



# Innovations for Climate Adaptation

**Interim report:  
Summary of adaptation initiatives by  
local government research partners**

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Centre for Sustainability  
Kā Rakahau o Te Ao Tūroa



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# INNOVATIONS FOR CLIMATE ADAPTATION

## INTERIM REPORT: SUMMARY OF ADAPTATION INITIATIVES BY LOCAL GOVERNMENT RESEARCH PARTNERS

### Summary | Kōrero whakarāpopoto

Climate change adaptation is an unprecedented challenge for decision-making at governance and management levels for local authorities and other groups. This interim report provides a summary of emerging themes one year into the *'Innovations for Climate Adaptation'* research, focusing on Council staff experiences and perspectives. It draws on semi-structured interview data from Council staff in Otago, Taranaki, and Bay of Plenty, and is designed to be read in conjunction with the report titled *'Summary of adaptation initiatives by Māori research partners'*.

Our findings show that Council staff have been undertaking and implementing various actions to reorganise Council practices and processes for climate response. Our findings identify the following key shifts:

- Using carbon accounting to inform mitigation actions that connect across internal Council teams and processes, resulting in new business cases for climate response in annual and long-term plans
- Shifts towards increased cross-Council collaboration and coordination at regional levels as part of climate change risk assessments and adaptation planning
- Internal reorganising within Councils to embed climate change considerations across decisions and valuing a wider range of knowledge and skills to inform these processes
- Increasing recognition of the need to resource mana whenua and community-led projects and processes for climate response.

These shifts show evidence of both 'just' (considering equity) and 'robust' (incorporating a wider range of knowledge) considerations in climate response. While these shifts may seem small or tentative, they provide important evidence and examples to build on as New Zealand continues to collectively navigate climate response.

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## Introduction | He timatanga

Climate change adaptation is an unprecedented challenge for decision-making at governance and management levels for Councils and other groups. Councils need to adapt both internally (e.g. funding and infrastructure decisions, capacity and capability, planning and strategy) and externally (e.g. engagement, collaborative decision-making, new partnerships). Underpinning these factors is the need for place-based communities to jointly understand climate change within the context of historical resource loss, particularly in relation to land and people brought about through colonisation and urbanisation. There is a need for clarity on roles, responsibilities and relationships Council's have with mana whenua within a Te Tiriti o Waitangi/Treaty of Waitangi context as they jointly address climate change challenges.

The '*Innovations for Climate Adaptation*' research tracks changes in practices and experiments across mana whenua and local authorities in three case study areas over two years. This interim report focuses on Council staff experiences and perspectives relating to climate response<sup>1</sup>.

## Research methodology | Tikanga rangahau

This research used a qualitative case study and Kaupapa Māori research approaches. Mana whenua, territorial authorities, and regional councils in three case study areas are the key research partners and include:

- *Taranaki region*: Ngaa Rauru Kiitahi (iwi); South Taranaki District Council, New Plymouth District Council, Taranaki Regional Council
- *Bay of Plenty region*: Rereatukahia (kāinga); Maketu iwi led by Ngāti Whakae; Bay of Plenty Regional Council, Western Bay of Plenty District Council
- *Otago region*: Aukaha (Kāi Tahu consultancy), Dunedin City Council, Otago Regional Council

In addition to these case study regions, the research team engaged with other regions and organisations, including Waikato Regional Council, Whanganui District Council, and Te Ruunanga o Tuupoho (representing ngā hapū o Tuupoho). The three case study regions face different climate change impacts and are at various stages in their climate response.

The remainder of this report summarises findings from two rounds of interviews completed in August-September 2022, and March-June 2023<sup>2</sup> with Council staff. Qualitative methods were used to understand Council staff concerns, challenges and their climate response actions.

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<sup>1</sup> While climate change action is often differentiated into adaptation and mitigation, in this report we talk more about climate response, to reflect the shifts we're seeing in many communities where mitigation and adaptation are understood as connected.

