabilities for three waters (storm, water and waste). Current threats to water infrastructure are many: older pipe networks are highly vulnerable to seismic events, wastewater sites are vulnerable to power outages (with only 10% with standby generators), and intense rainfall makes it hard to treat water. Water preparedness plans, asset lists, and lists of key customers such as hospitals and dialysis patients, are needed in more places. Back-up generators are needed for 90% of wastewater sites. The Emergency Management Bill would allow the Minister to recognise three waters providers as critical infrastructure entities. It is important that flood protection and stopbanks are also viewed as critical, with commensurate planning and information-sharing requirements around them.



Broadcasts

What happened: Television and radio broadcasts were critical for passing on information and providing reassurance. In Hawke's Bay and Tairāwhiti radio broadcasts were a key mechanism for communities to find out what was happening while other communications were down.

What worked well: The combination of national and local broadcasts worked well. NEMA has memoranda of understanding with radio and TV broadcasters to publicise emergency information and public safety messages before, during, and after emergencies. Radio New Zealand provided essential lifeline information via FM and AM transmissions, through their website, and social media. AM transmissions can be more resilient during an emergency. Television New Zealand shared messages about how to be prepared, how to keep safe, and how to seek help. We heard that national broadcasts were insufficient for local needs and local radio stations provided useful community-specific and frequent updates without telecommunications. For example, consistent and clear messages were broadcast on local radio in Gisborne, supported by a good relationship with the local mayor.

What didn't work well: Rumours and disinformation were spread in Hawke's Bay, undermining community confidence. It is important that CDEM groups and NEMA's Public Information Management teams provide accurate, verified, timely, and frequently updated messages for broadcasters to share with communities. This wasn't always the case. Many New Zealanders could only listen for short periods in their cars if they didn't have battery powered radios.

Looking forward: Relationships could be strengthened and formalised between local broadcasters and CDEM groups so that there is clarity and consistency on how to operate during emergencies to ensure good trusted local information is broadcast and dis- and misinformation countered. The Code of Broadcasting Standards in New Zealand requires balanced and accurate reporting and creates the expectation that broadcasters will provide accurate information and take care to avoid misinforming the public.

Guidance to the sector

Improve business continuity plans and invest in assets

Invest in business continuity plans and assets: Organisations with responsibilities under civil defence legislation, such as local authorities, emergency services, government departments, and lifeline utilities should have business continuity plans and assets in place that allow them to continue operating if power and communications are down during an emergency. Examples include investing in solar power, generators with appropriate connections, and satellite communications. Wastewater sites should invest in back-up generators, for instance.

Improve business continuity for fuel retailers and users: Fuel retailers could be better prepared to pump fuel without electricity and to sell fuel to customers while electronic payments are not available. Fuel users could be encouraged to buy fuel in preparation for emergency events. Consider purchasing a supply of drums to transport fuel under helicopters in emergencies.

Improve business continuity for airports: Airports should be ready to operate in emergencies, for example refuelling planes and powering terminals. This could also support fixed wing aircraft to play a bigger role in emergency responses, alongside helicopters.

Update Police business continuity plans: Police should consider, as part of their business continuity planning, how to both support the emergency response and to also maintain business as usual.

Improve preparedness for water outages: The water sector should develop water preparedness plans, asset lists, and lists of key customers such as hospitals and dialysis patients.

Secure access to food and other supplies

Help supermarkets in their essential role: CDEM Groups should work with local supermarkets to agree expectations on stocking up prior to and opening hours during and after emergency events. The civil defence system should encourage supermarkets to put in place effective business continuity plans and assets prior to events and support them to provide their essential service in the response phase.

Provide roading information: NZTA to provide information to support delivery of essential goods and maintain supply chains, linking with local councils and iwi where appropriate. For example, supported freight convoys.

Support low-income households with emergency supplies: Support preparedness for low-income households who cannot afford to hold seven days (or 14 days for isolated communities) worth of emergency supplies.

Draw more on Sector Coordinating Entities

A stronger role for Sector Coordinating Entities: Draw on Sector Coordinating Entities to play a stronger and more active coordination and advisory role in the civil defence emergency management system before and during an event.

Investigate how to continue electronic payments and provide cash: The Cash Industry Sector Coordination Entity could investigate how the banking sector can support business continuity through the provision of cash and the ability to continue to use electronic payments while power and/or communications are down. Guidance to communities should include holding some cash in small denominations to purchase food, fuel and other necessities in emergencies if electronic payments aren't available.

Support infrastructure resilience

Provide certainty of standards for infrastructure investment: Central government should provide certainty around infrastructure requirements and standards, so that companies can invest in more resilient infrastructure with confidence. For example, cell site battery standards.

Pre-accredit essential workers to access first responder routes: During the readiness phase, roll out an accreditation system for lifeline utility providers such as electricity companies, fuel truck drivers and other identified essential workers to access first responder routes.

Support broadcasters to share information with communities

Support broadcasters to share trusted information: Strengthen and formalise relationships between local broadcasters and CDEM so that there is clarity and consistency on how to operate during emergencies to ensure good trusted local information is broadcast. NEMA and CDEM groups and their PIM functions should provide accurate, verified information that is frequently updated as a proactive way to support broadcasters to provide trusted and critical information to communities and counter misinformation. They should involve broadcasters in regular scheduled briefings, nominate a point person to verify information and give advice on how to report safely in emergency situations.

Chapter 6: Funding settings

Overview

251. An effective emergency management funding system looks across all 4 Rs and takes a long-term view to support communities to prepare for, and respond to, emergencies. While the Inquiry's remit is funding settings for readiness and response, the emergency management funding system is much broader than this.
252. It is the Inquiry's view that there needs to be greater focus and action on reducing New Zealand's risk related to natural hazards and improving resilience. In the past decade, central government has spent billions on the response to and recovery from our most significant emergencies, but its investment in reduction pales in comparison. The approach is akin to the ambulance at the bottom of the cliff — the funding comes too late to effectively minimise the impact of events.
253. Local councils are largely responsible for funding their own readiness activities. However, most councils have strained resources and competing priorities, making it difficult to invest in maintaining infrastructure and much needed activities like readiness planning, capability building and preparation of emergency centres. Councils have told us they cannot afford the cost of continual events.
254. The Inquiry considers the Government should proactively invest in reduction and readiness activities. This shift in focus will help reduce negative impacts for communities during and after emergencies and may also reduce future spending required on response and recovery. Across the funding system, change is needed to ensure money can be spent effectively during the critical first days of an emergency response.
255. Central government does fund councils for a range of activities related to response, and for readiness activities that take place immediately before an emergency event. The current funding system for these activities is outdated and not fit-for-purpose, especially given the expected increase in the occurrence and severity of weather events in coming years. Councils are eligible for reimbursement of welfare costs, but the current process requires considerable time and effort by councils, it slows down action on the ground, and means some people making essential contributions to the response are unable to be reimbursed for costs incurred.



Image: A section of SH2 between Napier and Wairoa was washed out. Source: NZTA

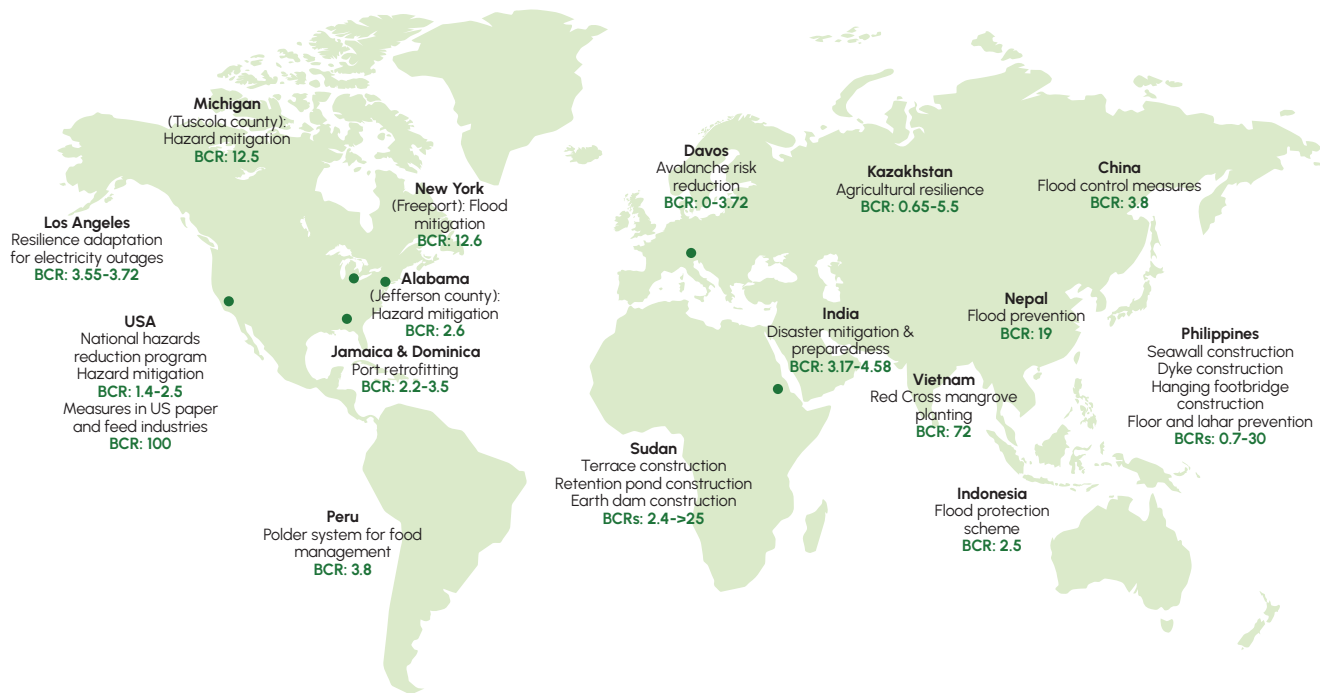
Shift to a preventative model of funding emergency management

256. The Government needs to shift its focus to invest in the CDEM system before emergencies happen. As described throughout this report, the adverse impacts of underinvestment in reduction and readiness activities were very clear during the severe weather events. A shift in focus towards funding reduction and readiness would enable councils and communities to better prepare and build resilience with the aim of reducing negative impacts on people, property, and businesses. We note that while reduction is out of scope of this Inquiry, it is important we discuss the investment required in this area. Without it, the impacts of emergency events will continue to be devastating.
257. The costs of paying for emergency recovery activities are significant. IAG New Zealand, the country's largest general insurer, estimates that Aotearoa New Zealand has spent more than 4% of GDP per year for the past 20 years recovering from natural disasters (due in large part to the Canterbury earthquakes).⁵³ As IAG notes, this is almost as much as was spent on education, superannuation or purchasing health services. It therefore should be of national significance.
258. Risk reduction actions can have higher upfront costs than the other components of emergency management, but they tend to be more cost effective than disaster relief over the longer term. A range of studies suggest that on average, the benefits of resilience (broadly defined, and including aspects like risk reduction infrastructure) outweigh the costs four-fold.⁵⁴ The diagram below illustrates a range of infrastructure resilience projects across the world, with the average benefit cost ratio significantly exceeding one. For example, flood control measures in China provided \$3.80 in benefits for every \$1 spent.

⁵³ IAG, *Meeting the cost of natural hazards: A briefing to the incoming government*, November 2023.

⁵⁴ Lloyd's, *Innovation Report 2018, Understanding Risk: Innovative finance for resilience infrastructure*, 2018. https://assets.lloyds.com/assets/pdf-innovativefinance-final-web/1/pdf-InnovativeFinance_FINAL_web.pdf

Average benefit cost ratios from a range of infrastructure resilience projects across the world



The benefit cost ratio is a simple indicator which shows how much the benefits of a project outweigh the costs. A ratio of 1:1 means the benefits equal the costs. The evidence demonstrates that preparing for disaster pays off; it generates a 'resilience dividend'. This dividend means that resilient infrastructure is an economically logical investment.

Source: Lloyds

259. Despite the evidence for potential long-term savings, underinvestment in reduction is a global issue. An analysis of selected disaster events published by Economist Impact found that "governments understandably prefer to allocate scarce funds to investments that generate immediate, tangible outcomes, rather than to risk reduction efforts whose gains are measured in events avoided".⁵⁵
260. A more local example of underinvestment in reduction is the spend on flood defences in Westport. Following the floods that struck Westport in July 2021, IAG insurers paid out \$73.1 million, with central government contributing an additional \$100 million. In June 2022, the Buller District Council, West Coast Regional Council, and Te Rūnanga Ngāti Waewae submitted a co-investment proposal to the Government seeking a \$44.5 million contribution to a \$56.1 million resilience programme. The Government agreed to \$22.9 million to support some aspects of the resilience programme. IAG's view is that the full \$56 million spent on reducing future risk in Westport will save considerably more in the future – the total identified response and recovery cost (including broader economic and social costs) for the July 2021 flooding is \$173 million.⁵⁶

55 Economist Impact, United Nations Office for Disaster Risk Reduction, *Building disaster resilience: A study of disaster events and financial lending streams*, February 2023. <https://www.undrr.org/publication/building-disaster-resilience-study-disaster-events-and-financial-lending-streams>

56 IAG, *Meeting the cost of natural hazards: A briefing to the incoming government*, November 2023.

The current government funding model puts pressure on an already strained local government sector

261. The current approach to funding emergency management activities is underpinned by the principle that local risks are a local responsibility, with the expectation that “local authorities will be primarily responsible for bearing the financial costs of the impact of an emergency in their geographical and functional areas of responsibility.”⁵⁷
262. Despite this responsibility, the Inquiry observed that in general, councils are not prioritising or investing in readiness activities. We heard from councils that a range of pressures, and the broader financial environment they operate within, affect their ability to invest adequately. The 2023 Review for the Future of Local Government found that “Local government has been under significant funding pressure for several years. Councils face growing community and government expectations and the impacts of growth, tourism, and significant infrastructure failures”.⁵⁸ The Inquiry considers that without assistance, councils will continue to struggle to invest the amounts needed into readiness activities.
263. The Inquiry notes that even with the principle that local government is primarily responsible for costs, central government does step in to fund emergency management during and directly before events, and increasingly during the recovery phase. For example, \$2 billion of government funding was allocated after the severe weather events through the North Island Weather Events Response and Recovery Package⁵⁹ (although the overall costs of the events is significantly higher, with damages currently estimated at between \$9 and \$14.5 billion).⁶⁰ There are also provisions for the funding of response activities, which are detailed further below.
264. The scale of central government funding for response and recovery is in stark contrast to the limited amount it allocates on an ongoing basis to support readiness activities. At the moment, NEMA administers \$889,000 (excluding GST) annually through the permanent CDEM Resilience Fund which aims to support local and regional readiness capability and practices.⁶¹ The Inquiry understands this fund has remained at a similar level since it was established in the 1990s.
265. The Inquiry considers the current investment in readiness and resilience activities is not sufficient to ensure councils are prepared for the next event. The significant amount of money that flows from central government during and after emergency events shows that money is available, but spending needs to be refocused. The

57 *National Civil Defence Emergency Management Plan Order 2015*, Section 161 (1) and (2), 2015.

