Te Tai Tokerau Resilience Action Plan

Actions for building natural hazard resilient whānau and communities in Te Tai Tokerau

September 2023

The approach taken to developing this action plan is set out in the companion document Te Tai Tokerau Resilience Plan: Rationale and Approach

Ko au te maunga, ko te maunga ko au
Ko au te awa, ko awa ko au

I am the mountain, the mountain is me
I am the river, the river is me

Nei ra te mihi kauanuanu ki te hunga kua whiwhi i tenei karere

Introduction

Cyclones Hale and Gabrielle hit Tai Tokerau hard. The severity and damage caused by these weather events was the worst in a generation and highlighted the vulnerability of our communities to natural hazards - especially in the more remote parts of the region. It was a real wake up call for ensuring our communities are better prepared to deal with these extreme events.

Northland experiences a range of natural hazards. Flooding is the most significant natural hazard risk in Northland. The other significant natural hazard risks are droughts, wildfire, landslides, coastal inundation and tsunami.

There is already a significant programme of work dealing with natural hazards – including cyclone recovery activities, flood risk reduction works, and climate adaptation planning. This Te Tai Tokerau Resilience Action Plan (the Action Plan) is part of this work. It has been commissioned by Minister Davis and the Regional Recovery Governance Group to determine the priority actions required to improve the resilience of Northland communities so they can withstand the impacts of natural hazards and continue to operate through and after them. It identifies the short-, medium- and long-term actions and investments necessary to increase regional resilience.

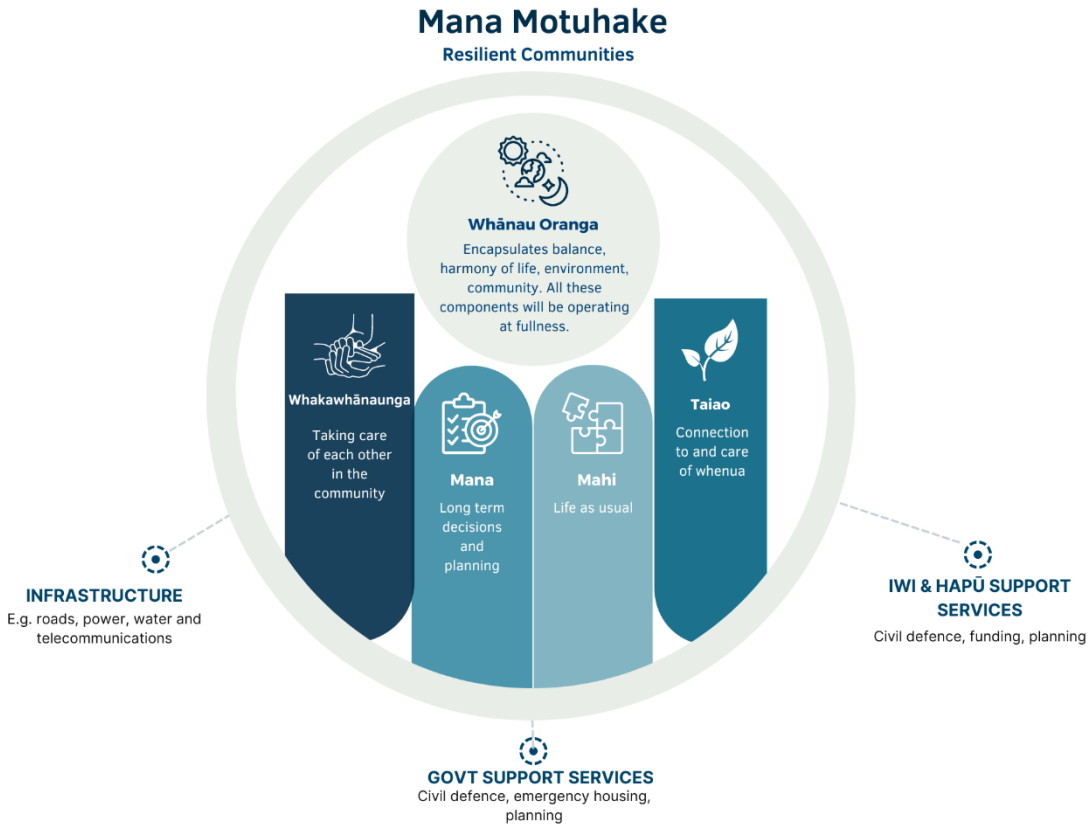
A particular focus for resilience in Northland is the remote communities at the “end of the road”. These communities are particularly vulnerable, due to their distance from services and being at the extremity of existing infrastructure networks. The Action Plan has been developed with the experiences of these remote communities at its heart.

The Action Plan also identifies the priority actions required to strengthen resilience of the region as a whole – such as strengthening the resilience of power, communication, transport infrastructure, and adaption to a changing climate.

Whānau oranga framework

> *In all my years, it's never been like this. Our roads have never ever washed away and all generations and my grandfather's generation, my mother's generation, never. Now, it's my grandchildren, and it's the first time our roads have all washed away.*

The Action Plan was developed based on a framework that puts whānau oranga (the continued wellbeing and health of the people in the community) at the centre of what it means to be resilient. This approach means that the focus was on understanding of the needs of the community first, and then considering how communities can be supported by infrastructure providers, government and council support services and iwi. We have called it the "Whānau oranga framework":



Whānau oranga is supported by four pou:

- Whakawhanaunga – taking care of each other in the community, readiness for events
- Mana – planning and making decisions to prepare for events in the future
- Mahi – life as usual in the community during and after events
- Taiao – connection to and care of the whenua, response to events

These aspects of self-sufficient and resilient communities are further underpinned by three external pou:

- Infrastructure into and out of the community
- Government and council funding and support services
- Iwi and hapū funding channels to whānau, provision of immediate food and shelter, and facilitating access to Government support and resources.