<sup>2</sup> Some interviews were undertaken with the same Council staff participant each time, while others involved different participants in the second round of interviews as first round participants had either changed their roles, left Council, or were unable to continue. Over 40 interviews were undertaken across round one and two. For the Interview two round, four of the original participants had either left their role/Council and new participants were identified, and one participant no longer wished to be involved.

## Interim Findings | Ngā otinga hukihuki

### Council Staff Experiences and Perspectives

An overarching theme that emerged through interviews is the significant challenges posed by the interconnected climate and biodiversity crisis, and the extent of societal transformation needed in response (see Reynolds, 2023). Council participants described how the transformation required extends beyond the mandated legislative roles, activities and regulatory functions of local government, and importantly – their resourcing. Consequently, many Council participants saw their role as helping to enable and influence some of these shifts, but with limited ability or levers to lead them. While participants expressed the challenges associated with transformation in different ways, they were generally grappling with how to start facilitating these (often) social changes within their organisations, while still operating within existing legislation, governance, and work cultures.

Two other broad themes emerged from interviews. Firstly, most Council participants described a decreasing amount of climate change denialism amongst elected members and the communities they work with. Participants noted that the increasing frequency and severity of extreme weather events (primarily flooding and Cyclone Gabrielle in 2023) meant that they were spending less time trying to convince and justify the importance of taking climate change action to elected members and their communities. All participants noted that while tragic, Cyclone Gabrielle and the extreme flooding in the North Island in early 2023 had already, and will likely provide even greater public acceptance of, and demand for, climate response. Secondly, most participants were concerned about shifts by the Labour Government away from mitigation actions in early 2023. Examples included; delaying the container deposit return scheme, limited investment in public transport, and shifting emphasis away from waste reduction and management. Participants argued that mitigation was still vitally important and needed to be prioritised alongside adaptation.

### Challenges to climate response

Participants described a range of challenges facing local government that reflect other commentary and research (see Review into the Future for Local Government, 2022; Local Government New Zealand, 2020; Hanna et al., 2022; Stephenson et al. 2020; Reynolds, 2023). In what follows we describe these challenges in separate paragraphs. However, participants noted how these challenges interact and compound, so they should not be viewed in isolation.

#### *Lack of clarity on roles and responsibilities*

All participants described a lack of clarity in relation to the role and expectations of local government for climate response (see Hanna et al., 2022). Some participants felt that this lack of clarity was particularly problematic for mitigation, given Councils have few levers to influence wider infrastructure investment that shapes mitigation for the largest proportion of New Zealand's greenhouse gas emissions. This lack of clarity can contribute to unrealistic community expectations about what local authorities can lead, fund, and implement. For example, in relation to mitigating transport emissions and promoting transport mode shift, Council participants said;

*'I look at things like the need to reduce transport emissions and understanding how important that is and then going "well, nationally our capital works program is 97% into roads, 3% into walkways and cycleways". And I'm not sure what percentage goes into public transport, but I imagine not very much. So... how [can] us as a council, 55,000 people largely*

*rural, I don't see us leading in the transport emissions reduction space... Because that's virtually an impossible thing, from my point of view, to ask the ratepayers to front up and be totally redoing how your transport networks work at a local level when there's no capital, there's no national level funding for that'* (District Council Participant E).

*'We have a lot of people with very high expectations of us to help do emissions reduction in the community, but we don't actually have any levers for that politically, financially. We can't do material changes like installing EV charging stations or subsidise e-bikes and stuff, that would be difficult to get a mandate for'* (District Council Participant H).