58 Review into the Future for Local Government, *He piki tūranga, he piki kōtuku The Future for Local Government*, 2023. [https://www.dia.govt.nz/diawebsite.nsf/Files/Future-for-Local-Government/\\$file/Te-Arotake_Final-report.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Future-for-Local-Government/$file/Te-Arotake_Final-report.pdf)

59 National Emergency Management Agency, “Weekly Update from the Cyclone Recovery Unit – 22 May 2023”, NEMA website, n.d. <https://www.civildefence.govt.nz/resources/news-and-events/news-and-events/weekly-update-from-the-cyclone-recovery-unit-22-may-2023>

60 The Treasury, *Half Year Economic and Fiscal Update 2023*, 20 December 2023. <https://www.treasury.govt.nz/publications/efu/half-year-economic-and-fiscal-update-2023>

61 National Emergency Management Agency, “CDEM Resilience Fund”, NEMA website, n.d.. <https://www.civildefence.govt.nz/cdem-sector/cdem-resilience-fund>

Inquiry recommends the Government increase the appropriation for the existing contestable fund to support a significant uplift in community readiness and resilience across New Zealand.

A refreshed approach to funding during and immediately after an emergency

266. In addition to an overall shift in the investment approach to emergency management, there needs to be some specific changes to the way funds for response activities are administered and a reappraisal of which costs are eligible.

The current state for funding response and immediate readiness activities

267. The current objectives of government financial support for local government during and immediately before an emergency focus on caring for directly affected people, and preventative actions to reduce immediate danger to human life or to reduce the potential consequences of an emergency.⁶² Current government policy is that councils can apply for reimbursement of 100% of welfare costs they incur in caring for displaced people.⁶³ Central government will fund 60% of other eligible activities above a threshold based on the net capital value of the council. Eligible activities include the repair of essential infrastructure like water, storm water, electrical, sewerage and gas assets as well as other council-owned structures like retaining walls and tunnels upon which essential services depend. Both these funding functions (welfare, and other response costs) are administered by NEMA.
268. Councils are responsible for most other response costs, including for example repairs to local roads. In practice, government funding is made available to councils and communities to support this response spending through a range of government agencies. Increasingly, it is also provided through event-specific bespoke government funds like the North Island Weather Events funding package. In addition, different government agencies provide funding for specific activities or sectors, ranging from support for farmers to silt removal following Cyclone Gabrielle.
269. Councils can also request reimbursement of funds that were incurred by iwi and other organisations with a formalised role in providing welfare services after an emergency. The Emergency Management Bill includes provisions for iwi and Māori organisations to be directly reimbursed for welfare costs within the criteria set at the time of the emergency.⁶⁴ We support the intent of this provision, reflecting the key role of iwi Māori organisations in providing welfare services.

62 The National Civil Defence Emergency Management Plan Order 2015, Section 162.

63 The Guide to the National Civil Defence Emergency Management Plan 2015, Section 33.4.1

64 Emergency Management Bill, Section 149. Accessed from: <https://legislation.govt.nz/bill/government/2023/0225/latest/whole.html#LMS670854>

Overhaul the system for distributing funding to councils

270. The Inquiry heard from most councils affected by the severe weather events that current processes for accessing this funding are a pain point. In particular, the processes are based on a low-trust, high compliance model and take up significant staff resources for both NEMA and councils. The claims process includes a review of eligible costs and invoices at a line-item level,⁶⁵ and sign-off from the local authority's chief executive certifying all elements of the claim are true and correct.⁶⁶
271. Councils spoke of a 'nickel and diming' approach taken by NEMA, with each line item being checked and each expense requiring an invoice, which can be difficult to ensure happens in emergency conditions. Councils told us working out the payments can be an expensive and time-consuming process, and that this can put strain on already limited resources. The current approach has led to tension in relationships between NEMA and councils, with councils frustrated by the protracted 'to and fro' process required to obtain reimbursement.
272. A more permissive approach has been taken in one-off situations, including for the bespoke welfare fund set up for Cyclone Gabrielle. The Inquiry considers funding should move permanently from a model based on reimbursement and tight control of eligibility criteria to a model which enables funds to flow more freely while ensuring accountability of spending. This approach would be particularly appropriate in the first two weeks of any immediate response, rather than during the recovery phase where the amounts involved will be much larger. In March 2023, the Office of the Auditor General published guidance on managing public funding in an emergency response or recovery. This could guide future processes for emergency welfare funding.
273. As discussed in **Chapter 2**, NEMA has a broad range of roles with limited capacity, and the Inquiry recommends focusing their responsibilities where most value can be added. The Inquiry recommends the administration of welfare related costs should be moved to MSD as it takes over responsibility for leadership of welfare coordination. MSD already has the necessary systems and capability for distributing funding at scale through its role in distributing Civil Defence funding to individuals. MSD officials have told us they are able to scale further as required.

Revisit the criteria for what central government funds

Welfare

274. As noted above, councils can apply for reimbursement of 100% of eligible welfare costs they incur in caring for displaced people. This includes direct costs of accommodating, transporting, feeding, and clothing people who cannot continue to live in their usual place of residence because of the threat to property and personal safety in an emergency.⁶⁷ The welfare fund NEMA administers allows response and

65 National Emergency Management Agency, "Response, other response and recovery claims following an emergency event", NEMA website, n.d., <https://www.civildefence.govt.nz/cdem-sector/guidelines/claims-factsheets/response-other-response-and-recovery-claims-following-an-emergency-event>

66 The Guide to the National Civil Defence Emergency Management Plan 2015, Section 33.7.

67 The Guide to the National Civil Defence Emergency Management Plan 2015, Section 33.4.1

recovery costs of \$12 million to be paid in any fiscal year. We note that following Cyclone Gabrielle, a welfare support fund was established, with an additional \$3 million of funding to cover costs that were not covered by normal reimbursement criteria.

275. We heard from councils, iwi, Pacific peoples, and ethnic communities that the criteria for what is reimbursed is restrictive and not sufficiently flexible to ensure immediate community needs can be met in an emergency. For example, the cost of hiring equipment to deliver welfare services could be reimbursed, but the purchase of the same items would not because they become an asset of the council. This can cause unforeseen issues. We were told many times by councils that during Cyclone Gabrielle the demand for generator hire outstripped supply but the cost of buying a generator was ineligible for reimbursement. The Inquiry considers that as part of reconsidering the criteria for welfare funding, Section 33 of the Guide to the National CDEM Plan, should be reviewed in light of experiences during the weather events and to consider allowing for the purchase of capital items up to a maximum amount.
276. Some councils and iwi also found it frustrating that operational costs are not covered by the strict criteria for reimbursement, despite the significant outlay required to coordinate welfare response activities. These restrictions meant that in some cases, spending on vital response activities were not able to be reimbursed afterwards.
277. The Inquiry recommends the welfare funding criteria are reassessed to ensure a broad view of welfare is covered, based on a model where organisations are commissioned to meet outcomes. The new approach should allow for flexibility, for example through establishing a commissioning model in the readiness phase. Memoranda of understanding could be used as the method for formalising the commissioning model.

Non-welfare response and immediate readiness

278. The government will reimburse 60% of other response costs incurred by councils if:
- the costs meet the appropriate funding criteria,⁶⁸ and
 - councils reach a threshold calculated based on their net capital value (this is like an excess and can disadvantage smaller councils).
279. As discussed earlier in the chapter, the types of costs covered by this funding include temporary repairs to critical infrastructure assets owned by the council like stopbanks and river management systems.⁶⁹
280. The requirement that councils contribute to this funding was originally put in place to require them to have a stake in maintaining and investing in their assets. However, with the funding pressures many councils are under, we were told some have very little flexibility to initiate significant readiness projects.

68 The Guide to the National Civil Defence Emergency Management Plan 2015, Section 33.4.2

69 The Guide to the National Civil Defence Emergency Management Plan 2015, Section 33.5.1.

281. The requirement that councils pay 40% of eligible response costs can lead to regional variations in council spending on response, which can exacerbate inequalities that are already present. For example, larger councils with a larger ratepayer and asset base have access to more funding to pay for response costs and have more ability to absorb costs incurred following an emergency.
282. The reimbursement model means that some councils need to take out loans to cover the costs incurred before they can be reimbursed. The interest payments on these loans can start immediately. We also heard that councils may incur a range of costs after an emergency that are not in scope for reimbursement under this provision, such as rubbish and silt removal and the repair of local roads. Overall, some councils are not in the financial position to afford the response and recovery costs. One District Mayor has noted, "it's just too hard on us and we're just going to go broke."
283. The Inquiry recommends that the Government review the settings, criteria, process, and mechanism for funding response costs, to allow funding to flow more freely, with appropriate oversight.

Community-led welfare responses

284. The current system provides government funding for local government or groups (including iwi) that are officially tasked with roles during an emergency. During the severe weather events, many businesses and voluntary organisations also stepped up to provide services for their community without being part of the official CDEM structure. This included helicopter owners providing rescue services and community groups providing meals.
285. These types of contributions brought significant benefit to the response effort. They also come with costs for the groups involved, even though people provided their time on a voluntary basis. For example, Surf Lifesaving had to replace contaminated wetsuits and other gear that had been used in floodwaters after Cyclone Gabrielle, and private helicopter owners that undertook rescues incurred significant fuel costs. Currently, there are no formalised systems in place for businesses or volunteer organisations to be reimbursed for unforeseen expenses incurred during an emergency to support the wellbeing of communities.
286. In some cases, councils and communities will be able to identify before an emergency when services may be needed during a response. In these cases, they should be encouraged to enter or update a current memorandum of understanding ahead of time to add clarity to who will pay for services. This could include agreements between councils and community groups well-equipped to provide hot meals at scale, or social housing providers who may be able to step into the welfare space if required. For cases where groups step up to provide services for their communities without a formal agreement already in place, there should be some discretionary mechanism for ex-gratia payments to be made within agreed criteria.

Clarify the funding sources available for councils and communities

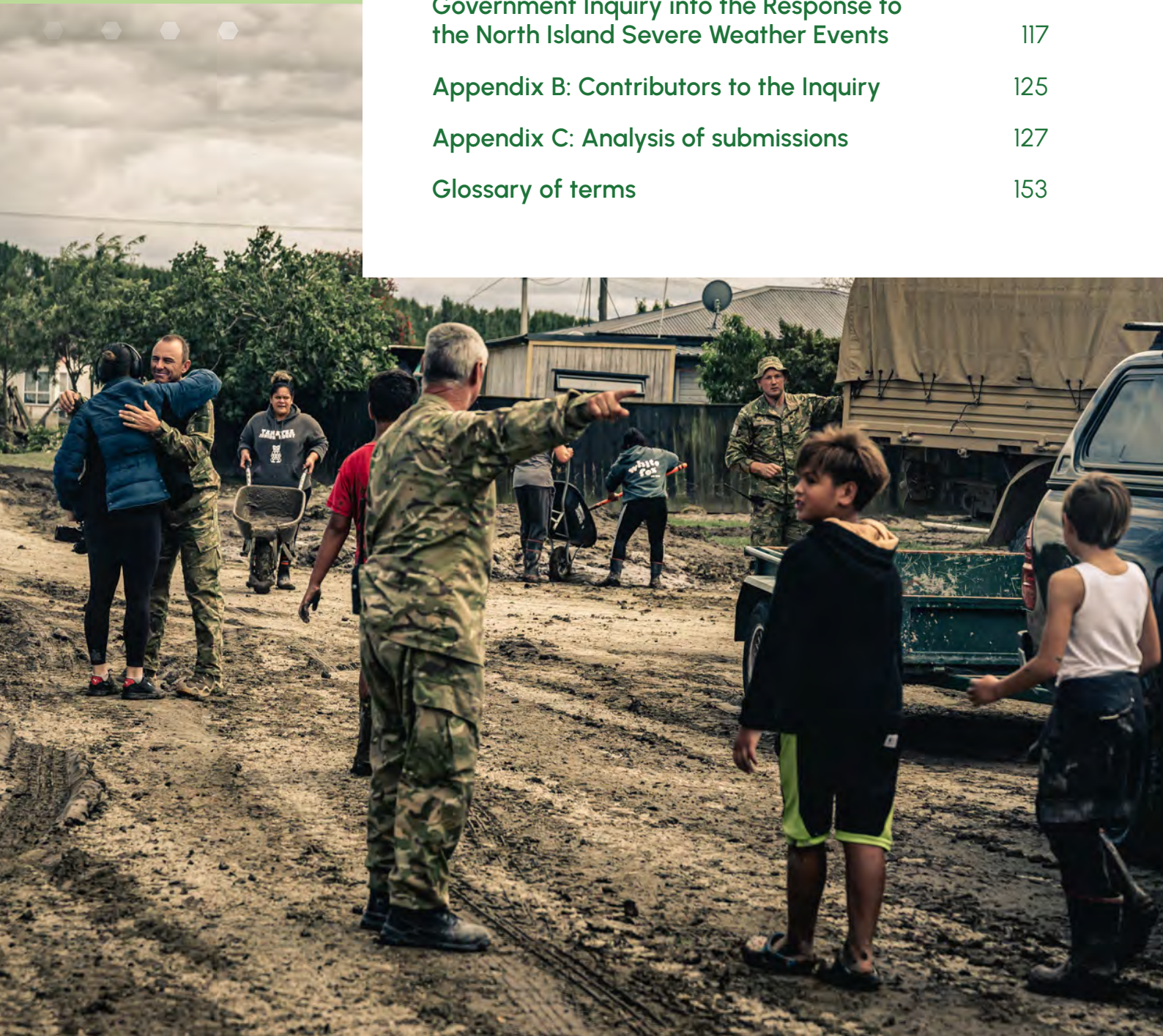
287. There are a range of other central government funding sources available to support communities and local government during a response, including funding from TPK, MPI, and MBIE. This also includes Mayoral Funds and bespoke funds set up for specific activities like the Hawke's Bay Sediment and Silt Recovery Fund, administered by the Department of Internal Affairs. Some non-governmental organisations like the Red Cross also administer funds.
288. The current approach sees siloed 'pots' of money across government and non-government sectors, and it is often unclear what funding is available to individuals and communities. The Inquiry was told this leads to inefficient and ineffective public spending and has the potential to cost more. In addition, community groups and providers can become frustrated when a funding flow stops as it has been exhausted, and new permissions or sources of funding have to be sought. There is an opportunity to bring clarity to the funding system, so people and communities can easily understand what funding they might be eligible for.