"People living in the community are the best people to do the mahi and engage with our people and we can do it with a little more tautoko. We did do it…and learnt so much."

"We don't give up, just haere tonu"

Process of developing the Te Tai Tokerau Resilience Action Plan

There have been three main aspects to preparing the Action Plan:

- Engaging with communities (primary focus)
- Reviewing existing plans and strategies
- Talking with infrastructure providers and community service deliverers

The primary focus for the Action Plan was to get a deep understanding of the issues remote communities face and their ideas for addressing them. We undertook an in-depth process engaging with different communities over two months through a Hapori Intel Rōpū[1]. This involved bringing together members of different communities to discuss their experiences and ideas. We also visited remote communities to hear directly from local whānau.

We also reviewed existing plans, strategies and initiatives across the region and identified the actions and aspirations relevant to lifting the resilience of the region as a whole. We considered whether these existing actions could address the issues raised by communities, and where they did, we have reflected them in the Action Plan. In some cases, the existing actions only partly addressed issues – in which case we have recommended amendments to existing action (such as expanding the scope or increasing the scale).

[1] A group formed for the purposes of preparing the Action Plan and providing a community voice. Members included well connected representatives from various communities across Northland.

Talking with infrastructure providers and our community service deliverers provided the intelligence to help identify the broader regional resilience priority actions. It also helped to further paint the picture of the challenges communities face, reflecting on the interactions infrastructure providers and community service deliverers have with communities.

"Our isolation is, it's our greatest asset, but it's also our weakest, and so when they say, "Oh, just get a grant for this, just get a grant for that, go and apply for that." Well, if no one's going to travel that distance, and it's going to cost us an arm and a leg for someone to leave Dargaville, come down to us, give a quote, and then come back, they're not going to come".

What did we hear?

These were the strongest themes that came out of the discussions with remote communities about what is most needed to build whānau oranga.

Manaaki hubs

'Manaaki hubs' are recognised places in communities supported and resourced to provide manaaki during an event. As was evidenced when cyclone Gabrielle hit, marae are often best placed to provide this – they have the facilities, formal structure (e.g. marae committees) and importantly, the aroha. But they need to be supported and resourced. Also, in some communities, marae may not be a viable available option, they may not want to take on the role, or be the best option – so other community facilities (e.g., town halls) may be a better option. And in some communities the only viable option may be a mobile manaaki hub. It is up to individual communities to decide.

Information and training

Communities need better 'know how' to support themselves during an event. This includes how to use equipment (e.g., chainsaws and generators), knowing what the right equipment is (e.g. which generator to buy), how to provide first aid, understanding the available support services, and project management skills for managing during an event.

Alternative electricity sources

Access to a form of electricity is critical for people's ability to cope with an event – for heating, cooking, communications, pumping water, running health equipment, and refrigerating food. Communities need access to electricity when the power network goes down for an extended period – whether it be through generators or 'off grid' electricity generation and batteries. And it doesn't mean that alternative electricity sources are needed everywhere – even if it's just the local manaaki hub – somewhere where people can take their perishable food and charge their phones.

There is also a desire for people to reduce their reliance on electricity via the powerline e.g., setting up their own electricity generation and storage.

Self-sufficiency

Communities want to be able to look after themselves. Self-sufficiency crosses over the other themes, but there were some specific ideas around how communities could be more self-sufficient including more local food supply (e.g., gardens), sharing knowledge on collecting kai, and more 'off grid' living**.**

There is also a desire for communities to better understand the resources they have within their communities. This could be some kind of plan to help unify the community by identifying local

resources available to be used in an emergency (e.g. tractors, chainsaws and people with particular skills).

There was a recognition that those that offer up their resources during times of need should be supported.

Access to freshwater

Access to clean freshwater is a basic human need. Many communities rely on water taken directly from streams, rivers and aquifers. During and after events access to these natural sources of water can be limited and compromised (full of sediment and containing sickness causing contaminants). Water storage is an obvious solution, but for some communities there are other existing options such as bores (aquifers) and springs.

Wastewater

The discharge of human sewage into waterways is abhorrent for many people. Most of Northland's sewage treatment plants discharge treated sewage to water – which is a major concern for Māori. Sewage treatment networks (e.g. pipes) and treatment plants are prone to failure during high rainfall, which means even more (often untreated) sewage going into waterways. The discharge of sewage can compromise mahinga kai – which can be an important food source for communities. It also has a major impact on the mauri of the taiao – the state of the taiao directly reflects the wellbeing of tangata whenua (in particular) and therefore impacts their spiritual strength to deal with extreme weather events.

Housing

Many people in Northland live in substandard housing including caravans, tents and sheds – and this is particularly the case in the more isolated parts of Northland and on whenua Māori. Living in housing that is overcrowded, drafty, mouldy, with leaks and no insulation means that people are less able to endure (have less resilience) when a natural hazard event hits. Northland's substandard housing is a major stressor on people's ability to be resilient.

Housing issues identified include:

- not being able to afford to repair and making houses warm and dry, especially those on whenua Māori,
- not enough housing stock,
- not enough support for temporary and emergency housing (including for rough sleepers),
- landownership structures making it hard to access funding,
- those in need missing out on temporary accommodation (e.g., cabins) because they don't meet the criteria (e.g. can only access a cabin if it can be plumbed into a septic system when they only have a long drop), and
- people not seeking support because they are fearful of authorities (e.g., worried that Oranga Tamariki will take their children away because of their substandard housing, being 'caught' for unconsented works or get their benefits taken away from them).

Roads

Northland's roads are in a poor state at the best of times – let alone after being hit by a cyclone. Councils and Waka Kotahi only have so much funding to maintain the roads and so must prioritise. However, there is concern that the prioritisation doesn't adequately give weight to people being able

to access their homes. There is a perception that people at the 'end of the road' who can't or struggle to access their homes are less of a priority than fixing up more heavily used but useable roads.