Some participants noted that there had been some recent national guidance on the role Council's play in managing climate change risks and hazards relating to flood management, water resources, planning, and building regulations (see Ministry for the Environment, 2021; Ministry for the Environment, 2022). However, others suggested there is still uncertainty about whether and how Council's should be intervening to increase resilience or reduce risk, particularly when granting resource consents, implementing plan changes, and working across governance boundaries. For example;

*'[W]e've still got people trying to apply for resource consents to build new houses [in unsuitable areas], so it's an ongoing challenge. Especially some of the people wanting to build them, they don't need a mortgage, they are not fazed by the insurance implications, they just want to do it anyway'* (District Council Participant G).

*'We're still getting requests for building and resource consents right on the edge of cliffs in the coastal zone and stuff... and at the moment based on our plan rules, some of them we have to approve because we legally can't not approve them'* (District Council Participant C).

*'Where we intervene to increase resilience or reduce risk with the community, that's the bit which I think is not clear - who does that, who leads that?'* (Regional Council Participant D).

*'We're seeing a lot of commissioner decisions that just ignore climate elements, which is incredibly frustrating. Again not just in developments and flood plains but developments that perpetuate communities reliance on high carbon lifestyles, in that the transport connections just aren't there so they're car dominated'* (Regional Council Participant A).

All participants noted that they were waiting on further legislation, specifically the proposed Climate Adaptation Act to clarify Council's roles and responsibilities and broader public expectations about processes and how costs will be allocated for managed retreat of private property and Council owned infrastructure<sup>3</sup>. For example;

*'Listening to communities but again making what we think is the best overall long-term decision and that's a real challenge especially when you haven't really got a legislative backing to say, "well actually, I can't point to a statute that says [we have] this responsibility, these powers". We can lean on certain things, but there's nothing that gives you absolute certainty that we have a role to play and can be directive and make decisions'* (Regional Council Participant K).

*'[O]ne of the huge elephants in the room at the moment is who funds adaptation work... The government come out with a National Adaptation Plan which is just a plan of plans. And it*

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<sup>3</sup> Since interviewing, a change of Government in late 2023 has put the proposed Climate Adaptation Act in question and the two companion Acts that were to replace the RMA have been repealed.

*says in there we need to share the funding between local and central government and others. But there's no detail about how that's actually financed, or funded. And so local government is funded by rates pretty much, we have a really small population here, really large area. We are never going to have enough money to keep the lights on and do huge multigenerational scale work that needs to be done on climate change adaptation... I'm doing what I can do on really tiny budgets that are scrounged from rates' (District Council Participant C).*

*'[A] challenge is funding because in this instance there's an assumption that the six most vulnerable houses are going to be demolished or removed. And even just the cost of that – they're old [with] likely asbestos... It's really expensive to do that' (District Council Participant H).*

*'We have another issue with a slip on one of our residential streets which backs onto reserve land. That's been widely covered in the press and... elected members are treading extremely carefully... [W]e need some national direction... rather than each individual council seeking their own legal advice' (District Council Participant H).*

Participants described how the current lack of legislative clarity is already playing out in everyday decisions relating to resource and building consents, monitoring and enforcement. For example, one Council officer noted how it affected funding priority decisions, “if a drain breaks, if in a road there’s a pothole, you need someone to go and fill it, it’s really linear, it’s easy, .... Whereas, this stuff is all discretionary if you like, and the costs are much more hidden and they’re generally longer term” (District Council Participant J). In another example, participants described how a seawall or piece of infrastructure might be damaged in a storm event, and some people in a community want Council to either fund or enforce rebuilding, but this may be maladaptive in the long term. Participants noted that they are already having to negotiate these complex situations and anticipate these increasing.

### *Capacity and Resources*

Participants also described the challenge of working within institutional Council cultures that need transforming for climate response. Most participants described an aspiration to factor climate change into all decisions across Council, for example; three waters, transport infrastructure, landuse and development, and social services. However, this integration challenges many existing processes and practices, particularly in some councils characterised by silos and strong disciplinary knowledges. Participants described how some Council asset managers had only recently shifted to including climate modelling in three waters infrastructure planning, and debates about how to integrate climate change into decision making being escalated to senior leadership and chief executives to establish and enforce new processes. Other participants described discussions within their organisations about whether climate change should have a new dedicated decision making committee (with associated resourcing), or be woven into existing decision making committees. The extent to which these shifts pose a challenge depend partially on the respective Council and leadership, but the examples highlight the extent climate response challenges existing Council structures and processes.

