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Natural Hazards Resilience & Adaptation Forum

Thursday 5 September 2024, 10.30am-12.30pm



Agenda

1. Welcomes & intros
2. Climate Resilience & Adaptation Things s 7(2)(f)(ii) – Protection of public officials
3. Levels of service for open space and natural hazards s 7(2)(f)(ii) – Protection of public officials
4. T&T's summary of 21st June Forum workshop s 7(2)(f)(ii) – Protect
5. Review T&T's suggested next steps for the *Tauranga City Risk & Vulnerability Assessment*
6. Talking about our changing climate s 7(2)(f)(ii) – Protection of public offic
7. Roundtable updates
8. ~~NZ Government's Finance & Expenditure Committee report on Inquiry into climate adaptation (delayed until 1 Oct)~~
9. Ministry for the Environment's *Summary Report on Adaptation Preparedness: 2024 update*

Background

Building climate resilience

Where are we now?

Climate change is predicted to increase the frequency, intensity, and duration of extreme weather events such as floods, storms, and drought. These events affect our assets, operations, emergency response capacity – and show that we must adapt to the effects of climate change. Even services as cutting the grass and maintaining a dog pound will be affected by a changing climate.

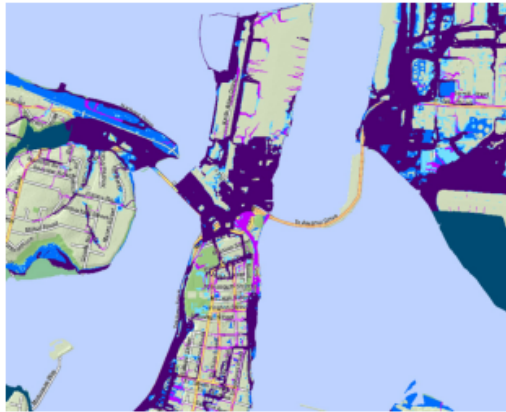
Through the Tauranga City Natural Hazards Resilience Programme initiated in 2019, TCC understands the risks to certain key infrastructure including critical assets in Tauranga City's three waters network, transportation network and selected bridges. Some projects to increase the resilience of high-risk infrastructure have already been factored into the 2024 LTP.

Further work has been identified as crucial to develop robust adaptation options and pathways for increased resilience across TCC's assets and activities. TCC therefore recently performed a pilot risk exposure assessment of key property assets (approx. 50 assets, incl. BVL) and activities. The purpose was to develop a test methodology that could be used across the council together with the Tauranga City Natural Hazards Resilience Programme.

In a worst-case future scenario, the results showed that:

- 9 assets are exposed to coastal inundation risk
- 2 assets are exposed to landslide hazards and coastal erosion
- 45 assets are exposed to groundwater hazards
- 24 assets are exposed to possible liquefaction damage
- 6 risks have been rated as 'critical' to the Property team's activity area, such as increased temperature extremes

The image to the right shows a flood map of Tauranga CBD based on a 2130 scenario rainfall (purple = major flow path).



Where do we want to be?

TCC is a resilient organisation where climate risks are considered in decisions and service delivery.

What are the gaps?

To build resilience across Council operations, assessments of additional assets groups and activity areas and development of mitigation actions will be needed. Today, TCC does not have a consistent approach to assess climate risks, neither in projects nor in TCC's corporate risk processes.

In January 2023, the Government launched mandatory climate reporting requirements for a range of public and private sector organisations – the Climate-related Disclosure (CRD) regime. The CRD regime requires organisations to analyse and report on how they will be affected by climate change.

Although TCC is not yet directly covered by the regime, there is value in aligning our climate risk assessments and reporting with the CDR standards. External stakeholders such as LGFA have already started requesting CRD information from TCC, which is why we propose that TCC works towards the goal of becoming an early adopter of the regime. The below actions will help us towards that goal.