Guidance to the sector

- Establish Memoranda of Understanding with welfare providers in the readiness phase, as part of moving to a commissioning model for these services.
- Provide updated and accessible guidance about what activities Mayoral Funds can be used for, and how organisations can apply and access funding following an emergency.
- Ensure all Government funds are well sign-posted and communicated to councils and NGOs helping with response and readiness activities, to ensure efficient and effective use of these funds.

Section Three

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Appendix A: Establishment of the Government Inquiry Into the Response to the North Island Severe Weather Events

Pursuant to section 6(3) of the Inquiries Act 2013, I, The Honourable Kieran McNulty, Minister for Emergency Management, hereby establish the Government Inquiry into the response to the North Island severe weather events ("Inquiry").

Membership

The following persons are appointed to be members of the Inquiry:

- Sir Jeremiah Mateparae, GNZM, QSO, KStJ (Chair);
- John Ombler, CNZM, QSO (member);
- Rangimarie Hunia, Ngāti Whātua (member); and
- Julie Greene (member).

Terms of Reference – Government Inquiry into the Response to the North Island Severe Weather Events

Background

The severe weather events that impacted the North Island in January and February 2023 were of a scale and severity unprecedented in Aotearoa New Zealand's recent history. Cyclone Gabrielle led to only the third declaration of a State of National Emergency in New Zealand's history. These events led to 15 deaths and widespread, significant damage including property loss, road closures, collapsed bridges, damaged power and communications infrastructure, and loss of livelihoods. Affected communities, including Māori and rural communities, across a number of regions, have raised concerns about communication and support during the response.

Image: NZDF on the ground following Cyclone Gabrielle. Source: NZDF

The impacts of these events continue to be felt across communities and will be felt for years to come as iwi, hapū, whānau, communities and individuals recover.

Some of the regions affected by the recent severe weather events have experienced multiple events over the past two years and will likely experience more events in future.

Severe weather events are not new. Climate change is exacerbating the frequency and complexity of severe weather events across New Zealand and the world. There have been over 30 states of local emergency declared over the past 5 years (2018-2022) related to severe weather or flooding – this is more than double the incidence of events in the 5 preceding years (11 states of local emergency, 2013-2017)⁷⁰. Floods are New Zealand's mostly frequent and costly natural hazard.

Definitions

Reduction – identifying and analysing risks to life and property from hazards, taking steps to eliminate those risks if practicable, and, if not, reducing the magnitude of their impact and the likelihood of their occurrence to an acceptable level.

Readiness – developing operational systems and capabilities before an emergency happens; including self-help and response programmes for the general public, and specific programmes for emergency services, lifeline utilities and other agencies.

Response – actions taken immediately before, during or directly after an emergency to save lives and protect property, and to help communities recover.

Recovery – the co-ordinated efforts and processes used to bring about the immediate, medium-term, and long-term holistic regeneration and enhancement of a community following an emergency.

Civil Defence Emergency Management (CDEM) Groups – are the Group established under section 12 of the Civil Defence Emergency Management Act 2002 (CDEM Act). The representatives of the CDEM Group are the Mayor or Chairperson of the local authorities that are a member of the Group (as per section 13 of the CDEM Act).

Displaced people – are people who had to leave their homes as a result of an emergency event and were provided shelter and accommodation under section 73(1) in the National Civil Defence Emergency Management Plan Order 2015.

Matter of Public Importance

It is a matter of public importance to ensure that the design of New Zealand's emergency management system is appropriate for responding to future emergency events because lives and livelihoods are at stake.

Purpose and Objectives

The purpose of this Inquiry is to ensure that the design of New Zealand's emergency management system is appropriate to support readiness for, and responses to, future

70 Declared States of Emergency » National Emergency Management Agency (<http://www.civildefence.govt.nz/resources/previousemergencies/declared-states-of-emergency/>).

emergency events (such as landslides, tsunamis, earthquakes, volcanic activity, floods and storms) by identifying lessons from the 2023 North Island severe weather events.⁷¹

In order to achieve its purpose, the Inquiry will inquire into whether:

- the readiness activities and response to the North Island severe weather events operated as needed under current emergency management system design and if not, why not and what would enable future responses to operate as needed;
- the current design of the emergency management system enabled central and local government (including CDEM Groups, Crown Entities and State-owned Enterprises) and other organisations to respond as expected during the response phase; and
- the system improvements already underway will be sufficient to address the identified challenges or whether additional improvements are required;
 - this specifically includes whether the changes proposed in the Emergency Management Bill relating to the role of Māori in the emergency management system will adequately address the concerns raised by Māori in relation to the North Island severe weather event response.

Scope

The Inquiry will examine the response activities undertaken during the North Island Severe weather events, and the readiness activities ahead of these events. The National Crisis Management Centre stood down on 22 March 2023. The Inquiry must only review the response and early recovery planning up to and including 22 March 2023.

The North Island severe weather events that are in the scope of this Inquiry are:

- Cyclone Hale, which crossed the North Island during the period commencing 8 January 2023 and ending 12 January 2023;
- heavy rainfall commencing 26 January 2023 and ending 3 February 2023 in the Northland, Auckland, Waikato, and Bay of Plenty regions; and
- Cyclone Gabrielle, which crossed the North Island during the period commencing 12 February 2023 and ending 16 February 2023.

The Inquiry will identify lessons from the response to, and readiness activities ahead of, the North Island severe weather events, and make recommendations that should be applied in the preparation for future emergency events in only the following areas:

- the legislative, regulatory and operational settings, and the implementation and execution of those settings, required to support New Zealand's emergency readiness and response, relating to the **roles and responsibilities** of central and local government (including Crown entities and State-owned Enterprises) and other organisations,⁷² including:

⁷¹ Many of the emergency management system's settings are hazard agnostic, so lessons from this response may be applicable to emergencies caused by hazards other than severe weather.

⁷² This includes organisations outlined in the Guide to the National Civil Defence Emergency Management Plan 2015 and any other entities that had a role during the response to the North Island severe weather events.

- the decision-making structures and arrangements that might be used or put in place during an emergency event;
- the coordination and collaboration involved in the response, including the interplay between national, regional and local levels as well as the role of Māori, iwi and community organisations;
- the legislative, regulatory and operational settings, and the implementation and execution of those settings, required to support the readiness for and response to future emergencies, relating to **funding settings**. This includes whether current policy funding settings and the delivery mechanisms for funding support, including to marae, iwi, rural, Pacific and other community organisations that have had a significant role in response, are fit for purpose and roles and responsibilities for these are clear across all government portfolios, including response funding settings to:
 - care for directly affected people;
 - take the necessary precautions or preventive actions to reduce the immediate danger to human life;
 - enable precautions or preventive actions aimed at reducing the potential consequences of an emergency;
 - enable immediate emergency financial support to individuals, businesses, and sectors, including how such support might be quickly implemented, appropriately and accurately distributed, monitored, and ended;
- the legislative, regulatory and operational settings, and the implementation and execution of those settings, required to support the **immediate management of the response** to future emergencies, relating to:
 - the issuing of, and response to, public warnings and notifications;
 - the timing and effectiveness of communication and information available for decision makers and to impacted communities;
 - public safety and the safety of all emergency services personnel and community first responders, including local Māori responders and national Māori response networks;
 - impacts of the severe weather events including potential public health, sediment, debris and waste issues;
- the legislative, regulatory, and operational settings, and the implementation and execution of those settings, needed to ensure the continued **supply of goods and services** (excluding cash supports) during an emergency event, relating to the provision of:
 - lifeline utilities and other necessary services, including electricity supply, water supply, telecommunications, transport access, and waste collection and removal;

- shelter and accommodation for displaced people, welfare support services, and other necessary central and local government support services;
- welfare support services and other necessary support services provided by community groups, including iwi, marae and other Māori actors, Pacific, and other organisations in the immediate aftermath that would not otherwise have been provided, particularly for 'hard to reach' communities;
- communication with, engagement of, and enabling of people and communities to prepare for an emergency event, relating to:
 - provision of information to the public to enable readiness for emergency events in their area;
 - what to do to prepare for an emergency event;
 - the preparation and planning by government, other entities and the community, including provision of quality and timely meteorological and hydrological information and forecasts, emergency management plans, and practices;
- the coordination and provision of response services to, and the impact on, any persons and communities disproportionately impacted by the events, including Māori, Pacific and ethnic communities, disabled persons, and rural communities; and
- acknowledging and acting in support of the interests of Māori in the context of an emergency event, consistent with the Treaty of Waitangi/Te Tiriti o Waitangi relationship.

Matters Upon Which Recommendations Are Sought

The Inquiry should make recommendations on changes to legislative, regulatory and operational settings and strategies and other measures that New Zealand should apply in preparation for any future emergency event, in relation to the principal matters within the Inquiry's scope, by applying relevant lessons identified from New Zealand's response to the North Island severe weather events.

Limits to the Inquiry's Scope

The following matters are outside the scope of the Inquiry:

- any response activities relating to the North Island severe weather events which occurred after 22 March 2023;
- policies and actions relating to the recovery from the North Island severe weather events, including decisions about the future of severely affected locations, and funding and coordination of recovery activity (as the recovery is anticipated to continue in the medium to long term);
- policies and actions relating to risk reduction and resilience building (as separate work programmes are already underway, including resource management reforms, climate adaptation reforms, Future for Local Government; Cyclone

- Recovery Taskforce, and the Department of Prime Minister and Cabinet's work on strengthening the resilience of New Zealand's critical infrastructure system);
- investigation of land use causing woody debris, including forestry slash, and sediment-related damage (as this was covered by the Ministerial Inquiry into Land Use);
 - investigation of the causes of deaths due to the severe weather events (as this is covered by any Coroner's Inquiry);
 - investigation into the treatment of individual cases of people or businesses affected by the severe weather events (such as insurance claims made by property owners);
 - how and when the strategies and other measures devised in response to the North Island severe weather events were implemented or applied in particular situations or in individual cases; e.g., the amount of funding to support welfare support grants, or business grants;
 - anything that is not required to produce the recommendations;
 - any questions of civil, criminal, or disciplinary liability; and
 - the judgments and decisions of any courts and tribunals and independent agencies, such as the Ombudsman, relating to the North Island severe weather events.

Inquiry Procedure

In accordance with section 14⁷³ of the Inquiries Act 2013, the Inquiry must comply with the principles of natural justice and avoid unnecessary delay or costs.

The Inquiry must operate in a way that:

- does not take a legalistic and adversarial approach;
- uses the most efficient and least formal procedures to gather any additional necessary information; and
- ensures that any request for necessary information is specified with due particularity.

The Inquiry can consult investigations, reports, and reviews (both domestic and international) and any other publicly available material relevant to these terms of reference; but should not duplicate or repeat work already undertaken in any other reports or review. In particular, the Inquiry will take into account the recommendations of the 2017 Ministerial Review, Better Responses to Natural Disasters and Other Emergencies, and the subsequent implementation of these recommendations.

The Inquiry should take account of:

- the outcome of other investigations and reports into related matters (e.g., Civil Defence Emergency Management Group or agency reviews into their individual performance during the response) and other material that is already in the public domain;

⁷³ New Zealand Legislation (http://www.legislation.govt.nz/act/public/2013/0060/latest/DLM1566149.html?search=ts_regulation%40deemedreg_covid-19+lessons_resel_25_a&p=1#DLM1566149).