Participants noted that even when climate response is funded, this work may not be implemented due to staff and skills shortages. Most participants described difficulty recruiting and retaining appropriately skilled staff. They noted that climate response is a relatively new area of expertise, inherently inter-disciplinary, and they are currently operating with staff shortages (c.f. Fitzgerald and the Aotearoa Climate Adaptation Network, 2022). For example;

*'Adaptation planning isn't a thing that's at university yet' (District Council Participant H).*



*'We have some really talented engineers in the council... really talented planners, but they're few and far between when it comes to experience and the information, and also the implementation of adaptation. We don't have existing frameworks within council for how to do this work at a local scale, so we are relying on information coming from central government'* (District Council Participant G).

*'[We] have had a reasonably high level of [staff] turnover in the last few years, and coupled with that, we have had some external things. The Ministry for the Environment has up-sized significantly and has taken policy and science staff from all over the country'* (Regional Council Participant J).

*'[C]apacity... is by far our biggest challenge'* (Regional Council Participant B).

These staffing and skills shortages then affect work plans, ability to deliver on plans and use budgets, while also contributing to existing staff burnout:

*'It's a crazy work program [for] local government at the moment, and adaptation is just one part of that'* (District Council Participant G).

*'I think the biggest challenge is that it's a highly dynamic area to be working in, because it's new for councils relatively speaking. Our teams have been considering natural hazards for ever, but we're being asked to project out now. And we have RMA reform, we have local government review... Three Waters reform as well, which is huge'* (District Council Participant F).

*'[E]verybody I know is burned out... And the reform... I mean [it's] multigenerational level reform that is happening over the top of BAU. Plus increases [in] extreme events that we have to respond to because you know councils are first responders for civil defence and emergency events. Yeah... it's kind of madness at the moment'* (District Council Participant C).

#### *Te Tiriti, partnership and cultural acumen*

Finally, participants described challenges associated with engaging and resourcing iwi and hapū to respond to climate change in ways that supported their aspirations. While council participants expressed relationships with mana whenua in different ways, many noted that mana whenua groups and representatives were even more stretched than Councils. Participants tended to view increasing levels of partnership and co-governance with mana whenua as desirable and appropriate, but some noted that they lacked the cultural acumen within the Council. For example, one Council participant noted that *'a lot of staff don't know how to engage with mana whenua or what partnership means or what it means for their job'* (District Council Participant K). Council participants were cognisant of how challenging this is for both mana whenua groups and council staff at present, in terms of building capability, resourcing capacity and working within the structures of local and central government. For example;

*'Yeah, they're [mana whenua] totally overstretched and it's a big concern I have actually going forward with local government reform [Three Waters] and the RMA reform... [A]ll of the reform that's happening, it's all very heavily focused on co-governance and enabling [iwi] to be right in at the ground level on those work programs, but also at a governance level. And that's really cool, but actually, those people don't necessarily exist in those numbers'* (District Council Participant C).