There are also some communities where roading may no longer be a sustainable option – and therefore need support for alternative modes e.g., via sea.

The continued poor state of roads in remote communities means that people struggle to get to school, access important services, and are at risk of hindering ability to access emergency services.

There are many communal private roads and driveways (not maintained by council) that people rely on to get to their homes and are in a poor state. When an event hits, and these communal access ways are not useable, a number of these communities do not have the means to repair their access – which can mean people can't access their homes. Five months after cyclone Gabrielle there were still people living in temporary accommodation because they could not access their homes.

Further, during some types of natural hazards, such as fires, the sea or airlift may provide safer escape routes than roading for some communities.

Communications

Communities are heavily reliant on the mobile and internet networks leaving them vulnerable when they go down. There is a need to be better prepared to be able to receive information (e.g. having radios with batteries) and having alternative ways to communicate (e.g. walkie talkies). Also, communities felt it took too long to get communications back up and running.

Decision making

There is a view that decision making does not adequately include matauranga Māori, is not being done in partnership with Māori, and is not reflecting the needs at the community level. There is also concern that communities are not involved enough in some decisions about things that happen in their community.

There is concern that the aspirations and actions that communities have come up with and are articulated in the Action Plan are generally not adopted or supported by relevant agencies e.g., they don't get incorporated into operational policies and procedures.

Where agencies are wanting communities to take on a role or a project (e.g., setting up manaaki hub), it is important that support and resourcing for the role or project is known upfront. There are examples where communities have been engaged in exploratory or planning work, only for the project to fall over because the funding doesn't eventuate – and the communities feel like their time and trust has been wasted. By understanding the support or resourcing upfront it also helps communities decide at the outset whether it is worth committing to a role or project.

Vision and outcomes

From the engagement with communities, a vision emerged of what a resilient community looks like, along with a set of outcomes which flesh out what achieving the vision looks like:

Vision:

People living safely and well in their homes and on their whenua
in the face of increasing natural hazards

Outcomes:

1. Whānau and communities are prepared for responding to events
2. Community connections are strong
3. Homes are places that support resilience and self-reliance of whānau
4. Whānau can access their homes and whenua
5. Whānau are self-sufficient in the face of disruptions to external services and supplies
6. Whānau and communities make informed choices about living with natural hazards and climate change impacts

Wider regional resilience

The vision and outcomes above can be extended across Northland, as these factors are relevant bottom-line considerations for all Northland communities. However, as well as the hurdles faced within remote communities, there are other aspects of resilience that need strengthening to ensure Northland is resilient as a region.

Physically, Northland is vulnerable in terms of its connectivity to the rest of New Zealand, with natural hazards significantly compromising roading and rail for long periods of time. There are challenges to getting products to market outside Northland and business continuity challenges where workplaces cannot be accessed.

There are a number of investment priorities that are essential to the viability and prosperity of the region as a whole. The priorities include critical infrastructure – major roading networks, lifeline infrastructures, and flood mitigation investments. Resilient transport and power networks are also necessary for towns and cities to operate effectively for their citizens and businesses.

In many cases the investment priorities are addressed through existing work programmes Action Plan highlight the most important activities in these programmes for achieving resilience objectives.

First action – owning the Action Plan

The most important and very first action is to determine who will 'own' the Action Plan. The actions in this plan will have little prospect of becoming reality without this happening. A particular feature of the Action Plan is the multiple agencies are involved in its delivery, which means excellent co-ordination between agencies is critical to the success of the Action Plan.

Ownership has two aspects – governance and delivery.

As this plan includes actions spanning multiple agencies, it will need a governance group that spans the majority of the relevant agencies. The Northland Regional Leadership Group (or a sub-group of) appears to best placed to take the work forward. (The Regional Leadership Group is made up of

senior representatives from government agencies, iwi and councils. Its role is to co-ordinate the efforts of government and councils across Northland for cross-cutting issues such as housing, water supply and economic development.)

However, because the community are at the heart of the Action Plan, it is also important that they have greater representation at the decision-making table. This could include seconding key community members onto a Regional Leadership Group sub-group.

The Action Plan requires an agency to oversee delivery of the action plan as a whole. Individual actions fall to a variety of agencies, but there needs to be an agency that facilitates, co-ordinates and monitors delivery. There is no obvious single agency to take on this role, and nor did any agency put their hand up during the development of the Action Plan.

The short timeframe for preparing the Action Plan means there are gaps and issues that need further work, including:

- Identifying which actions to take forward,
- filling in gaps for particular actions such as who will be responsible for delivery and where they will be funded from, and
- determining the ongoing engagement with the community.

A solution for overseeing delivery in the short-term, and addressing the gaps and issues requiring further work, is to establish a Transition Unit. The Transition Unit could operate for 6 – 12 months. This will give some time for the governance to confirm where long-term oversight of delivery will sit. The Transition Unit can also oversee delivery of funded short-term actions not owned by any other agency. It estimated that the cost of funding such a transition unit would be $0.5m plus approximately 10% of the delivery cost of any action the unit oversees.

Priority actions for building whānau and community resilience

These are the actions we think will make the biggest difference to building whānau and community resilience to natural hazards in Northland. Most of the actions have come from conversations with key community members and their understanding of the needs at the whānau and community level.

While the actions in this section tend to be focussed on remote communities, some of the actions respond to issues we heard about from other vulnerable parts our communities, such as those sleeping rough.

Further on in the Action Plan is the wider resilience set of actions, these are the actions for improving resilience across Northland more broadly (mainly infrastructure related). Obviously, many of these broader resilience actions will also benefit remote and vulnerable communities. Where an action is a broader action, it is only referenced in the wider resilience set of actions to avoid doubling up.