- previous reviews into the emergency management system (including design and settings) and the Government response to these; (e.g., Better Responses to Natural Disasters and Other Emergencies in New Zealand 2017);
- previous reviews of responses to emergency events (in particular, natural hazard events); and
- where another concurrent Inquiry may have similar issues in scope, this Inquiry should consult the other Inquiry to ensure there is no duplication of work.

The Inquiry is not bound by the conclusions or recommendations of any other investigation, report, or review.

The Inquiry can consider international investigations, reports, and reviews and other material, but will not travel internationally or invite persons to travel to New Zealand.

The Inquiry may:

- engage with any organisations and/or groups of individuals:
 - affected by the North Island severe weather events;
 - involved in preparing for and responding to North Island severe weather events;
 - responsible for developing emergency management legislative, regulatory and operational settings, strategies and other matters; and
- provide opportunity for the public to participate in the Inquiry.

Access to Inquiry Information

The Inquiry must restrict access to Inquiry information where it considers such steps are required in order to:

- avoid prejudice to the maintenance of the law, including the prevention, investigation, and detection of offences;
- ensure that current or future criminal, civil, disciplinary, or other proceedings are not prejudiced;
- protect the international relations of the Government of New Zealand;
- protect the confidentiality of information provided to New Zealand on a basis of confidence by any other country or international organisation;
- protect commercially sensitive information, including commercial information subject to an obligation of confidence; and
- protect information for any other reason that the Inquiry considers appropriate.

Reporting

The Inquiry is to provide its report, including final recommendations, to the Minister for Emergency Management in writing no later than 26 March 2024.

The Inquiry is to provide interim recommendations to the Minister for Emergency Management in writing no later than 7 December 2023. If the recommendations provided in December 2023 are not the same as the recommendations presented to the Minister in the Inquiry's report in March 2024, the Inquiry must ensure that the report includes an explanation of the changes made to the recommendations and the reasons for the changes.

The Inquiry must support the Department of Internal Affairs (as the department responsible for administrative matters relating to the Inquiry) to meet its administrative and reporting requirements relevant to the Inquiry by providing the department with regular information and reports on the progress, administration, budget and expenditure of the Inquiry.

Authority

The Inquiry is established as a Government Inquiry under the Inquiries Act 2013, with the Minister for Emergency Management as the appointing Minister.

Consideration of Evidence

The Inquiry may begin considering evidence on and from **31 July 2023**.

Dated at Wellington this 6th day of July 2023.

Hon Kieran McNulty, Minister for Emergency Management.

Appendix B: Contributors to the Inquiry

Public entities

| | | |
|---|--|---|
| Auckland Council | Bay of Plenty CDEM Group | Bay of Plenty Regional Council |
| Central Hawke's Bay District Council | Cyclone Gabrielle Recovery Taskforce | Cyclone Response Unit |
| Department of the Prime Minister and Cabinet (DPMC) | Far North District Council | Fire and Emergency New Zealand (FENZ) |
| Gisborne District Council | Hastings District Council | Hawke's Bay Regional Council |
| Kainga Ora | Kaipara District Council | Maritime New Zealand and Rescue Coordination Centre |
| MetService | Ministry for Ethnic Communities | Ministry for Pacific Peoples |
| Ministry of Business, Innovation and Employment | Ministry of Education | Ministry of Health |
| Ministry of Justice | Ministry of Social Development | Ministry of Transport |
| National Emergency Management Agency | New Zealand Defence Force | New Zealand Police |
| New Zealand Transport Agency | Northland Regional Council | Officials Committee for Domestic and External Security Coordination |
| Opotiki District Council | Radio New Zealand | Tararua District Council |
| Tauranga City Council | Te Aka Whai Ora Māori Health Authority | Te Puni Kōkiri Ministry of Māori Development |
| Health New Zealand Te Whatu Ora | Thames Coromandel District Council | The Treasury |
| Waikato District Council | Waikato Regional Council | Wairoa District Council |
| Waitomo District Council | Whaikaha Ministry of Disabled People | Whangarei District Council |

Organisations, sector representative groups, and communities

| | | |
|------------------------------------|--|--------------------------------------|
| Air Napier | Dartmoor and surrounding suburbs community representatives | Esk Valley community representatives |
| Fatimah Foundation | Federated Farmers | First Light Networks |
| Foodstuffs New Zealand | LandSAR | MoreFM (Mediaworks) |
| Muriwai community representatives | New Zealand Search and Rescue | NorthPower |
| Oceania Group | Pak'nSave Napier | Pakowhai community representatives |
| Piha community representatives | Red Cross New Zealand | Rural Support Hawke's Bay |
| Spark NZ | Summerset Group | Supreme Sikh Society |
| Surf Lifesaving New Zealand | Taylor Corp | Telecommunications Forum |
| Top Energy | Transpower | Unison Networks |
| Waiohiki community representatives | WaterNZ | Woolworths New Zealand |

Iwi Māori, hapū, marae

| | | |
|--------------------------------------|----------------------|----------------------------|
| Māori Ministerial Advisory Committee | Ngati Kahungunu | Ngati Porou |
| Tātau Tātau o Te Wairoa | Taumata Koorero | Te Aitanga a Mahaki Trust |
| Te Akitai | Te Hau Ora o Ngapuhi | Te Roroa Development Group |
| Tuhoe – Te Uru Taumatua | Waipatu Marae | |

Submitters

The Inquiry received 144 submissions from individuals and groups.

Appendix C: Analysis of Submissions (prepared by FrankAdvice)

1. The Inquiry invited submissions from the public about their experiences of the North Island severe weather events. Submissions to the Inquiry closed on 15 December 2023. 144 submissions were received through an online consultation form, by email (both text and audio submissions), and written submissions handed in to the Inquiry.
2. This section is an analysis of what people and groups shared in response to questions asked by the Inquiry, some of which invited selecting an answer on a scale and some of which invited open-ended answers. This report does not compare or corroborate what submitters may have shared through other methods or to other sources the Inquiry has access to.
3. The views expressed in this submissions analysis are wholly those of the submitters. While these informed the considerations of the Inquiry, they should not be interpreted as findings.

Structure of this appendix

4. This appendix is organised in two parts:
 - Part One provides a snapshot of the submissions analysis, highlights five key messages that emerged as important to most submitters, and an analysis of what submitters said should change to improve the response to severe weather events in future.
 - Part Two provides a more detailed analysis of submissions including relevant statistical breakdowns across three themes: readiness, response and what submitters said should happen now.

A note about privacy

5. We have taken care to preserve the privacy of submitters when documenting their personal stories in this document. Names, genders, and other identifying details (such as the specific location of submitters) have been removed where requested by the submitters.
6. Some illustrative quotes from this analysis have been incorporated into the final report.

Methodology

7. Submissions were compared by region and other demographics (such as age, gender, or whether a submitter was evacuated or rescued during the event) and highlighted areas where there are significant⁷⁴ differences.
8. The following terms used throughout the report have the following meanings:
 - "most" means 50% or more submitters ($50\% \leq x$)
 - "many" means between 30% and 50% submitters ($30\% \leq x < 50\%$)
 - "some" means between 12% and 30% submitters ($12\% \leq x < 30\%$)
 - "a few" means less than 12% submitters ($x < 12\%$).

Questions asked by the Inquiry

- How prepared do you think local and central government agencies were?
- How well prepared do you think necessary services were for the weather events? (including services such as electricity, water, telecommunications, and waste collection)
- How prepared do you think your community was?
- How well did local and central government agencies respond to the weather events?
- How well do you think necessary services responded to the weather events? (including services such as electricity, water, telecommunications, and waste collection)
- How well did your community respond?
- Did you receive a warning or evacuation notice? If so:
 - When did you receive this (date)?
 - At what time?
 - Who was it from? (E.g. neighbours, Civil Defence)
- How prepared did you feel in the lead-up to the weather events?
- How prepared were you during the weather events?
- What went wrong or did not work well during the emergency response, and why? (Including things such as emergency services, infrastructure and communications.)
- What worked well during the emergency response, and why? (Including things such as emergency services, infrastructure and communications.)

⁷⁴ Significance testing assesses whether an observed difference between two different cohorts is due to a "real" difference, or due to chance based on sampling. Therefore, those differences we refer to as "significant" differences are those that are very likely to be a "real" difference rather than due to chance.

- What, in your view, would have been most helpful in the lead-up to the weather event/s?
- What, in your view, would have been most helpful during the weather event/s themselves?
- What can be done to be better prepared in the future?
- Is there anything else you would like to tell us?
- Did you play a role in rescuing anyone as part of the severe weather events?
- Did you play a role in evacuating anyone as part of the severe weather events?
- Did you play one of the following support roles during one of the severe weather events?
 - Local marae support
 - Volunteer local support services (i.e. fire brigade, evacuation centre, informal volunteer support)
 - Paid staff seconded to support emergency services.
- Were you rescued as part of the severe weather events?
- Were you evacuated as part of the severe weather events?

Part One: snapshot analysis and key messages

9. Overall, the submissions to the Inquiry tell a story of frustration, disappointment, and at times anger, about the lack of preparation and inadequate response of services to the needs of communities affected by the North Island severe weather events. Many submitters talked about wanting decision makers to be held accountable for loss of life and property and feel recovery efforts are taking too long. They also want local authorities to take a more proactive approach to readiness in the future.
10. In analysing the submissions, five key messages emerged as important to submitters. These were:
 - people and services were not well prepared
 - the response from officials was slow and inconsistent
 - communications before and during the event were poor
 - in many instances there were infrastructure failures, however there were also some positive experiences of infrastructure recovery
 - communities stepped up and filled gaps left by officials.
11. Those messages are shared in more detail below to provide a snapshot of the submissions analysis and to highlight what submitters said should change to improve future responses to severe weather events.

People and services were not well prepared

12. Overall, submitters shared that individuals, families, communities, and in particular central and local government agencies and necessary services⁷⁵ were not well prepared for the severe weather events.
13. Over 70% of submitters said that central and local government agencies and necessary services were unprepared for how to respond to the severe weather events.
14. While many submitters said they were relatively prepared for a weather event on an individual / family basis, many were surprised by and under-prepared for the severity of the events and subsequent flooding. Some submitters said they were prepared to manage for several days after the events, not the several weeks they needed to be prepared for.
15. Submitters from rural / isolated areas felt more prepared and had more supplies (e.g., food, water, fuel) and infrastructure (e.g., generators, water storage tanks), because they were more used to being self-reliant.

Submitters' suggestions for how to be better prepared next time

- Having more resources on standby (e.g., generators, radios, vehicles, food, water).
- Improving expertise when it comes to cultural considerations in emergency response planning.
- Having plans for what is needed in the event of a blocked road / infrastructure failure (e.g., contractors on retainer).
- Improving Civil Defence training for Council staff to ensure adequate staffing of emergency centres for extended periods of time.

The response from officials was slow and inconsistent

16. A common story submitters told us was that responses from central and local government agencies and emergency services were slow and inconsistent. Submitters from Hawke's Bay, and particularly the Esk Valley, painted a particularly poor picture of the response.
17. Most submitters mentioned the delay of official responses – particularly when it came to local and central government agencies, CDEM Groups, and Group Controllers. Many said that local government support was not available in the first few days because of a lack of emergency management planning and capability.
18. Submitters also felt that community safety was not sufficiently prioritised, and officials did not adequately consider the diversity of communities nor take into account accessibility needs during the response.

75 Submitters were told that necessary services were defined as electricity, water, telecommunications, and waste collection

Submitters' suggestions for how to improve the speed and consistency of official responses

- Better communication and coordination between emergency responders.
- More capacity to evacuate and rescue people, particularly in remote areas.
- Faster decision-making from local councils, including clear roles and responsibilities during an emergency.
- Improved access to financial compensation from both central and local government (including access to information about what is available).
- Using the Defence Force earlier in the response.
- Central government intervention where local councils are not managing.
- Pre-arranged coordination between private air resources and emergency services (e.g., who will fly where and do what in the event of an emergency).

Communications before and during the event were poor

19. The inadequacy of communications from official sources to members of the public both before and during the events was a strong theme that emerged across the submissions.
20. Submitters shared that communications and warnings from official sources to the public were slow (if they came at all), indicating poor planning which impacted on the ability of communities to prepare.
21. Many submitters said that official communications to the public relied on mobile phones and internet – some submitters were referred by Civil Defence officials or the Police to Facebook for up-to-date information, including for evacuation notices. Many of these submitters said that this was during the time when they were without power or mobile phone coverage, meaning they could not access any information.

Submitters' suggestions for how to improve communication

- Having better communication before events about risks and mitigation strategies.
- Earlier evacuations and warnings.
- Having communication infrastructure that does not rely on internet and telecommunications (e.g., Starlink, radio networks, improved Civil Defence warning / alert system).
- Better communications from officials during events about what was happening and how agencies were responding.
- More communication from local councils after events about next steps and recovery.

In many instances there were infrastructure failures, however there were also some positive experiences of infrastructure recovery

22. Most submitters experienced infrastructure failures during the events, such as electricity or water being cut-off, telecommunications failures (both cell phone and internet), or roads and / or bridges being blocked / washed away.
23. Many submitters identified that much of the current infrastructure was poorly planned (for example, built in the wrong place or built using the wrong materials) or is not being adequately maintained. Submitters felt that this led to infrastructure failing during the events, delaying the ability of officials and communities to effectively respond. These submitters also noted a lack of back-up infrastructure (for example, generators or additional drainage).
24. Some submitters were pleased at how quickly infrastructure (particularly power and water) was restored and were positive about how they were treated by these services during the response and recovery. However, some other submitters had more negative experiences and were disappointed at the speed of the recovery.

Submitters' suggestions for how to improve infrastructure and necessary services

- Better environmental planning (e.g., where roads, power stations, and other types of infrastructure are built).
- Better maintenance of current infrastructure.
- Better monitoring of river and rainfall levels and monitoring and policing of slash and other flooding risks to prevent bridge failures.
- Better weather forecasting.
- More back-up systems for electricity and telecommunications.