*'So [our] climate change strategy itself was written in collaboration [with mana whenua], but beyond the strategy and the actual implementation, how do we actually work together?' (District Council Participant A).*

*'We have lots of Council rigmarole to get round, and all the Councillors are different. Everyone gets different opinions and feelings about how that [genuine Treaty partnership] might roll' (District Council Participant K).*

*'The concept of co-governance is an issue that I think councils across the country are wrestling with. What is it? How do you implement it? Do residents support it?' (District Council Participant B)*

*'With [one project with local marae that was part of the Government's covid response] ... we were actually confined by the Government processes ... we were fast-tracked through a funding process ...we had a content rich two page expression of interest [and then] we were meant to go through a full application process. So we had mana whenua endorsement ..., turned up to a meeting, and we suddenly got [a significant grant] given to us, but we'd bypassed our full application process where you talk about roles and responsibility. I was afraid the Minister was actually going to announce it the next day. So, there was a bit of having to reverse engineer and kind of apologise' (Regional Council Participant H).*

The issues of meeting te Tiriti/Treaty obligations and responsibilities and cultural capability in local government goes well beyond responding to climate change. The above, particularly the last quote, highlights the complex structural constraints to giving effect to partnership working with mana whenua, given historically embedded institutional systems, local government's relationships with central government, legislation, the diverse and dynamic nature of elected councillors and constituents' expectations. These constraints often undermine and compromise the efforts of officers and senior managers in their working relationships with mana whenua. This is a highly contested space and there have been significant shifts in understanding of local government as a Treaty partner, as demonstrated in He Piki Tūranga, He Piki Kōtuku The Future for Local Government review (2023).

## How are Councils responding and what is working well

In what follows we describe new practices and shifts towards climate response that participants identified as having some benefits or positive outcomes. In the following sections we describe the new practice or shift, identified benefits or positive outcomes, and use illustrative examples.

### *Mitigation*

Participants described how carbon auditing is being used within Council's to inform mitigation actions which are then either funded, or ear-marked for funding through Councils' Long Term and Annual Plans or central government grants. These carbon audits partly reflect approaches taken in the Carbon Neutral Government Programme, although there are currently no regulations relating to actually reducing emissions (see Ministry for the Environment, 2022b). While the process differs across Councils, generally it has involved employing external consultants/auditors to evaluate each Council's operational emissions profile. In some cases this includes a district/region wide emissions profile, while in others, only emissions from activities Councils directly operate or manage<sup>4</sup>. The

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<sup>4</sup> Participants noted that there have been debates about what to include. For example, one question raised was whether emissions from sewage and landfill are included as these are essentially district/region wide emissions but are typically managed through Council's assets and processes.

emission profiles are then used to establish a base-line and identify and cost different mitigation actions. Participants noted that they have used emissions audits to identify 'low-hanging fruit' first; actions that could be taken to reduce the most emissions as quickly and cheaply as possible. Some of the actions don't require significant investment or lead times. For example, installing more efficient lighting in Council facilities, or internal staff initiatives like ride sharing, recycling, internal waste audits, composting on site. These kinds of actions can generally be managed as part of the BAU replacement of materials/infrastructure or new in-house initiatives. Other actions require more research, evaluation and funding. Participants described how some mitigation actions are now being tagged for funding through business cases in Long Term and Annual Plans or other funding sources. Examples of these kinds of mitigation actions include:

- Moving from gas powered infrastructure to electricity in Council facilities (like aquatic facilities)
- Electrifying Council vehicle fleets
- Feasibility studies into organic waste diversion infrastructure from landfill
- Large scale native planting and carbon offsetting on Council controlled/owned land
- Using nature based solutions and green/blue infrastructure to create carbon sinks.

**South Taranaki District Council are exploring the following mitigation actions:**

- Reforestation of 200 hectares across the district on Council-owned land over the next five years. This will include natives, non-native and non-wilding hardwoods (depending on the landscape and ecological context). Non-native species will be used to 'super charge' emissions sequestration and earn carbon credits which will then be used to fund further restoration and eventually transition forests back to native species over time.
- Waste reduction and processing options, especially for commercial organic material given the significance of agriculture in the district. This has included a jointly contracted feasibility study by multiple Council's for an organic composting plant in South Taranaki as there are currently no processing options to manage residential or commercial organic waste in the region. Part of this study included engagement with iwi who expressed a desire to not transport organic material out of their rohe.
- While water and wastewater treatment plants have been identified as significant GHG emissions sources, plans to address these sources are currently on hold due to uncertainties about Three Waters Reform (District Council Participants B, C and D).