	#	Action	Owner	Timeframe ²
Risk identification and assessment	B1	Identify which assets are exposed to climate risks and natural hazards, complementing the Infrastructure Resilience programme, such as parks, reserves, and waste infrastructure.	Asset Services, Sustainability	Short term
	B2	Identify existing and upcoming transition risks ³ and opportunities and assess their operational and financial impact to TCC (as required by the CRD regime).	Sustainability, Finance	Short term
	B3	Explore the potential impacts by conducting scenario analysis for the identified physical and transition risks to test and evaluate TCC's operational resilience (as required by the CRD regime).	Sustainability, Finance, Risk	Medium term
	B4	Update TCC's Risk Management Framework and processes to include climate risks.	Sustainability, Risk	Short term
	B5	Establish an internal forum or working group to develop and foster consistent best practice natural hazards, climate risks, and resilience management across the organisation.	Sustainability	Immediate

Climate Resilience and Adaptation Thing

Tauranga is prone to natural hazards

- We are located on the coast with many areas potentially exposed to erosion and flooding.
- There are many steep slopes made up of rocks and soil that may be prone to slips and landslides.
- There are active faultlines nearby to the west and southeast.
- Several active and dormant volcanic centres are nearby (Okataina, Whakaari/White Island, Tuhua/Mayor Island).
- We are on one potential path of tropical cyclones tracking south from the Pacific islands.

The natural hazard landscape in Tauranga will change as projected future climate is expected to result in a warmer city with more intense storms.





RPS

- **Climate Change Integration:** including land use planning, infrastructure development, and resource management.
- **Risk Identification and Management:** considering both current and future scenarios due to climate change.
- **Adaptation Strategies:** manage the impacts of climate change and natural hazards, ensuring community resilience and long-term sustainability.
- **Collaboration and Coordination**
- **Public Awareness and Education:** community participation and preparedness.
- **Policy Implementation and Monitoring**



IMPLEMENTING ADAPTATION STRATEGIES

1. Risk Assessment and Mapping

2. Incorporation into Planning

3. Community Engagement and Education

4. Infrastructure Resilience

1. Invest in resilient infrastructure that can withstand extreme weather events and other climate impacts.
2. Retrofit or redesign existing infrastructure, such as stormwater systems and coastal defenses, to better manage climate risks.

5. Natural Defenses and Ecosystem Management

1. Protect and enhance natural buffers like wetlands, forests, and dunes that provide resilience against climate impacts.
2. Implement nature-based solutions, such as restoring ecosystems to reduce vulnerability to natural hazards.

6. Monitoring and Review

7. Collaboration and Partnerships

8. Emergency Preparedness



CAIP & ADAPTATION

- 1. Strengthen Infrastructure:** water systems and other critical infrastructure to handle increased rainfall and rising sea levels.
- 2. Protect Coastal Areas:** coastal protection measures, including sea walls, dune restoration, and managed retreat.
- 3. Resilient Urban Planning:** developments need to be designed to withstand extreme weather events and avoid high-risk zones.
- 4. Restore Ecosystems:** Enhance wetlands and forests to act as natural buffers against climate impacts and support biodiversity.
- 5. Engage Community:** Promote sustainable practices and involve the community in climate adaptation efforts, ensuring support for vulnerable populations.

Risk and Vulnerability assessment

- So what's next?



What do we have & is there alignment?

- Coastal Structures Policy
- IDC – DxV?
- Emergency Management Plans?
- Reserve Management?
- CAIP but how..?
- And?





Is there more we need to do?

How do we to proactively manage climate risks and build resilience?

How do we guide organisational actions ensuring alignment with existing policies and enhance our community's ability to adapt and thrive in the face of climate change while taking advantage of any opportunities available to us?

Climate Resilience and Adaptation Thing





- **Purpose:**

Essential for guiding TCC's actions and decisions on managing climate risks and building resilience.

- **Vision and Objectives:**

Clear vision for reducing vulnerability, ensuring sustainable infrastructure, and fostering community resilience.

- **Scope and Applicability:**

Covers all departments and stakeholders, focusing on risks like flooding, sea-level rise, and storm surges.

- **Guiding Principles:**

Core principles include sustainability, community engagement, transparency, and evidence-based planning.

- **Review & Integration with Existing Policies and Plans:**

Aligns with policies like the Infrastructure Development Code, Coastal Structures, Landslide Response Policy, Reserves Policy (stormwater) and City Plan – sets regulatory framework.