Communities stepped up and filled gaps left by officials

25. What stood out clearly were submitters' views that community, and community organisations, stepped up to fill the gap left by official responses during the events. While community champions were celebrated in many submissions, we also heard that local knowledge and expertise was undervalued by official emergency responses.
26. Volunteer support was highly valued by submitters, such as community-run emergency hubs and the help from owners of private helicopters who rescued people and provided supplies to cut-off communities. On the other hand, some submitters noted that community responses were disorganised and wasted effort on things that did not help the response.
27. Some submitters shared that officials and government agencies did not value community enough and at times added bureaucracy and did not listen to locals about what was needed.

Submitters' suggestions for how to improve community response

- Creating pre-agreed communication networks between neighbours.
- Officials valuing and listening to those with local knowledge and expertise when planning and responding to events
- Appointing formal or informal community leaders responsible for Civil Defence (e.g., designating a person or group who will coordinate the community and communicate with the government response in the event of an emergency).



Image: Residents in Taradale clean up silt. Source: Getty Images

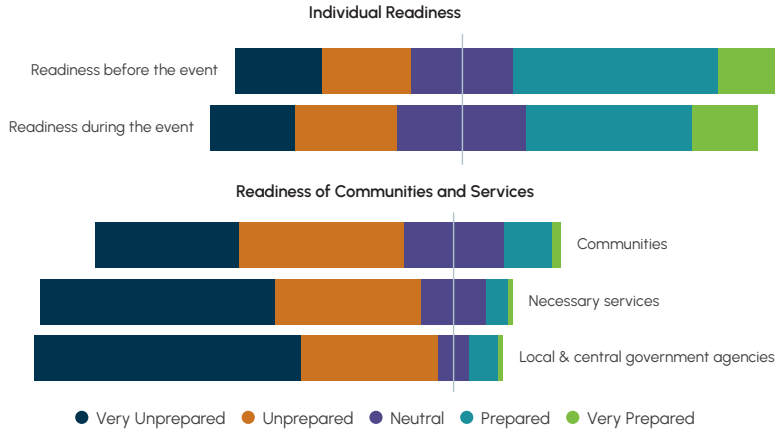
Summary statistics of submissions to the Inquiry

JANUARY 2024

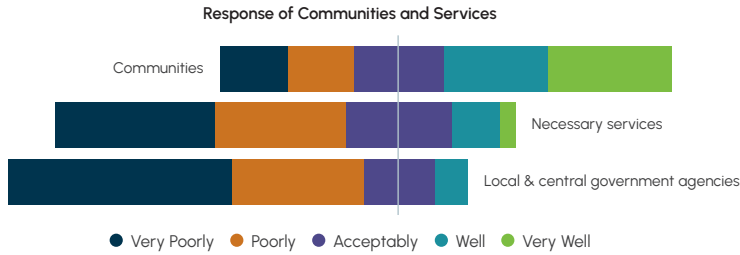
This page provides an overview of the summary statistics drawn from the submissions to the Government Inquiry into the Response to the North Island Severe Weather Events (the Inquiry). It outlines demographic and geographic information and the quantitative statistics generated by the analysis of submissions.

VIEWS OF SUBMITTERS ON READINESS AND RESPONSE

While most submitters felt that they were prepared as individuals, they felt communities and services were unprepared.



Most submitters felt that their communities responded well, but necessary services and government agencies did not.



TYPES OF SUBMITTERS

144
submissions were received

91% individuals
6% organisations/businesses
2% officials
1% community groups
1% iwi
**percentages add up to more than 100 due to rounding*

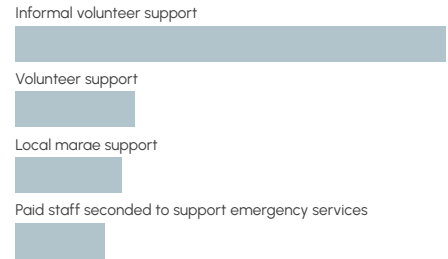
30%
of submitters were evacuated during the weather events

26%
of submitters played a role in evacuating people during the events

15%
of submitters were rescued during the weather events

13%
of submitters played a role in rescuing people during the events

Other support roles submitters played during the events

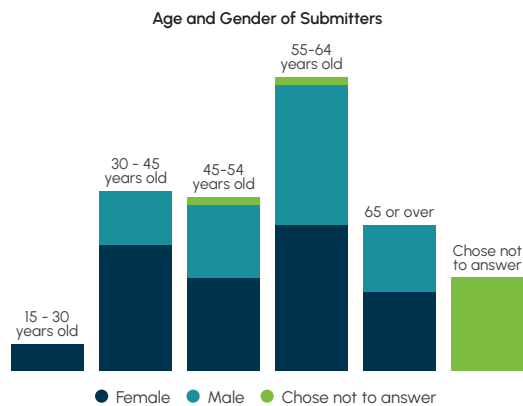
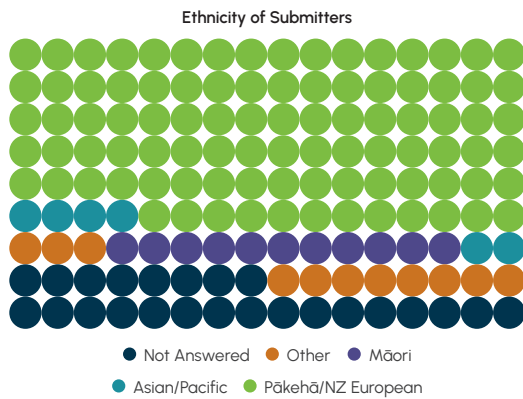


EVACUATIONS AND WARNINGS

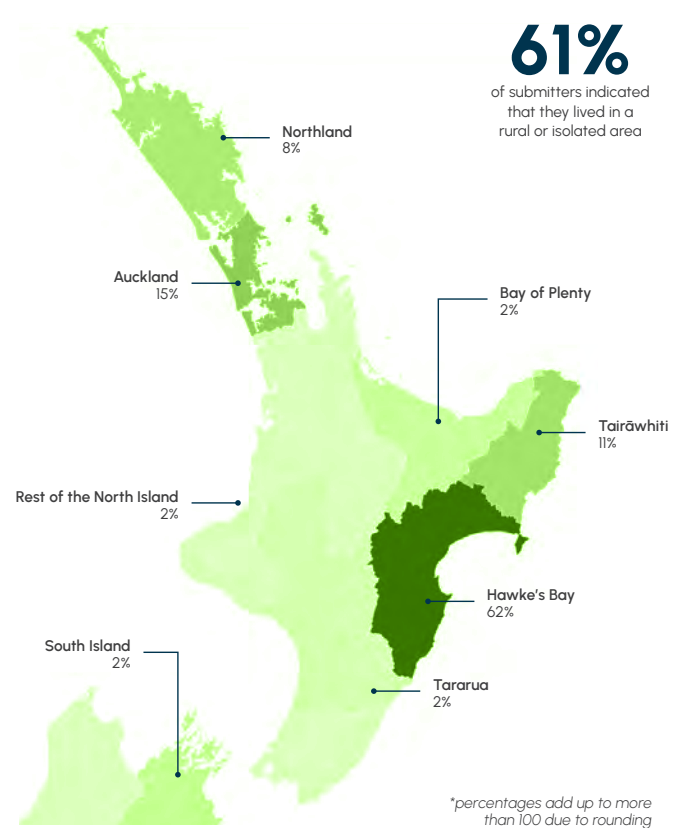
66%
of submitters did not receive a warning or evacuation notice

The majority of submitters who did receive a warning or evacuation notice received a Civil Defence emergency alert through text

DEMOGRAPHIC INFORMATION



GEOGRAPHIC INFORMATION



Part Two: detailed analysis of submissions

28. This part is a detailed analysis of the submissions received by the Inquiry. We have grouped this analysis in four sections:
- Summary demographics: a summary of who submitted to the Inquiry
 - Readiness: submitters' views on how prepared people / organisations were in the lead up to the events
 - Response: submitters' experiences during the events and emergency response
 - What submitters would change: submitters' recommended actions for the future. For completeness, this section includes submitters' recommendations about recovery, which we note falls outside the scope of the Inquiry.
29. In these sections, we have conducted an analysis of each question asked by the Inquiry in their online consultation form (attached at Appendix One). Information from submissions not submitted through this form has been interwoven in the analysis where relevant.

Summary of who submitted to the Inquiry

30. The Inquiry received a total of 144 submissions. Table 1 below outlines the number of submissions by type of submitter.

Table 1: Types of submitters

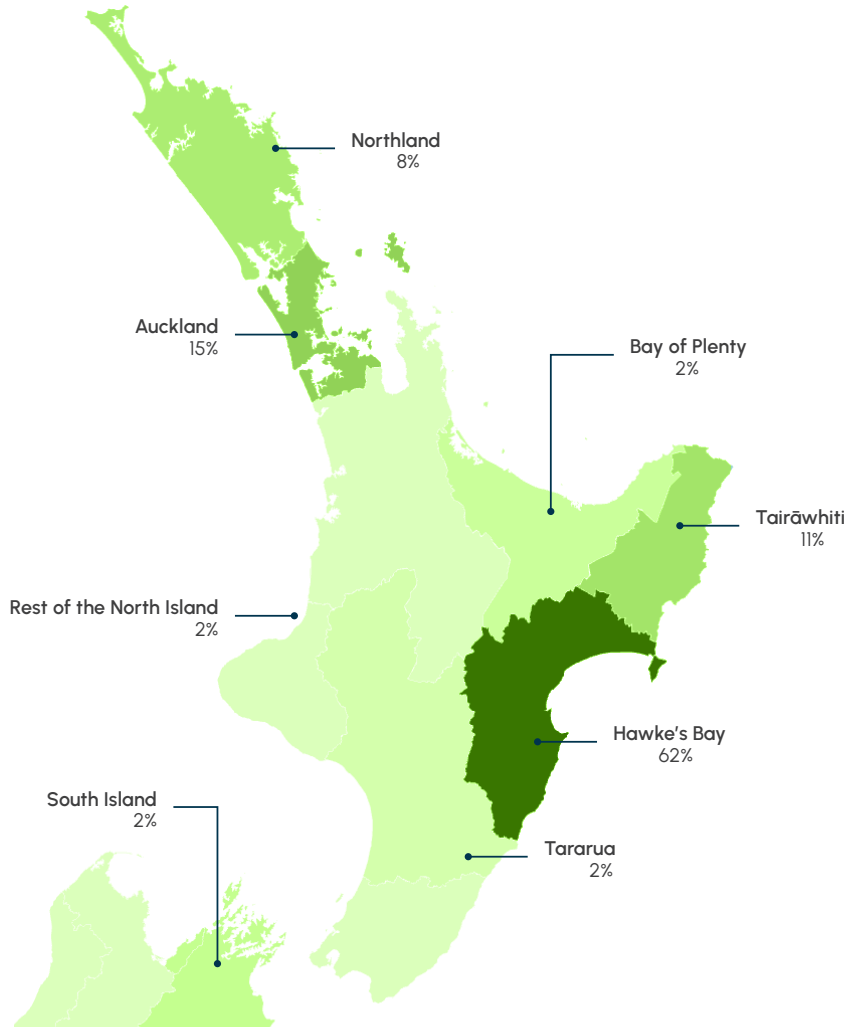
| Type of submitter | Number of submissions |
|---|-----------------------|
| Individuals | 131 |
| Organisations/businesses | 8 |
| Officials (submitting on behalf of government agencies or civil defence groups) | 3 |
| Community groups | 1 |
| Iwi | 1 |
| Total | 144 |

Location of submitters

31. Figure 1 below shows the geographical distribution of submitters, with a darker colour indicating more submitters coming from that area. Most submitters came from Hawke's Bay, which likely reflects the fact that this region was more affected by Cyclone Gabrielle, the most destructive of the North Island severe weather events.
32. All the submitters from the South Island indicated that they were holidaying in the North Island at the time of the events.

33. 61% of submitters indicated that they lived in a rural / isolated area. Most of these submitters indicated that they were in Hawke's Bay.