Participants noted that Council's operational emissions are sometimes factors that they can influence and that it made both practical and ethical sense to start there. Participants emphasised the need to model mitigation (and adaptation) through their own internal actions first, before they encourage or require others to -*'council needs to get its own house in order first'* (District Council Participant A).

Participants described how carbon auditing has been used to encourage consideration of climate response across different teams within Councils, particularly when working with asset managers. In other words, carbon auditing provided a 'boundary object' to shift conversations and investments. Some participants described how one advantage of bringing in external consultants/auditors is that their knowledge is sometimes more 'respected' by colleagues and can result in more 'buy-in' for the transitions needed. Participants also described how feasibility studies and research into mitigation (such as organic waste diversion from landfill) created opportunities to work with mana whenua to understand how Council's operations could better align with tikanga on 'waste' and other matters.

In this way, the conversations and decisions that carbon auditing prompt can create opportunities for collaboration that includes a wider range of perspectives than before.

However, participants also cautioned that carbon auditing introduced new costs, and required new knowledge and skills that not all Councils (particularly smaller ones) had 'in-house', thereby requiring expensive external consultants. Some participants also noted that as auditing and consulting have become mainstreamed, they've become used to managing political risk whereby every decision requires external consultants' evaluations. Some participants noted that some mitigation decisions just need courageous leadership - both within Councils and beyond. For example;

*'[O]ur chief executive is really in that space of let's just do some things. He's not too worried about cost benefit analysis... He's pretty much just going we're going to electrify the fleet' (District Council Participant E).*

*'Well, actually maybe we don't need... another \$30,000 report. Maybe we just get on with building business cases for switching over some of the assets... Also, sometimes it's having the confidence to know that you do actually know things, because sometimes you'll find you're paying consultants to come in and you're like, well actually I know as much as you, it's just I don't have the title' (District Council Participant A).*

#### *Data, modelling and embedding climate change adaptation in decision making*

All participants described the important role downscaled climate projections, climate risk assessments and exposure screenings now play in Council processes. While the three case study regions are at different stages in their risk assessment processes, climate science data and downscaled climate projections are playing an important role in shifting Council's decision-making processes which are then increasingly being reflected through District and Regional plans, policies and rules, and infrastructure investment.

All three case study regions have either commissioned, or are in the process of working through downscaled climate change projections, associated risk assessments and exposure screenings from consultants. Often, this work is commissioned and led by the regional council in each area, and then shared with territorial authorities and others. Some territorial authorities are using the regional risk assessments to then inform more detailed assessments of specific infrastructure they manage, like roads and community facilities. Most participants understood these risk assessments as an important first step to gather data and help build a shared understanding of how climate change could impact landscapes, communities, and livelihoods. Some participants referred to these risk assessments as a 'resource for everyone' in their region, but had questions about how to use and communicate the information to communities. Some participants also described challenges in terms of data formats and spatial resolution, accessibility, and then integrating the data into decision making. For example;

*'Getting accurate data and projections for things like sea-level rise, 100 year flood zones. Some councils have really impressive map layers in their spatial plan. I think Northland is an example where you can look at the spatial plan for the entire region and click on layers for 10 year flood zone, 100 year flood zone. [We] would really like to be able to do something like that, but that's a lot of investment to get something like that developed. And having it done regionally would probably be more feasible for a small council like us... And it would just make sense to be using the same data sets and... the same layers across the region,*

*otherwise you could get some really confused residents who live on the border* (District Council Participant B).

To address data format and resolution challenges, some participants described how from the very start of their risk assessments they tried to ensure that the outputs from the process would be in a format that could fit with existing Council systems and processes (including GIS layers). For example;

*'What we really had to do is to make sure that what comes out of the infrastructure risk assessments is in the right data form for them [asset managers] to be able to use... So lot's of work in the background there around how you then integrate what comes out of the infrastructure risk assessment [into] useable data sets in the way that [asset managers] use* (District Council Participant E).