The priority actions have been developed without constraint of existing funding – most of the actions are unfunded. However, this does not mean the priority actions assume an open cheque book – they attempt to strike a balance of being aspirational but reasonable.

Explaining the action tables

The action tables start on the next page. This following is a brief explanation of the tables.

Short, medium and long term

The actions are split into:

- Short term (starting next 6 – 12 months)
- Medium term (starting 12 months to 2 years)
- Long term (starting 2 years +)

The short-term actions are those judged as needing to start as soon as possible because of immediate need and/or are they are actions that need to occur before other related actions can be implemented.

Who delivers

This is the agency or agencies best placed to deliver the action. The delivery agency may not be the funder.

Cost

Costs are an estimate. In some cases, we have good information about the potential cost, but in other cases it is an educated estimate or we currently don't know the cost.

Who funds

This is where the funding for the action comes from. In most cases actions are unfunded.

Outcome delivered

The actions are chosen based on their ability to deliver on the six outcomes. Some actions will deliver on more than one outcome.

Acronymns

The following acronyms are used in the action tables:

- TBC – To be confirmed
- CDEMG – Civil Defence Emergency Management Group
- NRC – Northland Regional Council
- FNDC – Far North District Council
- KDC – Kaipara District Council
- WDC – Whangarei District Council
- TPK – Te Puni Kokiri
- MHUD – Ministry of Housing and Urban Development
- EECA – Energy Efficiency and Conservation Authority
- MSD - Ministry of Social Development

Short term

Starting over the next 6 – 12 months

Action	Delivered by	Cost	Funding	Outcome delivered
1. Establish a fund for resourcing and supporting **manaaki hubs**[2]. (*Refer also action 16 - development of the programme to resource and support manaaki hubs*).	TBC	Initial fund: $5m Ongoing: $1m / yr	Unfunded	• Whānau and communities are prepared for responding to events • Community connections are strong • Whānau are self-sufficient in the face of disruptions to external services and supplies • Whānau and communities make informed choices about living with natural hazards and climate change impacts.
2. **Identify manaaki hubs** across the region, confirm scope of the services they will provide, and understand what's needed to be able to deliver these services. (In many cases manaaki hubs will be marae and in some cases these may be mobile options).	TBC	$150 - $250k (one-off)	Unfunded	• Whānau and communities are prepared for responding to events • Community connections are strong • Whānau are self-sufficient in the face of disruptions to external services and supplies
3. Invest in **pilot manaaki hubs**. An initial investment to pilot set up a small number of manaaki hubs in marae, town halls, schools etc.	TBC	$500k - $750k (one-off)	Unfunded	• Whānau and communities are prepared for responding to events • Whānau are self-sufficient in the face of disruptions to external services and supplies

[2] Places where a community can go during an event to be looked after with aroha.

Action	Delivered by	Cost	Funding	Outcome delivered
4. Develop a **pilot mobile manaaki hub**. A mobile unit (e.g. covered trailer or transportable shipping container) that contains the necessities for providing immediate welfare support for a community.	TBC	$100k - $150k (one-off)	Unfunded	• Whānau and communities are prepared for responding to events
5. Develop and maintain a resource for whānau and communities to get support and advice about being **self-sufficient**, including: a. Energy self-sufficiency (e.g. generators, solar power, and batteries.) b. Food self-sufficiency (e.g. facilitating sharing of equipment, encouraging growing own gardens or community/marae gardens and orchards, sharing knowledge of kaimoana collection and preserving and storing food. c. Emergency health equipment (e.g. defibrillators).	TBC	Development: $50k - $250k (one-off) Ongoing: $50 - $150 / yr	Unfunded Related funding: • Māori and Public Housing Renewable Energy Fund • Community Renewable Energy Fund	• Whānau and communities are prepared for responding to events • Homes are places that support resilience and self-reliance of whānau • Whānau are self-sufficient in the face of disruptions to external services and supplies • Whānau and communities make informed choices about living with natural hazards and climate change impacts.
6. Undertake a **'deep dive' into better understanding the current state of housing** within Northland and what is needed to get homes to an certain level of resilience. *(Refer also action 17 – responding to the findings of the 'deep dive').*	MHUD, TPK, MSD, Te Whatu Ora	$500k (one-off)	Various existing funding for improved housing initiatives across MHUD, TPK, EECA, and Te Whatu Ora. Unknown whether any of this funding is available for this action.	• Homes are places that support resilience and self-reliance of whānau • Whānau can access their homes and whenua • Whānau are self-sufficient in the face of disruptions to external services and supplies

Action	Delivered by	Cost	Funding	Outcome delivered
7. Invest in immediate **priority actions for housing**: a. Repairing and restoring existing substandard housing on whenua Māori, including non-consented homes; b. Scaling up the existing model of providing small homes alongside a collaborative 'cut-through' on consenting issues c. Onsite infrastructure investment e.g. onsite wastewater management; d. Grant funding to subsidise new supply of affordable rentals and affordable (at place) homes**.**	MHUD TPK MSD	Unknown	Various existing funding for improved housing initiatives across MHUD, TPK, EECA, and Te Whatu Ora. Unknown whether any of this funding is available for this action.	• Homes are places that support resilience and self-reliance of whānau • Whānau can access their homes and whenua • Whānau are self-sufficient in the face of disruptions to external services and supplies
8. Provide on-call funding for agencies supporting **the sleeping rough** during events.	155 Whare Āwhina	An on-call up to $500k fund.	Unfunded	• Whānau and communities are prepared for responding to events • Community connections are strong
9. Undertake a rapid assessment to determine extent of **unusable private roads and access ways** which are the only access to and from homes/whenua.	TBC	$100k (one-off)	Unfunded	• Community connections are strong • Whānau can access their homes and whenua
10. Allocate funding for the repair and upgrade of **unusable private roads and access ways** which are the only access to and from homes/whenua.	TBC	One-off: $5m - $10m Ongoing $1m million / yr	Unfunded	• Community connections are strong • Whānau can access their homes and whenua