Figure 1: Geographical distribution of submitters



Roles submitters played during the events

34. Many submitters played support roles during the weather events. Table 2 below details these roles.

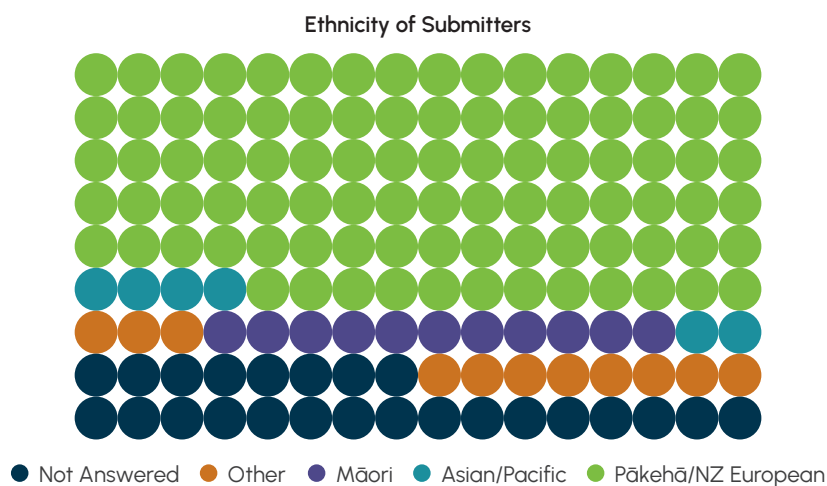
Table 2: Roles submitters played during the events

| Roles submitters played during the events | Number of submitters |
|---|---|
| Role in evacuating people | 36 (14 also played a role in rescuing people) |
| Providing informal volunteer support e.g., cooking and delivering food, clearing roads, checking on neighbours, fundraising, supporting emergency hubs | 33 |
| Role in rescuing people | 17 |
| Providing formal volunteer support e.g., fire brigade, civil defence | 9 (3 also played a role rescuing and evacuating people) |
| Providing support at the local marae | 8 |
| Council staff seconded to support emergency services | 7 |

Demographics of submitters

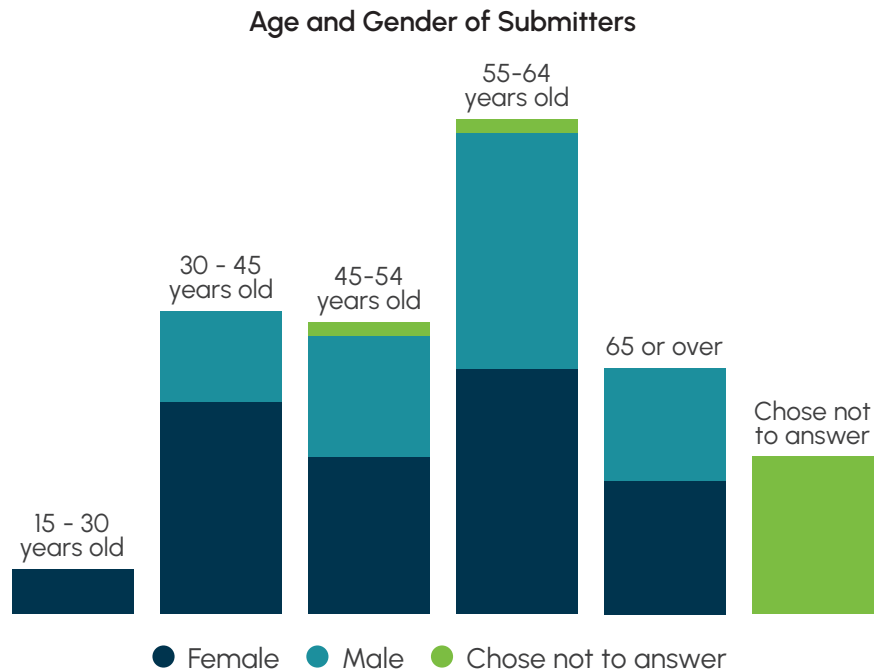
35. Figure 2 and Figure 3 below outline the ethnicity, age, and gender of submitters. Groups with small numbers have been combined to preserve the confidentiality of submitters.
36. The ethnicity and gender of submitters generally reflects the national⁷⁶ distributions of ethnicity and gender.
37. The age distribution of submitters is slightly older than the national distribution for those over 15. There were no submissions from people under 15.

Figure 2: Ethnicity of submitters



⁷⁶ Regional data is not readily available.

Figure 3: Age and gender of submitters



Readiness

Submitters' ratings of readiness of communities and services

38. The Inquiry asked submitters to rate the readiness of local and central government agencies, necessary services, and their community on a five-point scale from "Very unprepared" to "Very prepared".⁷⁷
39. Figure 4 and Table 3 below shows how submitters rated the readiness of these groups. Overall, most submitters felt that all these groups were unprepared.
40. Submitters felt that local and central government agencies and necessary services⁷⁸ were significantly more unprepared than their communities. Many of these submitters said that these agencies were acting without plans, even if they had recently experienced similar (albeit at a smaller scale) weather events.

⁷⁷ Very unprepared", "Unprepared", "Neither prepared nor unprepared", "Prepared", "Very prepared"

⁷⁸ Such as electricity, water, telecommunications, and waste collection

Figure 4: Readiness of Communities and Services

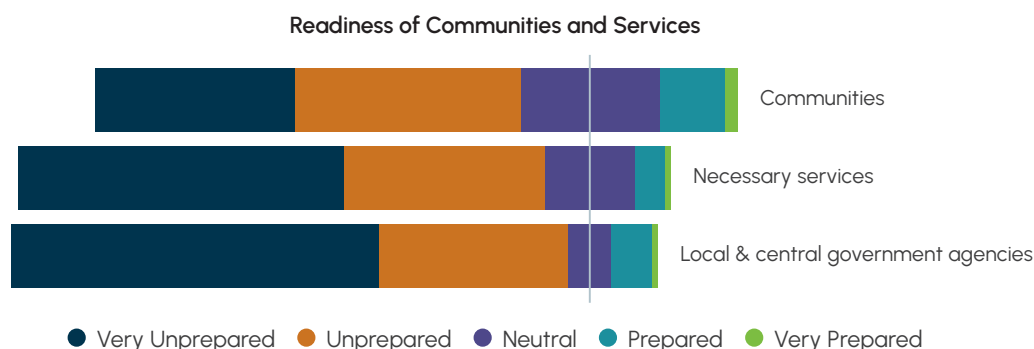


Table 3: Data table for readiness of Communities and Services

| | Very unprepared | Unprepared | Neither prepared nor unprepared | Prepared | Very prepared |
|---------------------------------------|-----------------|------------|---------------------------------|----------|---------------|
| Submitter's communities | 31% | 25% | 21% | 11% | 2% |
| Necessary services | 50% | 31% | 14% | 5% | 1% |
| Local and central government agencies | 57% | 29% | 7% | 1% | 1% |

41. Those submitters who were evacuated or rescued during the events rated the readiness of communities and services slightly, but significantly, more negatively than other submitters. This indicates that submitters' experiences of the response communities and services may have affected their perceptions of the groups' readiness.
42. Submitters' ratings of the readiness of communities and services were consistent across regions, rurality (i.e., rural and non-rural submitters rated readiness similarly), and across age and gender.
43. Submitters' ratings of readiness were significantly correlated across groups; lower ratings of one group are associated with lower ratings of the other groups, and vice versa. For example, if a submitter rated the readiness of necessary services low, they were more likely to rate local and central government agencies and their community low as well. This may be because:
 - submitters found it difficult to differentiate between groups – they may have not been able to identify whether a particular service was a necessary service, or part of local and central government agencies, leading them to rate all groups similarly

- submitters did not know about the readiness of a particular group (e.g., their electricity provider), and so rated it similarly to the groups they did know about. This is supported by open-ended answers that accompanied the ratings – most submitters only discussed the readiness of the group that they were most familiar with, rather than all three.

Submitters' discussion of the readiness of communities and services

44. The Inquiry gave submitters an opportunity to expand on their ratings of the readiness of communities and services with an open-ended text box.
45. Table 4 below outlines what submitters said caused them to view communities and services as unprepared⁷⁹, in order of prevalence.

Table 4: Submitters discussion of readiness

| Group | What made submitters think communities and services were unprepared |
|---------------------------------------|---|
| Local and central government agencies | <p>Lack of / slow communication and warnings from official sources to the public implied poor planning</p> <p>Poor maintenance of infrastructure (e.g., storm drains, stop-banks, roads)</p> <p>Not responding to risks identified by communities</p> |
| Necessary services | <p>Inaccurate weather forecasting</p> <p>No river-level monitoring, or poor communication / understanding of river levels and the risks associated with high river levels</p> <p>Lack of back-up infrastructure (e.g., generators)</p> <p>Poor planning of infrastructure (e.g., a power station in known flood area)</p> |
| Submitter's communities | <p>Lack of communication and early warnings from official sources impacted communities' ability to prepare, particularly in Hawke's Bay</p> |

46. It should be noted that, naturally, many submitters inferred a group's readiness from the quality of their responses, i.e., if a submitter had a poor experience of a response from a group, they used this as evidence of poor planning / readiness.
47. A few submitters from rural areas identified that there was no local civil defence function or plan. These submitters said that there previously were "community CD groups" throughout the regions, but these stopped being supported by local government. These submitters felt that if these groups were still active, they would have been more prepared for the events.

⁷⁹ The few submitters that rated communities and services as "prepared" or "very prepared" did not provide reasons.

48. A few submitters noted that some communities and services were prepared / had plans, but these plans were for:
- other types of emergencies (e.g., earthquakes or fires), but not cyclones
 - less severe emergencies (e.g., surface flooding, rather than flash flooding)
 - events with less impact on critical infrastructure (e.g., plans assumed that cell towers and the internet were still working).

Submitters' experiences of warnings and evacuations

49. The Inquiry asked submitters whether they received a warning or evacuation notice, and asked about the form of the warning or evacuation notice.
50. 23% of submitters received a warning or evacuation notice, 66% of submitters did not (the remaining 11% did not answer the question).
51. Most submitters said they were expecting the Civil Defence emergency alert notification (e.g., sirens, Civil Defence mobile alerts, or texts) to warn them of severe weather and / or the need to evacuate, and so were surprised when they did not arrive. Many of the submitters who did not receive a notice said that this was despite local and central authorities having access to the relevant information (such as weather forecasts or reports of flooding).
52. Most submitters who did receive a warning or evacuation notice (across all events) received a Civil Defence emergency alert through text. However, many of these submitters felt that they received these warnings too late to be sufficiently prepared.
53. Of those submitters that did receive a warning or an evacuation notice, many found them confusing or unclear. These submitters felt the warnings and evacuation notices did not communicate the urgency of the situation, and they therefore did not prepare or respond adequately.
54. There were no other significant differences between rural and non-rural submitters or between other demographic groups (e.g., age or gender).
55. A few submitters received warnings via their community (e.g., a neighbour), rather than officials. A few other submitters received informal warnings from officials / emergency services who were in the area (e.g., local fire crews, police).

Submitters' ratings of individual preparedness

56. The Inquiry asked submitters to rate their individual preparedness before and during the events on a five-point scale from "Very unprepared" to "Very prepared".⁸⁰
57. Figure 6 and Table 5 below shows how submitters rated their individual preparedness before and during the events. Many submitters felt they were individually prepared both before and during the events, and there was no significant difference overall between submitters' ratings of their preparedness before and during the events.

Figure 6: Individual preparedness

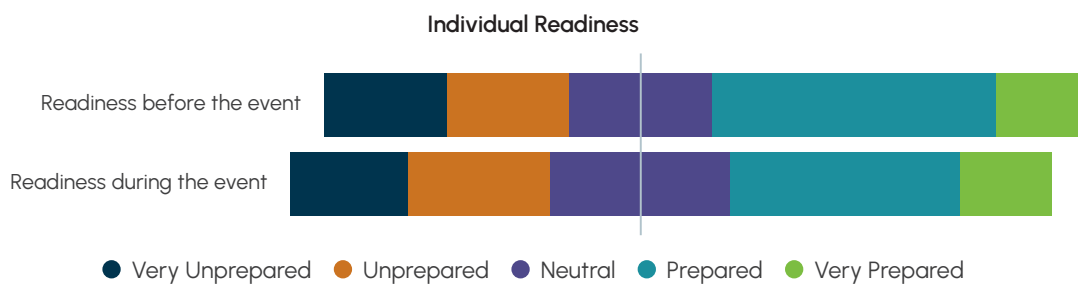


Table 5: Data table for individual preparedness

| | Very unprepared | Unprepared | Neutral | Prepared | Very prepared |
|-------------------|-----------------|------------|---------|----------|---------------|
| Before the events | 15% | 15% | 17% | 34% | 10% |
| During the events | 14% | 17% | 21% | 27% | 11% |

58. Those submitters who said that they were "unprepared" or "very unprepared" felt that they were relatively prepared for a weather event but were not prepared enough for the extent of the events (particularly Cyclone Gabrielle). Submitters mentioned how they were unexpectedly rendered under-prepared due to the extent of flooding and / or how they were prepared for several days not several weeks.
59. Those submitters who lived in a rural / isolated areas rated their individual preparedness (both before and during the events) as significantly higher than other submitters. These submitters said that this was because they had more access to supplies (e.g., food, water, fuel) and infrastructure (e.g., generators, water storage tanks) because they were more used to being "self-reliant".
60. Those submitters who were evacuated during the events were more negative about their individual preparedness both before and during the events than other submitters. Many of these submitters indicated that this was because they were unprepared to evacuate.

⁸⁰ "Very unprepared", "Unprepared", "Neither prepared nor unprepared", "Prepared", "Very prepared"

61. Those submitters who were rescued during the events were only more negative than other submitters about their individual preparedness during the events (but not before the events). These submitters indicated that this was because they felt prepared before the events but were surprised by the severity of the events or how quickly the situation escalated.
62. Those submitters who participated in rescuing other people rated their individual preparedness during the event as significantly higher than other submitters. This could reflect either that these submitters were operationally involved⁸¹ in the response and so more informed / officially supplied than other submitters, or their rating is reflecting that they successfully rescued people during the events and feel that reflected their levels of preparedness.
63. There were no other significant differences between the ratings of submitters in different regions or between other demographic groups (e.g., age or gender).

Comparison between submitters' ratings of their preparedness and the readiness and response of other groups

64. Submitters' ratings of their individual preparedness (both before and during the events) were significantly higher than their ratings for readiness and response of most other groups. However, there was no significant difference between submitters' ratings of their preparedness during the response and their ratings of their community's response. This indicates that the same experiences likely influenced submitters' perceptions of their community's response and their individual preparedness.
65. Submitters' ratings of their individual preparedness correlated with their ratings for readiness and response of other groups; lower ratings for individual preparedness are associated with lower ratings of the readiness and response of other groups, and vice versa. This indicates that submitters' perceptions of other groups may have influenced their individual preparedness (e.g., if they perceived local and central government responding poorly, they felt less prepared to deal with the events).