Participants noted that doing this initial data formatting scoping then helped with integration into existing decision-making processes like asset management plans and infrastructure strategies later.

While participants had different views on the best ways to integrate climate change data into Council processes, there was a general consensus to not 'reinvent the wheel' or add to workload. What this means practically is that most participants were plugging risk assessment data into existing council processes, rather than setting up new 'climate change' focussed committees or processes. For example; Bay of Plenty Regional Council are using risk assessments to inform planning on flood protection infrastructure, and New Plymouth District Council are using risk assessments to inform district plan changes and investment decisions on stormwater planning. These examples highlight how participants are pragmatically introducing new climate data into existing processes to try and encourage adaptation informed decisions. Participants noted that the benefits of using existing processes is that it can help a wider range of Council staff appreciate how climate change affects their responsibilities, rather than being siloed into a few staff members' responsibilities. Such approaches can help distribute responsibility for climate response more evenly throughout a Council.

Some participants cautioned that risk assessments would inevitably raise questions about further downscaled assessment, and then adaptation action, and then who pays. However, at the time of the second interviews (Autumn 2023), no Council's appeared to be at this stage. For example, at the time of second interview in Bay of Plenty, the regional Council had recently completed a risk assessment, and were in the process of determining next steps (such as making this information public and the implications of this). In relation to next steps, one participant noted;

*'I think there'll be some conversations post our risk assessment about who will pay for more work. I guess realistically, the districts will need to pay for any work they do at the district level in terms of assessment, but some of the poorer districts might look to us for help. Then once I guess we start into the adaptation, the DAPP kind of processes, I imagine that we'll all contribute together.... But then I guess everybody's waiting to see what comes from central government'* (Regional Council Participant D).

Reflecting earlier points about responsibility and knowledge - new roles, staffing, and expertise were an important focus for all Council participants. The Council's in our case study regions were all reorganising internally, re-naming staff roles, creating new responsibilities and positions to focus on climate change. Within the eight months between interviews 1 and 2 (August 2022 – June 2023), all participants reported staffing and structure shifts - either within their own roles or wider teams. These shifts included:

- Recruiting for a wider range of skills and knowledge than previously. For example; increasingly recruiting/valuing staff who have good relationship building skills, can translate scientific knowledge, understand social change and community development, and bring

Mātauranga Māori expertise (see FitzGerald and Aotearoa Climate Adaptation Network, 2022).

- Promoting staff internally as they demonstrated new knowledge and expertise relevant to climate change mitigation and adaptation.
- Creating new teams and/or revising reporting structures to ensure climate change concerns are reflected in more senior positions and embedded across teams.

### **Waikato Regional Council's internal changes**

WRC's approach has been to reconfigure internal processes, with the acknowledgment that anything they do in the future will be affected by climate change. Internally this has involved elevating the climate change portfolio to the Office of the Chief Executive and putting structures and processes in place to enable all Directors and Teams to consider the impacts of climate change. To provide governance oversight on climate action, a new Climate Action Committee of Council has been established. This is not a decision-making committee, but has a role to:

1. Receive scientific evidence and Mātauranga Māori to inform strategic leadership on how the Waikato Region could achieve climate change mitigation and adaptation
2. Inform the development of climate change adaptation and mitigation objectives, share information, and facilitate collaborative action to reduce greenhouse gas emissions and prepare for climate change impacts.

All council decision making must also consider the implications of climate change in the following ways:

- The impact of a change in climate so Councillors have confidence they're making 'future-proofed decisions'
- Whether the proposed actions will reduce or increase emissions, and whether these changes can be quantified and if not, why not
- Whether the decision/s show climate leadership to the wider community.