- **National Direction and Legal Precedents:**
Adheres to frameworks such as the Resource Management Act 1991, Local Government Act 2002, and Climate Change Response (Zero Carbon) Amendment Act 2019.
- **Risk Assessment and Management:**
Structured approach for identifying, evaluating, and mitigating climate risks, including stormwater impacts.
- **Resilience and Adaptation Actions:**
Includes infrastructure upgrades, nature-based solutions, and community education initiatives.
PARA – protect, accommodate, retreat & avoid?
- **Response to Natural Hazards and Events:**
Guidelines for preparedness, response, recovery, and long-term resilience.
- **Implementation and Monitoring:**
Details on timelines, responsibilities, resources, and progress monitoring.
- **Stakeholder Engagement and Collaboration:**
Emphasises collaboration with regional councils, central government, iwi, and community groups.
- **Communication and Reporting:**
Plan for transparent communication and reporting on progress and adaptation measures.

Guiding Our Actions

- **Unified Direction:** Aligns all activities with a clear approach to risk and resilience.
- **Informed Decision-Making:** Framework for decisions based on principles and risk assessments.
- **Integrated Approach:** Coordinates related policies for enhanced efficiency.
- **Adaptive Management:** Allows for adjustments based on new information and evolving risks.
- **Community Focus/Lead:** Ensures actions are responsive to community needs and concerns.

Thank
you





Levels of service for open space and natural hazards

s 7(2)(f)(ii) – Protection of public officials

Natural Hazards and Resilience Forum



Purpose of item

- We are reviewing our policies on what open space we provide to our community and will accept from developers
- We want to ensure all business groups with an interest are aware of this work and can feed into the advice and options to the council committee
- We want you to consider if any research/mapping we do for this is useful for your team in other ways

Open space acquisition

- At present our policy is silent on whether we should accept land with natural hazards **although landform and topography can be considered*
- At present open space needs to perform certain functions for us to accept it (play space, kick about space, amenity like walkways etc) which means highly constrained land likely won't fit what we normally accept (eg, steep slopes, pure stormwater reserves)
- There is a discretion for council to accept land that isn't needed regardless of this (generally we won't pay for it)

Setting a position

- This discretion can make it difficult for staff who have to decide whether or not to accept this land
- There are often competing trade offs – more land for biodiversity and open space, versus potential maintenance costs and liability consideration with managing the hazards
- Developers have generally wanted council to accept constrained land so it is not on property titles and therefore less likely to deter buyers.
- However council owning the land limits what adjacent private property owners can do to minimise the risk of the hazard on their property (eg building structures). Although some natural management by council may still occur (planting vegetation on slopes, restoring coastal dunes).

Existing open space functionality

- As climate change progresses impacts may mean some existing spaces can not perform their intended open space function (eg as a sportsfield, a playground, a walkway or place to kick a ball)
- Need to consider the impact this will have on the open space network and how this may impact open space provision over different time horizons
- This will inform positions on open space provision, as currently we have a “make the most of what we have approach” to existing areas
- Noting climate change may just change the function of the space (eg from walkway to wetland) so may result in the same amount of open space but different functionality also there may be open space acquisition opportunities on land where managed retreat occurs following climate events which increase open space

Background research mapping

- To inform this issue we are getting a risk assessment done by T&T
- It will look at spaces performing an open space function now (so not all stormwater just those with dual open space function)
- It will map these spaces against all the BOPRC hazards over several timeframes
- The we will use an internal group to assess impacts of the hazards on the spaces ability to meet their function (eg as a sportsfield, a playground, a walkway or place to kick a ball)
- It will produce information on spaces that might not be able to perform their functions over different time horizons to inform the review of what level of service we offer

Timeframe

- We are in the process of scoping the risk assessment of our spaces and place with T&T (this is expected to take roughly a month from when it is started)
- Once we have the analysis we will hold workshops to work through options on responding to climate impact on the level of service we provide
- The issues and options paper for the review will go to a committee in April next year

Getting involved

- For those not already involved if you would like to be involved any or all of these activities please get in touch:
- The T&T scope for the risk assessment
- The risk assessment workshop
- The policy options workshop

Risk & Vulnerability Assessment

T&T

T&T's summary of Forum's 21st June workshop

Attendees agreed that they could see value in:

- a) a pilot geospatial physical risk assessment
 - b) a non-spatial physical risk assessment, similar to that undertaken for the Property team last year – as it can be useful to support the request for monetary investment.
- There was discussion around the 'implementation' of the risk work, and the need to extend into actions/responses.
 - Regarding **vulnerability**: Undertaking a place-based assessment to determine communities that are high-risk or vulnerable (based on agreed indicators – eg age & deprivation level), would be helpful for the emergency management team, and they could utilise information to determine where to locate the community emergency hubs. This assessment would also assist other teams to develop programmes to enhance community 'connectiveness' within the identified areas.
 - It was noted that the TCC infrastructure criticality assessment is currently based on the population the infrastructure serves. This assessment could be expanded by considering the 'social vulnerability' of areas.