Action	Delivered by	Cost	Funding	Outcome delivered
11. Review the **impact of forestry trucks** on rural communities, particularly the integrity of rural roads.	Regional Transport Committee	$50k - $100k (one-off)	Unfunded	• Community connections are strong • Whānau can access their homes and whenua
12. Work with communities to develop an affordable **emergency event training and information programme** (e.g. first aid and dealing with wildfire) to support manaaki hubs and key community members. *(Refer action 22 for rollout of the programme).*	CDEMG Iwi	$250k (one-off)	Unfunded	• Whānau and communities are prepared for responding to events • Community connections are strong • Whānau and communities make informed choices about living with natural hazards and climate change impacts.
13. Natural hazards and risk data shared via an **interactive online platform** that**:** a. Shows areas currently and potentially impacted by a range of extreme weather events and natural hazards b. Includes local knowledge and matauranga Māori	NRC	$250k - setting up online platform Including local knowledge and matauranga Māori - unknown	Partly funded NRC - $150k for online platform. Including local knowledge and matauranga Māori - unfunded	• Whānau and communities are prepared for responding to events • Whānau and communities make informed choices about living with natural hazards and climate change impacts
14. Set up a **community preparedness fund**. Community response groups and marae can apply for funding of identified activities for building preparedness within a community (e.g. the purchase of a generator and Starlink internet).	NRC	Community response groups: Initial fund - $3m (one-off). Marae: Initial fund - $4m (one-off).	Unfunded	• Whānau and communities are prepared for responding to events

Action	Delivered by	Cost	Funding	Outcome delivered
15. Fast track **tangata whenua led climate change adaptation planning and solutions**. (Direct funding to tangata whenua to lead their own climate adaptation planning processes including inclusion of climate change considerations in IHEMP's, resourcing specific technical climate advice, supporting local engagement and development of climate change response, and planning for managed relocation)	Tangata whenua, Councils (supporting role)	$500k - $1m / year (additional to existing funding) *(Cost of a Māori led climate change risk assessment and response strategy estimated at upwards of $125,000 per location)*	Current council funding for climate change adaptation programmes: NRC - $200k / yr FNDC - $140k /y WDC - $215k / yr KDC - $140k /y All councils considering increased funding.	• Whānau and communities are prepared for responding to events • Community connections are strong • Homes are places that support resilience and self-reliance of whānau • Whānau and communities make informed choices about living with natural hazards and climate change impacts.

Medium term

Starting over the next 12 months – 2 years

Action	Delivered by	Cost	Funding	Outcome delivered
16. Develop a programme for **resourcing and supporting manaaki hubs.** The programme to include (for example): a. ensuring manaaki hubs are energy self-reliant and have necessary equipment (e.g. communication),	TBC	$250k (one-off)	Unfunded	• Whānau and communities are prepared for responding to events • Community connections are strong • Whānau are self-sufficient in the face of disruptions to external services and supplies

Action	Delivered by	Cost	Funding	Outcome delivered
b. supporting manaaki hubs to be available for communities and business to connect online, c. setting out how manaaki hubs will work with organisations such as Civil Defence, hapu and iwi. *(Refer action 1 for funding of the programme).*				• Whānau and communities make informed choices about living with natural hazards and climate change impacts.
17. Increase the level of funding available for **improving the standard of housing** and allocate as recommended by the 'deep dive' *(refer action 6)*.	MHUD, TPK, Kainga Ora, MSD, Te Whatu Ora	TBC	Various existing funding across MHUD, TPK, EECA, and Te Whatu Ora. Unknown whether any of this funding would be available for this action.	• Homes are places that support resilience and self-reliance of whānau • Whānau can access their homes and whenua • Whānau and communities make informed choices about living with natural hazards and climate change impacts.
18. Provide funding for **renewable energy self-sufficiency** initiatives (e.g., solar and wind).	TBC	Unknown	Existing related funds: • Māori and Public Housing Renewable Energy Fund • Community Renewable Energy Fund Existing scope of these funds does not appear to provide for this action. Potential to expand scope of funds and/or provide	• Whānau and communities are prepared for responding to events • Homes are places that support resilience and self-reliance of whānau • Whānau are self-sufficient in the face of disruptions to external services and supplies • Whānau and communities make informed choices about living with natural hazards and climate change impacts.

Action	Delivered by	Cost	Funding	Outcome delivered
			additional funding for the existing funds.	
19. Increase the funding available for programmes supporting the installation of **water tanks and other water self-sufficiency** initiatives.	NRC Puna Wai Ora Entity A - 3 Waters Iwi	$2m / year (additional to existing funding)	Existing funding: • NRC $500k / yr (2023) • Puna Wai Ora (Te Aupouri led water tank project for Te Hiku iwi) - $8m (funding runs out late 2024)	• Whānau and communities are prepared for responding to events • Homes are places that support resilience and self-reliance of whānau • Whānau are self-sufficient in the face of disruptions to external services and supplies • Whānau and communities make informed choices about living with natural hazards and climate change impacts.