Submitters' discussion of individual preparedness before and during the events

66. The Inquiry gave submitters an opportunity to expand on their ratings of their individual preparedness with an open-ended text box.
67. Table 6 below (in order of prevalence) outlines what submitters felt made them prepared or unprepared before and during the events⁸².

81 Both officially and unofficially

82 We have not distinguished between reasons for preparedness before versus reasons for preparedness during because there was no significant difference between these two ratings.

Table 6 - Submitters' discussion of individual preparedness

| What made submitters feel unprepared | What helped submitters feel prepared |
|--|---|
| Lack of / slow communication from official sources | Had prepared supplies in advance (e.g., grab-bags, food, water, generators) |
| Late / no evacuations or warnings | Personal knowledge of risks in the area |
| Previous experience with less severe events meaning they became "complacent", expecting them to be similar | General preparedness due to isolation / rurality |
| Inaccurate / late weather forecasting, particularly in the Hawke's Bay | Previous experience with severe weather events |
| Not understanding how quickly the events could escalate | |

68. Lack of communication from official sources was the most common reason submitters gave for feeling unprepared (25% of submitters gave this as a reason). Many of these submitters were unable to find information on the weather, evacuation efforts, emergency services and hubs, and what support they would receive. Some said this lack of communication caused panic and feelings of isolation as well as enabling the spread of misinformation (e.g., that stop-banks were damaged deliberately in Hawke's Bay).

Response

Submitters' ratings of the response of communities and services

69. The Inquiry asked submitters to rate the response of local and central government agencies, necessary services, and their community on a five-point scale from "Very poorly" to "Very well".⁸³
70. Figure 7 and Table 7 below shows how submitters rated the response of these groups. Most submitters felt that their communities responded well and were significantly more positive about the response from their community than from other groups.
71. While most submitters rated the response of local and central government agencies and necessary services negatively, submitters rated necessary services significantly higher than the response from local and central government agencies.

83 "Very poorly", "Poorly", "Acceptably", "Well", "Very well".

Figure 7: Response of Communities and Services

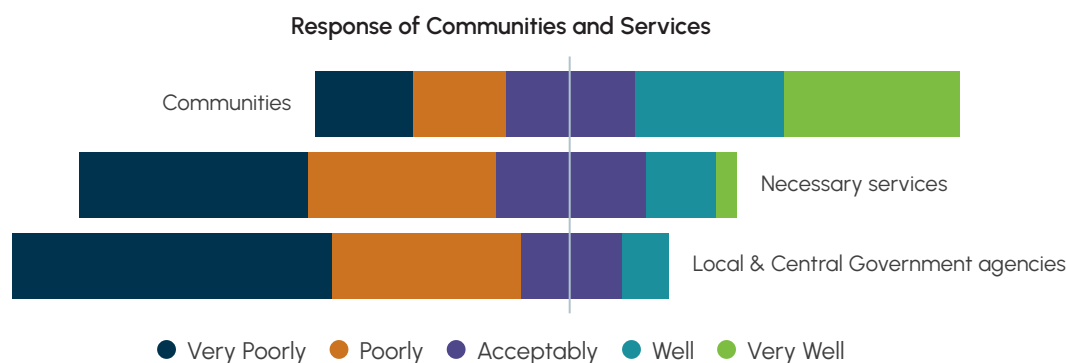


Table 7 - Data table for response of Communities and Services

| | Very poorly | Poorly | Acceptably | Well | Very well |
|---------------------------------------|-------------|--------|------------|------|-----------|
| Submitters' communities | 16% | 14% | 20% | 23% | 27% |
| Necessary services | 28% | 35% | 23% | 11% | 3% |
| Local and central government agencies | 49% | 28% | 15% | 7% | 0% |

72. Those submitters who said that their communities responded “well” or “very well” said that that the local community response consisted of independent volunteers who co-ordinated supplies and information in the absence of leadership or assistance from government or Civil Defence officials. Many of these submitters indicated that they expected a more “official” response, but that their community were the only ones able to provide assistance.
73. Many of the trends in submitters' ratings of these groups' responses are similar to those seen with their ratings for readiness:
 - submitters' ratings were significantly correlated across groups; lower ratings of one group are associated with lower ratings of the other groups, and vice versa
 - there were no other significant differences between the ratings of submitters in different regions, between rural and non-rural submitters, or between other demographic groups (e.g., age or gender).
74. One difference was that those submitters who were evacuated or rescued, rated the response of local and central government agencies significantly more negatively than other submitters. Their ratings of the response of necessary services and their communities were not affected.

Comparison between submitters' ratings of readiness and response

75. Submitters rated responses slightly but significantly more positively than they rated readiness. This may be because the responses during the events had more tangible, positive outcomes for submitters than actions to prepare for the events.
76. Despite this small difference, submitters' ratings of readiness and response were significantly correlated – lower ratings for readiness are associated with lower ratings for response, and vice versa. As discussed previously, this may be because some submitters found it difficult to differentiate between readiness and response.

Submitters' discussion of the response of communities and services

77. The Inquiry asked submitters to expand on their ratings of the response of communities and services.
78. Table 8 below outlines what submitters felt went well and what went poorly during the response, in order of prevalence. Significant⁸⁴ themes are in bold and discussed in more detail under the table.
79. Submitters found it easier to articulate reasons for their ratings about responses rather than readiness. As explained above, this may be because the responses during the events had more tangible outcomes for submitters than actions made to prepare for the events.

84 Themes mentioned by many submitters, or themes mentioned by only a few submissions that reflected their unique perspectives

Table 8: Submitters discussion of response

| Group | What went poorly during the response | What went well during the response |
|---------------------------------------|--|---|
| Local and central government agencies | <p>Poor decision-making during the events, leading to slow and inconsistent government actions, particularly in Hawke’s Bay and Esk Valley</p> <p>Response did not prioritise community safety</p> <p>Less and slower support for rural areas</p> <p>Lack of coordination between agencies, including between central and local government</p> <p>Lack of/slow communication from official sources</p> <p>Late/no evacuations or warnings</p> <p>Response did not consider communities’ cultural context</p> <p>Response did not consider the accessibility needs of disabled people</p> <p>Local knowledge and expertise were undervalued during the response</p> | <p>Involvement of the New Zealand Defence Force</p> <p>Positive one-on-one engagement with government (e.g., during local council meetings, or MSD)</p> <p>Financial support (e.g., rates relief, one-off payments during response /recovery)</p> |
| Necessary services | <p>Poor communication from emergency services to people in need of assistance (particularly 111), and poor coordination between emergency services</p> <p>Failure of infrastructure (e.g., roads, electricity, cell towers, and internet)</p> <p>Slow recovery of services (e.g., supermarkets) after the event</p> | <p>Fast reconnection of electricity and water (in some areas)</p> <p>Good performance of emergency services (e.g., supply delivery by helicopter)</p> <p>Financial support (e.g., bill forgiveness, credits for electricity)</p> |

| Group | What went poorly during the response | What went well during the response |
|-------------------------|---|--|
| Submitters' communities | <p>Tension between volunteer / community response and government response</p> <p>Lack of communication from community groups, and people reporting receiving help from individuals only</p> <p>Uncoordinated community response leading to wasted resources</p> <p>Businesses acting unhelpfully (e.g., requiring evidence of people's inability to attend work during the events)</p> | <p>Volunteer air support during the early response (e.g., private helicopters for rescue, small, fixed-wing aircraft for moving freight)</p> <p>Community-run emergency hubs</p> <p>Community-based communication (e.g., through Facebook or Whatsapp) that was more accurate than official information</p> <p>Community members distributing supplies (e.g., food, water, clothing)</p> <p>Community members participating in warnings, evacuations, and rescues</p> <p>Community members participating in the clean-up of roads and houses</p> <p>Adapting previous plans (e.g., community group COVID response plans) to respond better</p> |

Poor decision-making during the events, leading to slow and inconsistent government actions, particularly in the Hawke's Bay and Esk Valley

80. Many submitters generally attributed poor responses to the poor and delayed decision-making of CDEM Groups and Group Controllers. Many submitters said this was exacerbated by confusion about who was in charge of responding to the events.
81. Submitters who were involved in the Hawke's Bay CDEM response raised the following concerns:
 - the appointed Group Controller was not in the area during the events so there was no clear decision maker and no central coordination of the response
 - many Council staff were untrained in general emergency management (e.g., how to respond to phone calls from the public leading up to and during an event)
 - designated emergency management staff had not completed their CIMS training and lacked the skills / experience required
 - the CDEM group had warnings / forecasts about the extent of the events, but did not immediately disseminate this information to people who would be affected.

82. Most submitters from the Esk Valley said that they felt abandoned by the Hawke's Bay CDEM response. These submitters pointed to the lack of warning given to Esk Valley residents about potential flooding, despite submitting that the information was available to decision makers at the time. These submitters also raised the slow response, once it became clear that the event was severe – these submitters felt that their region was simply ignored.
83. These submitters also pointed to previous flooding events in the region and the known risk areas that were not addressed by their local authorities. Many felt that the failure of their local authorities to reduce these risks and prepare appropriately contributed to the extent of the damage in the Esk Valley.

Response did not consider communities' cultural context

84. Some submitters, particularly those who identified as Māori, said that Māori taonga was not appropriately valued during the emergency response. One submission discussed the impact of Cyclone Gabrielle and the resulting floods on their local marae, including how their local Council refused to provide support and the ongoing impact of this damage on their iwi, hapū, and whānau.
85. One submission discussed how Ola Manuia – the Pacific Response which set up emergency hubs at local churches to provide culturally accessible support to Pasifika people affected by Cyclone Gabrielle– was able to leverage their relationship with agencies and utilise lessons from their COVID-19 response to provide culturally accessible support during Cyclone Gabrielle. This submission noted that the Civil Defence response did not consider how best to serve the Pacific community. The submission said the response should have leveraged the Pacific community's expertise when developing emergency response plans to ensure that the emergency response was accessible and effective from a cultural perspective.

Response did not consider the accessibility needs of disabled people

86. A few submissions said that Civil Defence did not consider disabled communities when planning for an emergency response. One example raised by these submissions was that initial communications from Civil Defence were not accessible (e.g., text only, or news bulletins without sign language interpreters) which meant that some disabled people were unaware of the extent of the events and received little to no warning.
87. One submission also raised that the response did not consider where disabled people with access needs would evacuate to, or where they would stay for a longer period if needed.

Local knowledge and expertise was undervalued during the response

88. Some submitters said that local knowledge and expertise was undervalued in the official emergency responses (e.g., locals' understanding of rivers, roads, and community needs). These submitters felt this knowledge and expertise should have been leveraged to better respond to the events.

89. A few submitters said that Civil Defence and other emergency responders (including central and local government) should leverage the cultural expertise and past experiences of communities to improve the quality of both planning and the response.

Response did not prioritise community safety, but this improved with the involvement of the New Zealand Defence Force

90. Some submitters said they felt unsafe in the immediate aftermath of the events and identified instances of people burglarising homes that were evacuated.
91. Of these submitters, some said that their local police did not do enough to make them feel safe. These same submitters said that they felt safer once the army was called in to the emergency response.

Poor communication from emergency services to people in need of assistance (particularly 111), and poor coordination between emergency services

92. Many submitters felt betrayed and failed by emergency services, particularly those submitters in Hawke's Bay and in rural / isolated areas. These submitters relayed stories of calling 111 and:
- there being no answer
 - not receiving help or empathy
 - being referred to an emergency service (e.g., fire and rescue) which then either did not pick up the phone or did not arrive.
93. Many submitters more closely involved in the response (e.g., people who were part of a community organisation assisting with the response) said the inadequacy of the emergency response was because 111 operators had little to no communication with on-the-ground staff and were struggling to coordinate the emergency response. A few submitters from Hawke's Bay said that emergency services were manually comparing reports to identify double-ups and ensure that nobody had been missed, which was a time-consuming process and affected the quality of their response.

Failure of infrastructure (e.g., roads, electricity, telecommunications, and internet), but fast reconnection of electricity and water (in some areas)

94. Most submitters, particularly in Hawke's Bay and in rural / isolated areas, lost telecommunications, electricity, and internet at some point during the events.
95. Of the submitters who lost necessary services during the events, many said they felt let down by how long it took to get these services reconnected. Some submitters, from across the regions, reported that it took weeks before basic amenities were restored.
96. Some submitters praised the efforts of local power companies to reconnect their services immediately or very shortly after the events. Most of these submitters were from Hawke's Bay.

Volunteer air support during the early response

97. Many submitters identified volunteers with private air capacity (e.g., private helicopters or small, fixed-wing aircraft from individuals or businesses) as a key part of the community response. These volunteers both rescued people and provided supplies to cut-off communities.
98. A few submitters said these volunteers encountered issues with air traffic (e.g., co-ordinating with central and local government agencies) and the availability of fuel.

Community-run emergency hubs

99. Many submitters found community-run emergency hubs⁸⁵ a valuable support during the events, but some of these submitters found that these emergency hubs were insufficiently prepared for the extent of the events.
100. One submitter described their experiences with the emergency hubs Ola Manuia. They felt that it was particularly valuable for people who did not speak English and were therefore not well served through the Civil Defence response.

Tension between the community response and the government response

101. A few submitters felt that the quality of the community response was negatively impacted by the arrival of local and central government agencies. Many of these submitters felt that local and central government agencies introduced bureaucracy which slowed down decision making (e.g., going through official procurement channels to hire contractors to clear roads rather than using available local contractors) or meant that communities were unable to continue with their response.
102. Some other submitters felt that government agencies abdicated responsibility for the response to communities during the event and appeared “after the fact” with no tangible support.