Suggested next possible steps	Responds to CIAP action
<p>Physical, non-spatial risk assessment: -</p> <p>Including risk identification, and risk rating to develop a risk workbook - for the other TCC teams (starting with the Parks and Reserves team?)</p> <p>To include all hazards, including flooding, extreme weather, coastal, heat, humidity drought, fire, groundwater etc.</p>	<p>Responds to Action 36:</p>
<p>GIS exposure and vulnerability analysis, and map preparation:</p> <p>Mapping would relate to spatial hazards (flooding, coastal), and include those risk elements that a) haven't been mapped as yet, and b) are relevant to Council teams. These could include both Council-owned assets (eg property, community facilities, parks, networks, roads), and/or non-council assets (eg schools, GPs, marae etc).</p> <p>Additionally, we would assess and map social vulnerability of communities (based on agreed indicators).</p> <p>The scale at which vulnerability data is presented can be agreed – in response to Action 48, 'small communities' scale.</p>	<p>Responds to Action 1, 48 and also expands on Action 36.</p>
<p>For highly rated element-level risks, develop actions / responses:</p> <p>This would be an additional exercise, which we think would enable TCC to better appreciate the purpose and value of these assessments.</p>	<p>New</p>
<p>For highly rated place-based risks, develop adaptation plans.</p> <p>This may involve a range of potential responses, working with the emergency management team, planning team, etc.</p> <p>May lead to DAPP plans etc.</p>	<p>Responds to Action 48.</p>

s 7(2)(f)(ii) – Protection of public officials



Talking about our changing climate

s 7(2)(f)(ii) - Protection of public officials



Tauranga City

Council has a goal for Tauranga to be a low emissions and climate resilient city.

- We cannot achieve this goal alone.
- We need to build awareness and engage with our communities on our changing climate.
- We need to work with our communities to prepare through reducing emissions and increasing resilience.

Why we are doing this

- Central government has directed local authorities to help and work with communities to prepare for, and adapt to, the physical effects of climate change.
- Our communities are concerned about climate change.
- We need to help communities adapt their homes and businesses to be more climate resilient.
- The main action of the CAIP is to develop behaviour change and communication programmes to outline steps Council is taking to reduce emissions, provide education programmes within schools, and introduce tools to help the community on their own climate journey.

Climate communication needs to connect with people at the level of values and emotions

- **Year 1 (starts late 24) Tell good stories** - we will share sustainability stories from council with the community, how it works towards our climate goals.
- **Year 2 (starts Jul 25) Share information** - we will raise community awareness about our changing climate in Tauranga, including what it will look like, when it will happen, who will be most impacted.
- **Year 3 (Jun 26 – onwards) Take action** - we will launch a programme supporting our community to adopt low carbon (mitigation) and resilient behaviours, talk to our residents about solutions to climate impacts and develop adaptation plans for vulnerable communities,

How we will share

- Develop a toolbox of collateral, key messages with a consistent look that can be used across the Council.
- We will share how Council projects are part of our climate response, including badges to showcase how projects are meeting our climate commitments.
- We will use a range of communication channels (including online, social media, digital, print and engagement) to reach our residents across the city, making sure our residents feel empowered to take action and that they have information on how to turn concern into action.
- Key messages may include:
 - Together we are reducing our emissions for a better tomorrow
 - Together we are preparing our city for a changing climate
 - Every action matters
 - We can all make a difference, no matter how small.