Action	Delivered by	Cost	Funding	Outcome delivered
20. Provide funding to support communities and marae to prepare or update their own **Community Response Plans**[3], and recognise that some communities may want to expand the scope of community response plans to include: • The location of **manaaki hub(s)** within the community. • **Matauranga Māori** of the taiao (environment) and natural hazards (e.g. the whakapapa and stories of the area) • **Community asset mapping** of local knowledge, equipment, resources, etc to support the preparedness of a community. (For those communities that want to). • Identifying the **vulnerable in the community** (e.g. elderly and people with ongoing health requirements) and a plan for supporting them during an event (e.g. evacuation procedures). • A plan for **alternative access** when roads are inaccessible (e.g by sea, airlift or using 'offroad' vehicles)	Communities, supported by the Civil Defence Emergency Management Group as required.	$150k -$200k / yr for 5 years	Five full time CDEMG staff and one fixed term position supporting communities and marae to prepare community response plans.	• Whānau and communities are prepared for responding to events • Community connections are strong • Whānau are self-sufficient in the face of disruptions to external services and supplies • Whānau and communities make informed choices about living with natural hazards and climate change impacts.
21. Assess and respond to the **longterm viability of 'last kilometre' telecommunications** (given the quickly changing technology and reliance on	Rural Communications Group Chorus	Unknown	Unknown	• Whānau and communities are prepared for responding to events • Community connections are strong

[3] Community response plans are developed by the community to prepare for events based on their specific needs and vulnerabilities.

Action	Delivered by	Cost	Funding	Outcome delivered
central government investment in remote digital infrastructure).				• Whānau and communities make informed choices about living with natural hazards and climate change impacts.

Long term

Starting over the next 2 years +

Action	Delivered by	Cost	Funding	Outcome delivered
22. Roll out (and maintain) the **emergency event training and information programme**	Councils, Iwi, local champions	$500,000 / yr	Unfunded	• Whānau and communities are prepared for responding to events • Whānau and communities make informed choices about living with natural hazards and climate change impacts.
23. Establish system and funding to support **community members who provide resources** (e.g. food and petrol) during and after an event.	MSD, Te Whatu Ora, Te Aka Whai Ora, philanthropic	Maintain an up to $500k fund to be drawn from after/during an event	Unfunded	• Whānau and communities are prepared for responding to events • Community connections are strong • Whānau are self-sufficient in the face of disruptions to external services and supplies
24. Explore a **Matauranga Māori natural hazard early warning system.**	NRC Local tuhonga, marae	Unknown	Unfunded (NRC looking to develop a flood early warning system that could potentially be used	• Whānau and communities are prepared for responding to events • Whānau and communities make informed choices about living with natural hazards and climate change impacts.

			to support a Matauranga Māori early warning system.)	
25. Funding for **climate change adaptation responses** (e.g. infrastructure upgrades, land purchase and investing in nature based solution) as identified in adaptation plans / strategies.	Various	Unknown – significant cost[4]	Climate Emergency Response Fund	• Homes are places that support resilience and self-reliance of whānau • Whānau and communities make informed choices about living with natural hazards and climate change impacts.

[4] For example, cost to just to address Northland council infrastructure (e.g roads) impacted by 1.5m sea level rise is $370m. From: Local Government New Zealand, 2019: *Vulnerable: the quantum of local government infrastructure exposed to sea level rise*.

Wider regional resilience actions

Through discussions with communities, it was clear that resilient roading and power networks are the most important infrastructure necessary for remote communities. Functional roads and power provide an essential platform for delivery of all other services. For example, during recovery events, provision of communications services relies on roading access (to repair damaged communications infrastructure) and power (to operate both the infrastructure and people's individual devices).

In addition to the resilience of whānau and remote communities, there are investment priorities essential to the viability and prosperity of the whole region. The priorities include major roading networks, lifeline infrastructures, water infrastructure and flood mitigation investments. Physically, for example, Northland is vulnerable in terms of its connectivity to the rest of New Zealand, with natural hazards compromising roading and rail for long periods of time.

The actions for delivering improved resilience across the region are largely already identified by relevant providers and/or in existing strategies and plans. The main purpose of the *Wider Resilience Action Table* is to:

- Highlight the key actions required for improving resilience.
- To identify the actions requiring additional help to make happen or speed up delivery.

Each action is ranked as 'high', 'medium' and 'low'. The ranking reflects a combination of the contribution the action will make to resilience and the extent additional resourcing or support is needed to make the action happen or speed up delivery.

The following is a summary of the actions requiring additional action or support ranked as 'high' priority in the *Wider Resilience Action Table*:

- Re-initiate and progress the **business case for the SH1 Whangārei to Te Hana corridor** (including the Brynderwyns section) – cost unknown.
- Improve resilience, safety and capacity improvements of the two **Brynderwyn alternative routes** (Paparoa – Oakleigh and Waipu – Mangawhai – Kaiwaka) - $107.5m.
- Improve 3,391km of **unsealed road drainage** across Northland - $25m.
- Progress the repairs of **slips on local roads** across Northland - $36m.
- Contribute to the cost of outstanding **local road repairs** as a result of the weather events - $17m.
- Bring the **Kaitaia Airport** up to and maintain Civil Aviation Authority Standards - $10m over 10 years.
- Advocate for a communication providers **performance agreement and delivery plan for mobile and fibre communications** in the event of extended power outages and/or breaks in physical access to core sites, to demonstrate compliance with Section 60 of the Civil Defence Emergency Management Act.
- Support for **access to satellite systems** as they become available – particularly for areas not well served (mobile blackspots) or for which existing infrastructure (e.g. copper) is planned for withdrawal – cost unknown.
- Undertake **flood risk reduction assessments and works** for marae and communities (e.g., Whirinaki, Punuruku, Matangirau and Kaeo) at high risk of flooding - $7.2m.
- Provide further support to the **Nga Manga Atawhai** project (a multi-agency/group project to remove dangerous trees) - an additional $5.5m / 2 yrs.

- Fill funding shortfall for the Northland **Multi Agency Coordination Centre** to better enable emergency services and others to coordinate efficient and effective responses to events in Northland – $1.037m shortfall.

The following is a summary of the actions requiring additional action or support ranked as 'medium' priority in the *Wider Resilience Action Table*:

- Explore additional investment in **coastal shipping** – cost unknown.
- Investigate potential to provide better **backup power to critical infrastructure and services**:
    - Identify key cell and fibre network locations for increased back up power and emergency event response - cost unknown.
    - Identify other key locations for backup power supply to support end of the road communities - cost unknown.
- Undertake **flood modelling of Kaipara land drainage networks** – cost unknown.
- Explore upscaling programmes for **building business resilience** – cost unknown.