What submitters want to happen now

103. The Inquiry asked submitters what would have been most helpful in the lead-up to and during the severe weather events. Submitters also offered suggestions on what they think should change in emergency management in their discussion under the other questions.
104. Submitters’ suggestions relevant to improving readiness or response have been explored in Part One under the relevant key message. Additional recommendations that are not linked to one of the five key messages are discussed below.

85 These included community-based hubs funded by central or local government, unofficial hubs set up and operated by community members, or marae.

Many submitters continue to be angry about the response and want decision makers to be held accountable for loss of life and property

105. Many submitters expressed anger towards the decision-makers who did not call for evacuations sooner. A few of these submitters have named specific regional leaders who they believe are accountable for the poor response and the resulting loss of life and property. Other submitters blame their local government organisations for not listening to the warnings from communities / locals prior to the events.
106. Many submitters said there was confusion about who was in charge of responding to the events. These submitters thought this lack of leadership contributed to delays, poor decision making, and confused communications.

Many submitters felt that official recovery efforts are taking too long

107. Many submitters said that the official recovery efforts are taking too long. Specific recovery efforts identified included reconnecting necessary services (e.g., water), repairing bridges, and clearing roads.
108. Several submitters said that the slow official recovery has put their health and wellbeing at risk and continues to negatively impact their lives.

Glossary

Summary of key terms

| Term | Definition |
|--|---|
| 2 Rs | The 'readiness and response' components of the 4 Rs. |
| 4 Rs | The four areas of activity used to describe New Zealand's integrated approach to civil defence emergency management. The four areas of activity are reduction, readiness, response, and recovery. |
| Appropriation | The statutory mechanism by which Parliament authorises the Government to incur expense and capital expenditure. |
| Assurer Assurance | Assurer relates to NEMA's function to provide assurance (confidence) that the emergency management system is fit for purpose. |
| Capability | The skills, experience, and abilities of people that perform functions and tasks. |
| Capacity | The quantity of people needed to perform functions and tasks. |
| CDEM (Civil Defence Emergency Management) agencies | An agency with responsibilities under the CDEM Act 2002, including local authorities, CDEM Groups, government departments, emergency services, and lifeline utilities. |
| CDEM Group | A statutory joint standing committee that is made up of mayors or chairs of member local authorities, or a committee set up by a unitary authority that has governance responsibilities for emergency management. |
| CDEM response | Emergency response activities carried out by CDEM agencies during an emergency (or just "response" where appropriate). |
| Cell sites or towers | A mobile device site where antennas and electronic communications equipment are placed to transmit signals to cell phones. |
| Civil Defence Centre (CDC) | A facility established and managed by CDEM, during an emergency, to support individuals, families/whānau and the community. |

| Term | Definition |
|---|--|
| Command | Command (authority within an agency) is executed vertically, and includes the internal ownership, administrative responsibility, and detailed supervision of an agency's personnel, tasks, and resources. Command cannot normally be exercised outside an agency. |
| Common Operating Picture | A continuously updated overview compiled from local, regional and national data shared between integrated communication systems. |
| Common Operating Platform | The technological infrastructure or system used to support the creation, management, and dissemination of the common operating picture across different stakeholders involved in the response. |
| Community <i>Vulnerable Communities / Disproportionately impacted communities</i> | A broad group of people living in the same place or having a particular characteristic in common. <i>Includes, but not restricted to, elderly, aged care facilities, disabled persons, rural communities, Māori, Pacific and ethnic communities.</i> |
| Controller | A statutory role under the CDEM Act that is appointed at national, regional, and local levels. |
| Control | Control (authority across agencies) is executed horizontally and is the authority to direct tasks to another agency, and to coordinate that agency's actions so they are integrated with the wider response. Control authority is established in legislation or in an emergency plan. This control is to task a certain agency towards a certain outcome (achieve a managed evacuation for example). It is not control over resources (personnel, vehicles, assets). |
| Coordinating Executive Group (CEG) | A statutory committee that is made up of senior officials from each member local authority, Police, Fire and Emergency New Zealand, a provider of health and disability services, and other co-opted members. It is responsible for implementing decisions of the CDEM Group. |
| Coordinated Incident Management System (CIMS) | The Coordinated Incident Management System (CIMS) is a framework of principles, structures, functions, processes, and terminology that agencies can apply in in both emergency and non-emergency incidents. |
| Coordination | Bringing together agencies and resources to ensure unified, consistent, and effective response. Command and control assist with coordination by defining authority between and within agencies. |

| Term | Definition |
|--|---|
| Councils / local government | Collectively refers to regional councils, unitary councils, district councils and city councils. Also known as local authorities. |
| Critical Infrastructure Entity (Lifeline utility in the CDEM Act) | Any organisation named or described in Schedule 1 of the CDEM Act. This includes airports, ports, railways, and providers of gas, electricity, water, wastewater or sewerage, storm water, telecommunications, roading networks and petroleum products. |
| Declaration | A formal announcement of the beginning of a state of condition made under the CDEM Act. [Refer state of emergency]. |
| Departmental Agency | In the context of this paper, Departmental Agency refers to NEMA. It is an operationally autonomous agency with its own chief executive, hosted by the Department of the Prime Minister and Cabinet (DPMC). |
| Displaced people | People who have had to leave their homes as a result of an emergency event and were provided shelter and accommodation under section 73 (1) in the National Civil Defence Emergency Management Plan Order 2015. |
| Emergency Coordination Centre (ECC) | Operates at a regional level to control one or more Emergency Operation Centres. |
| Emergency Operation Centre (EOC) | A facility, usually operated by a local authority, which is a coordination and control centre for local emergency response and support. The term is used in CIMS, and CDEM guidance, but not in the CDEM Act. |
| Emergency | In general, an emergency is a situation that poses an immediate risk to life, health, property, or the environment that requires a significant and coordinated response. It has a specific meaning under section 4 of the CDEM Act as it is relevant to the decision to declare a 'state of emergency'. |
| Emergency Management System | The overall system that includes civil defence and emergency management agencies, policies, legislation, regulations, capability, funding, operations, mindset, and culture. |
| Emergency Management Assistance Team | An Emergency Management Assistance Team (EMAT) is a team that can be deployed to share capability and add surge capacity with the emergency management system. |
| Essential workers | Staff who work for essential businesses such as hospitals, rest homes, supermarkets, lifeline utilities or critical infrastructure, or emergency management agencies. |

| Term | Definition |
|---------------------------|---|
| Fibre | High speed internet. |
| Generator | An alternative power source that can be used during an outage. |
| Group Plan | A statutory document produced by the CDEM Group under the CDEM Act – section 49 sets its contents. |
| Immediate Response | An immediate response to an emergency starts when notice is given that an event is likely and preparatory actions begin. Depending on the hazard, this could be three to four days before an event is likely to begin. The immediate response finishes when the threat to life has passed and the situation has reached the point of stability. |
| Infrastructure | The basic physical and organisational structures and facilities needed for the operation of a society or enterprise, such as schools, roads, bridges, and power supplies. |
| Hapū | A group within an iwi (subtribe). |
| Hazardscape | An understanding of the physical nature, distribution, frequency of occurrence, impacts and consequences of key hazards that could affect a locality, region or country. |
| Inquiry | Established to inquire into any matter of public importance or concern to the Government of the day. Government inquiries are appointed by and report to a Minister. In the context of the report, the Inquiry refers to the Government Inquiry into the Response to the North Island Severe Weather Events. |
| Iwi | A large group of people (or tribe) descended from a common ancestor and associated with a distinct territory in Aotearoa New Zealand. |
| Joint Committee | A standing committee under section 12 of the CDEM Act comprising the regional council and territorial authorities within the region. [Refer CDEM Group] |
| Kāinga Ora | A crown entity that provides social housing, urban development, and home ownership products. |
| Kawa | Protocol or etiquette, particularly in a Māori meeting place. |
| LandSAR | A national volunteer organisation that provides land search and rescue assistance across New Zealand. |
| Local Authority | A local authority is a territorial authority, a regional council, or a unitary authority. |

| Term | Definition |
|--|---|
| Manaaki/manaakitanga | The act of showing kindness, respect, generosity, care for others, and reciprocity. |
| Marae | Meeting grounds with buildings that belong to a particular iwi (tribe), hapū (subtribe), or whanau (family). |
| Memorandum of Understanding (MOU) | An agreement between two or more parties that is outlined in a formal document. It is not legally binding, but signals willingness of the parties to work together with a contract. |
| Mihi | A formal greeting or expression of acknowledgement. |
| National Crisis Management Centre (NCMC) | A secure all-of-government facility maintained in a state of readiness to manage the national response to emergencies, sometimes colloquially referred to as 'the bunker'. |
| National Emergency Management Agency (NEMA) | Government agency that provides leadership in reducing risk, being ready for, responding to and recovering from emergencies. |
| Operator | Operator refers to NEMA's function to lead or support the response to and recovery from emergencies, while also supporting the operation of the emergency management system. |
| Planning Emergency Levels of Service | Service delivery goals for infrastructure providers during and after an emergency event. These goals could be delivered through the existing infrastructure (e.g., pipes, lines, cables), or through other means (trucked water or the provision of generators). |
| Public Information Management (PIM) | The function that, during an incident, prepares, distributes, and monitors information to and from the media and public. |
| Readiness | A grouping of emergency management activities that relates to developing operational systems and capabilities well before an emergency happens, including self-help and response programmes for the public, and specific programmes for emergency services, critical infrastructure entities/lifeline utilities and other agencies. |
| Recognised Seasonal Employer scheme (RSE) | Administered by Immigration New Zealand, the scheme allows horticulture and viticulture industries to bring in workers from overseas. |

| Term | Definition |
|--|---|
| Recovery | A grouping of emergency management activities that relates to the coordinated efforts and processes used to bring about the immediate, medium-term, and long-term holistic regeneration and enhancement of a community following an emergency. |
| Reduction | A grouping of emergency management activities that relates to identification and analysis of risks to life and property from hazards, taking steps to eliminate those risks if practicable, and, if not, reducing the magnitude of their impact and the likelihood of their occurrence to an acceptable level. |
| Regional Council | A regional council named in Part 2 of Schedule 2 of the Local Government Act. |
| Resilience | The capacity to withstand or recover quickly from a natural hazard event. |
| Response | A grouping of emergency management activities that relates to the actions taken immediately before, during or directly after an emergency to save lives and protect property. |
| Rohe | The territory or boundary of iwi and hapū |
| Sector Coordinating Entities (SCEs) | Pre-arranged points of contact with critical infrastructure entities/lifeline utilities to facilitate streamlined coordination and communication during emergencies. They help resolve issues, provide, and distribute information, contribute to planning, coordinate requests for help and liaise with other sectors. |
| Severe weather event | One of three weather events that impacted the North Island in 2023: Cyclone Hale, the Auckland Anniversary heavy rainfall, and Cyclone Gabrielle. |
| Situational awareness | An understanding and appreciation of the complexities of an incident, including an understanding of the environment, the situation, likely developments, and implications. |
| Starlink | A satellite internet constellation, operated by SpaceX. |
| State of Emergency | A state of emergency is called when normal emergency services are overwhelmed, or at risk of being overwhelmed. It provides access to powers that would not normally be available. A state of emergency can be local or national and results from a declaration made under the CDEM Act 2002. |

| Term | Definition |
|--|--|
| Steward | One of NEMA's core functions. As steward, NEMA provides strategic leadership for risk reduction, readiness, response, and recovery activities, and builds emergency capability and capacity. |
| Stopbanks | Compacted mounds of earth built next to rivers that help to limit the spread of floodwater onto surrounding land. |
| Substation | Part of an electrical generation, transmission, and distribution system. |
| Taiwhenua | The land and people of a specific district. |
| Taiwi | Non-Māori. |
| Telecommunications | Communications over a distance, for example by cell phone, landline, or fibre internet. |
| Territorial (Local) Authority (TLA) | A city council or a district council named in Part 2 of Schedule 2 of the Local Government Act. |
| Tikanga | Māori customary practices or behaviours, derived from 'tika' meaning 'right' or 'correct.' To act in accordance with tikanga is to behave in a way that is culturally appropriate. |
| Unitary authority (council) | A territorial authority that has the responsibilities, duties, and powers of a regional council conferred on it. |
| Whānau | Immediate and extended family group. |

Acronyms and abbreviations

| | |
|----------|--|
| ACC | Accident Compensation Corporation |
| BCR | Benefit Cost Ratio |
| CDC | Civil Defence Centre |
| CDEM | Civil Defence and Emergency Management |
| CDEM Act | Civil Defence Emergency Management Act 2002 |
| CEG | Coordinating Executive Group |
| CIMS | Coordinated Incident Management System |
| DPMC | Department of the Prime Minister and Cabinet |
| ECC | Emergency Coordination Centre. |
| EOC | Emergency Operations Centre |
| EMAT | Emergency Management Assistance Team |
| FENZ | Fire and Emergency New Zealand |
| GDP | Gross Domestic Product |
| GST | Goods and Services Tax |
| IMT | Incident Management Team |
| LGNZ | Local Government New Zealand. The membership body for local authorities. |
| LPG | Liquid Petroleum Gas |
| MNZ | Maritime New Zealand |
| MOU | Memorandum of Understanding |
| MPI | Ministry for Primary Industries |
| MSD | Ministry of Social Development |
| NCMC | National Crisis Management Centre |
| NEMA | National Emergency Management Agency |
| NZDF | New Zealand Defence Force |
| PIM | Public Information Management |
| RCC | Rescue Coordination Centre managed by Maritime New Zealand |
| RSE | Recognised Seasonal Employer scheme |
| TPK | Te Puni Kōkiri |
| VHF | Very High Frequency |



Image: Flooding near Puketapu, to the west of Napier. Source: NZDF



GOVERNMENT INQUIRY
INTO THE RESPONSE TO THE

**North Island Severe
Weather Events**