Roundtable Updates

MfE

Ministry for the
Environment

Summary Report
on Adaptation
Preparedness

2024 update



**Adaptation preparedness:
2024 update**

Executive summary

Introduction

- Purpose of the information request
- What we requested
- Organisations subject to the 2024 request
- Response analysis

Trends

- Changes in response rate
- Changes in adaptation preparedness

Adaptation preparedness in 2024

- Is your organisation aware of the impacts that climate change may have on its ability to carry out functions and deliver services?
- Does your organisation have access to data related to the impacts from climate change?
- Has your organisation assessed its exposure to climate change impacts, in terms of its ability to continue to carry out functions and deliver services?
- Has your organisation assessed its vulnerability to climate change impacts, in terms of its ability to continue to carry out functions and deliver services?
- Does your organisation have a plan or strategy to improve its resilience and/or the resilience of the community it serves to climate change impacts?
- Does your organisation have any indicators or measures to help it monitor and manage its risks for climate change impacts?
- Are risks to your organisation's ability to carry out functions and deliver services from the impacts of climate change reported to your organisation's governance board?
- Does your organisation require the impacts of climate change, and adaptation options to address these impacts, to be assessed and considered in decision-making?
- Which actions or resources would help your organisation to better prepare for the impacts of climate change?
- What are the barriers to an effective adaptation response that are faced by your organisation?
- Impacts of risks from the National Climate Change Risk Assessment

Appendix 1: Climate Change Response (Zero Carbon) Amendment Act 2019, sections 5ZW and 5ZX

Appendix 2: Copy of climate change adaptation reporting information request

Executive summary

The Climate Change Response (Zero Carbon) Amendment Act 2019 allows the Minister of Climate Change and the Climate Change Commission to request information on how organisations that provide essential services are preparing for the impacts of climate change.

In 2020, the Ministry for the Environment made an initial request for information, to set a baseline against which the effectiveness of adaptation actions to prepare for the impacts of climate change can be measured. A second request for information was made in 2024, to review changes in adaptation preparedness since the 2020 baseline request.

Key trends of organisations that reported in 2020 and 2024 are included below, as are the key findings from the 2024 responses.

Key trends

Cross comparison of results and response rates between the 2020 baseline request and 2024 request suggests **an overall increase in climate adaptation preparedness**.

In 2024, information was requested from fewer organisations and the response rate increased by nearly two-thirds. This was observed across all types of reporting organisations.

Increases in adaptation preparedness were particularly observed when directly comparing the responses of organisations that submitted to both the 2020 baseline and 2024 information requests. The following findings suggest an improvement in these capabilities.¹

Risks and impacts

- **Increases in awareness and documentation of climate change impacts.** In 2024, slightly more organisations indicated that climate change impacts are either well or partially understood and documented.
- **Increases in access to data on regional climate change impacts.** Many more organisations report having access to data at a regional, local and asset level.
- **More understanding of vulnerability and exposure to climate change risks.** Many more organisations have access to exposure data for some or all climate change impacts, and moderately more organisations are now undertaking some form of vulnerability assessment.

Strategy, government and metrics

- **More organisations have a strategy or plan in place to adapt to the impacts of climate change.** Many more organisations have some kind of strategy or plan in place to improve resilience to risks.
- **More organisations are considering the use of indicators and measures to monitor and manage climate risks.** Many more organisations have indicators or measures in place or under development.
- **Climate change impacts are being reported to governance boards more frequently and are being considered more in decision-making processes.** Moderately more organisations report these impacts more than once annually and consider these impacts in decision-making for some or all projects.

Priority actions and resources, and barriers to climate adaptation

- Priority actions and resources varied slightly between information requests, while barriers to effective adaptation action remained the same. *Funding to implement a strategy and deliver on-the-ground adaptation actions* was the most selected resource in 2024, whereas *Tools to help quantify impacts from climate change on your organisation* was the most selected in 2020. Despite this difference, both options were within the top three most selected resources in both requests.
- Responses from organisations to both requests indicated *that lack of awareness and education among decision-makers and the wider community about climate change impacts* was the greatest barrier to adaptation action.

Significant climate risks of importance to organisations

- **Organisations in both information requests had similar risks of concern, although they were ranked differently.** In 2024, *E1 (risks to governments from economic costs)* was the most selected risk of concern, and it was selected the second most frequently in 2020. In 2020, *B2 (risks to buildings)* was the most selected risk of concern, but it was the second highest risk of concern in 2024.

Closing karakia

Ka whakairia te tapu

Ka wātea ai te ara

Kia turuki whakataha ai

Kia turuki whakataha ai

Haumi ē, hui ē, tāiki ē!

Restrictions are moved aside

So the pathway is clear

To return to everyday activities

Enriched and unified.

Together, we agree!