Wider Resilience Action Table

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
State highways **Waka Kotahi**	Improving the **resilience of SH1**, in particular permanent resilient arrangements for the Brynderwyns and Mangamuka	Brynderwyns repair works complete. Mangamuka due for re-opening late 2024; detours still in operation No current progress on the viability of an alternative SH1 Brynderwyns route	Funding for Waka Kotahi to progress the business case for the SH1 Whangārei to Te Hana (including the Brynderwyns section) that commenced in 2017 but was put on hold in 2018.	High
	Ensuring the continued capacity of robust **SH1 alternative/detour routes**: • SH 10, 12, 14 and 15 • Brynderwyn local road detour routes (Kaiwaka – Mangawhai - Waipu and Paparoa - Oakleigh local roads) • Alternate Mangamuka local road detour (Kaitaia-Awaroa Road, via Broadwood)	Funding committed to address weather event damage and impacts of increased traffic volumes and loadings on Brynderwyns detour routes but require additional funding to upgrade to improve resilience.	The two SH1 Brynderwyns detour routes require $107.5m to support resilience, safety and capacity improvements (including being suitable for heavy vehicles).	High
	Waka Kotahi maintaining a **live database of resilience risk to State Highway network** provides immediate data updates from the field. NTA also has good baseline database.	In progress	No additional action needed	Low
	New **Waka Kotahi operational contracts** place more emphasis on maintaining road resilience and reduce potential for disruption.	In progress	No additional action needed	Low
	More Waka Kotahi **nature-based solutions to water management.**	In progress	No additional action needed	Low

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
Local roads **Northland Transport Alliance (NTA) (district councils)**	NTA extending best practice approach to unsealed road building, repair and maintenance to all districts after evidence of increased resilience in Kaipara.	Underway, seeking funding to accelerate to 150km/year.	No additional action needed.	Low
	A one-off funding injection of $25M is required (across 3,391km of unsealed network) to address the known condition deficit and lift **roading network drainage assets** to a condition that is able to be maintained effectively within existing budgets in the future.	Unfunded – no progress.	Require a one-off funding injection of $25m.	High
	NTA resilience slip program- identification and assessment of **road slips** and prioritisation of response methods.	Prioritisation of slips completed; funding sought to start work.	Require investment $36m (at $12m per annum for three years) to progress the repairs of 116 of the total 1126 historic slips on Northlands category 4 and 5 local road routes.	High
	Support for the anticipated local share cost component of the 2022/23 **extreme event local road repair works** that continue through into 2023/2024.	Unfunded – no progress.	Require investment of an additional $17m above the $88.6M total estimated repairs across Northland three districts.	High
Air and costal shipping **Various**	Bring the **Kaitaia Airport** up to and maintain Civil Aviation Authority Standards.	No funding to bring airport up to necessary standards.	Require $10m over 10 years (capex approx. $7m, opex approx. $3m)	High

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
	Further support for **coastal shipping** for freight transport.	Waka Kotahi co-funded investment of $30 million across NZ focused on enhancing domestic shipping services, reducing shipping emissions, improving efficiency and upgrading maritime infrastructure.	Explore additional investment in coastal shipping	Medium
	Expansion of Northport, contributing to Northland's economic resilience and supporting coastal shipping.	Currently going through resource consent process	No additional action required at this time. Review at conclusion of resource consent process.	Low
Rail KiwiRail	Continue initiatives to **improve rail**: • Upgrade of Whangarei to Otiria line and terminals. • Progressing the Marsden link • Repairing and improving resilience of the North Auckland line	Upgrade of Whangarei to Otiria line and terminal – on hold pending discussions with Ngati Hine. Marsden Point link – aiming to have all necessary land purchased by end of 2023. Don't have enough funding for build the line. North Auckland Line – have repaired over 60 sites and awaiting confirmation of funding from insurers (re-instatement works) and Govt (improvement works).	Fill funding shortfall Marsden link (cost unknown). Potential additional funding for improving North Auckland line (if funding doesn't eventuate).	Medium
Power Top Energy Northpower Transpower	Govt review of the **legislation for vegetation control near powerlines**, particularly for vegetation in fall zones and for the responsibility of private landowners. to better enable reduced likelihood of power outages due to tree fall and damage.	Under discussion by industry	No additional action needed	Low

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
	Top Energy – implementing a **11kV distribution network reliability improvement plan**. (More than 90% of the impacts on the reliability of Top Energy's network are due to faults on the 11kV distribution network).	Funded (but required reallocation expenditure from other projects)	No additional action needed	Low
	Top Energy – providing **greater resilience of the 110kV transmission line network** into the far north (e.g., a second 110kV line to Kaitaia, managing slips where the current 110 kV crosses the Maungataniwha Range).	Major change to 110kV lines not scheduled in the life of the Top Energy 2023-2033 Asset Management Plan (AMP). However, the AMP recognises the need for improving resilience.	Unclear for now. Top Energy indicated that will be undertaking a comprehensive review which will feed into the 2024 AMP.	Low (for now)
	Northpower – committed to various actions identified in 2023 – 2033 Asset Management Plan for **improving resilience**, such as • **increasing network resilience** in the Whangārei area and make opportunistic improvements during renewal works, e.g., raising assets at flood-prone sites. • Improving resilience through development of more **redundancy in assets and supply controls**.	2023 – 2033 Asset Management Plan adopted and being implemented.	Unclear for now. Northpower recognises the risks of climate change (e.g. more extreme weather events), the need (e.g.) to better understand the vulnerabilities of their assets, and the need to develop network planning and modelling capabilities to effectively understand and manage the risks posed by climate change.	Low (for now)
	Provision of **secondary sources of power/standby generation for critical infrastructure and services** (e.g., cell towers,	No commitment	Investigate potential to provide better backup power to critical infrastructure and services:	Medium

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
	fibre, GP's, petrol stations or other rural community business locations)		• Identify key cell and fibre network locations for increased back up power and emergency event response. • Identify other key locations for backup power supply to support end of the road communities.	
Communic-ations Chorus, Spark, OneNZ, Rural Communicati ons Group	More resilient **back up power for cell and fibre networks**.	See power actions above.	Advocate for communication providers to develop an agreed performance requirement and delivery plan for mobile and fibre communications (in Northland) in the event of extended power outages and/or breaks in physical access to core sites, to demonstrate compliance with Section 60 of the CDEM.	High
	Extend coverage to cell black spots and remove remaining copper connections.	No further work committed to	Support for access to satellite systems as they become available – particularly for areas not well served (mobile blackspots) or for which existing infrastructure (e.g. copper) is planned for withdrawal.	High
	Introduction by OneNZ (formerly Vodaphone) of **cell to satellite service** in 2024 beginning with text message capability and leading to voice calls.	In progress	No additional action needed	Low

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
	Developing the **new Public Safety Network**. It consists of three elements: a digital land mobile radio, cellular services and personal alerting. It will provide the emergency services with modern, secure and resilient critical communications.	In progress	No additional action needed	Low
Flood mitigation and adaptation NRC	Implement NRC's **Flood Adaptation Strategy**. Project will deliver: Phase 1: A spatial risk assessment using the latest flood hazard modelling to estimate exposure and potential impacts on community values and assets for all catchments across the region. Phase 2: Undertake process to determine appropriate approach to flood risk management and adaptation for catchments. Phase 3: Develop business cases for funding of flood risk management actions to feed into NRC's financial planning (Long Term Plan). Phase 4: Develop strategic policy direction to help NRC prioritise and coordinate ongoing investment in flood risk reduction activities for communities.	Phase 1 complete. Currently working on phase 2 - developing relevant and targeted flood management actions for each catchment. Have already identified a number of actions for which business cases have been developed and funding is being sought though NRC's Long Term Plan: • 12 structural flood management projects at various scales and stages of implementation • Marae flood resilience programme for 35 flood-affected marae • Additional staff to lead hapu engagement across the climate action, Rivers and CDEM teams • Support for community adaptation planning with district councils • Scoping investigations for a second flood early warning system	NRC (rate payers) may not be able to afford to fund all actions. Flood adaptation and mitigation works tend to be funded mainly from targeted rates – which some communities cannot afford. The highest priority action for funding support is for flood risk reduction assessments and works for marae and communities (e.g. Whirinaki, Punuruku, Matangirau and Kaeo) at high risk of flooding. Estimated $7.2m cost, current funding approximately $2m (NRC and FNDC), require additional $5.2m. Other priority actions are addressed above in the priority actions for building whānau and community resilience:	High

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
		• Radar storm tracking and nowcasting to support during-event responses; and • A flood/tide predictive model for the Northern Wairoa/Dargaville.	• Develop an online interactive online platform showing areas impacted by natural hazards (*refer action 13 above)* • Develop a Matauranga Māori early warning system (*refer action 24 above)*	
	NRC to continue to operate and maintain **flood protection schemes** - Awanui, Kāeo-Whangaroa, Whangārei, Panguru, Kawakawa, and Otiria-Moerewa.	All funded.	No additional action needed	Low
	District councils continue to operate and maintain **land drainage networks.**	Kaipara DC - new or replacement embankments are needed, and drainage improvements required in vulnerable areas – progress delayed by the rains of past 18 months.	Additional flood modelling of Kaipara land drainage networks.	Medium
Three waters (stormwater, drinking water and wastewater) District councils 'Entity A' (3 Waters)	Explore improvements to three waters network resilience to address reduced network performance during weather events and to reduce risk of damage to infrastructure.	Councils considering options for improving network resilience as part of their Long Term Plan planning.	No additional action needed at this time	Low (for now)

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
Climate change adaptation Councils	Northland councils have their own **climate change strategies**, which address emissions reductions and climate change adaptation. The **Te Tai Tokerau Climate Adaptation Strategy** (joint Northland council strategy) focusses on adaptation. Includes actions to: • Grow relationships • Improve knowledge and understanding • Reduce risk and vulnerability • Build capacity	Te Tai Tokerau Climate Adaptation Strategy adopted, some actions commencing. Funding not secured to deliver all aspects of strategy (though each council going through processes to secure additional budget).	Highest priority adaptation planning work is to fast track tangata whenua led climate change adaptation planning and solutions – *refer action 15 above.*	High
Business resilience Northland Inc NRC MBIE	Building understanding and awareness of **resilience with businesses.**	Northland Inc are developing and implementing a $0.5m programme to advise businesses on how to increase their resilience. NRC is leading a programme to help farmers improve their business continuity planning.	Explore upscaling these programmes.	Medium
Other	Provide further support to the **Nga Manga Atawhai** project – a multi-agency/group project to remove trees that fell in the cyclone from under power lines, alongside roads and in rivers. Trees recycled in firewood and chippings to improve soil conditions which improve flood resilience.	One project, led by Te Roroa, underway. Supported by $1m of MPI funding.	An additional $5.5m / 2 yrs. Aiming to be self-sustaining after that.	High
	Provide support funding to establish a **Northland Multi Agency Coordination Centre** to better enable emergency services	The four Northland councils have jointly committed a total of $6.533m. Shortfall of $1.037m remains.	Funding for the $1.037m shortfall.	High

Sector	Key actions for resilience	Status	Further action/support needed?	Priority for help
	and others to coordinate efficient and effective responses to events in Northland.			