To support internal shifts and embed a culture with a focus on climate change, WRC have also established a Climate Action Advisory Group of approximately 20 members from across the full breadth of the organisation (including biophysical scientists, subject matter experts, social scientists and economists). The group focuses on strategic oversight and advice on the implementation of WRC's climate change response, information sharing, and exploring the climate change implications of decisions, policies and work programmes. Another key focus of the group has been exploring how climate change action can create co-benefits:

*'[W]e're saying that when we're working towards that water quality objective, let's get a biodiversity win out of it. Let's get a carbon sequestration win out of it as well'.*

The benefits of this approach is that responsibility for addressing climate change is distributed across the organisation, rather than sitting with one team or person. This aims to share learning, create connections, and upskill a wider range of staff. It also helps to avoid bottlenecks where climate change related work, decisions, or information get channelled through a small team or one person, and reduces institutional risks such as 'climate champions' leaving.

Reflecting these changes, one participant summed up these shifts describing the kind of staff they were looking to recruit:

*'We know there's going to be adaptive planning in the region in the years to come. I wanted someone who could work in both the technical world and the community... world, and bridge between those'* (Regional Council Participant D).

Another senior manager noted that they increasingly required staff who had:

*'Deep cultural competency around Te Tiriti o Waitangi, number one [requirement], because if you don't understand mana motuhake, tino rangatiratanga, we can't hire you to be part of the team. If you've got that sorted then everything else just flows. ... community development, ...strong interpersonal skills, humbling oneself, that you're not the knowledge holder.'* (District Council Participant I).

In many respects, this reflects a growing recognition that responding to climate change requires both social skills and scientific expertise and holistic thinking. The integration of climate change across social and physical science, and embedding both across the full range of Council activities is reflected by the approach the Dunedin City Council is taking in relation to identifying social and environmental limits through developing a 'City Portrait' (see box below).

Finally, participants described how they were starting to see shifts in climate response investment towards projects that create multiple benefits and address both adaptation and mitigation. Participants used different terms to describe these kinds of projects, including; 'blue and green infrastructure', 'soft infrastructure', 'blue carbon', and 'nature-based solutions'. While participants see potential in these projects, they also described barriers to their acceptance and implementation, including from colleagues within Council<sup>5</sup>. Some participants described how they had sought to address these kinds of internal barriers by including colleagues in workshops on blue/green and soft infrastructure, using pictures, maps and diagrams to illustrate the approaches, and appreciating that shifts in mind-sets and disciplinary approaches will take time. Some participants also reflected that they sometimes framed these projects in different ways depending on the audience. For example, if they were talking to a colleague or elected member who cared more about biodiversity than climate change, they would emphasise the biodiversity benefits of a project. Some participants also suggested that demonstrating the multiple benefits of projects was the best way to influence decision makers and foster community support. For example;

*'[I]f we build a cycleway, then an organisation like our Regional Tourism Operator can work alongside a local hapū and a local community to set up guided tours on that cycleway and put in place wayfinding and those sorts of things that then generates revenue from that asset, which also... gives the ability for people to move from A to B not using the car. Anything that's multi-benefit stuff is what we need... – is what our communities will sign up to'* (District Council Participant E).

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<sup>5</sup> Barriers and challenges to blue/green infrastructure and other nature-based solutions in Aotearoa New Zealand that create multiple-benefits like water sensitive urban design are described in various publications, so we do not recount these here (see Alestra et al., 2022; Reynolds, 2023; Moores et al, 2019).



## Dunedin City Council's Doughnut Economics and City Portrait

At the time of Round 1 interviews (Spring 2022), Dunedin City Council had approved an initiative to develop a 'City Portrait' to understand the extent to which the city overshoots its ecologically sustainable limits, and to what extent it is providing for a minimum standard of living for its people. The City Portrait is based on Kate Raworth's doughnut economics, bringing it to a city level (see <https://www.kateraworth.com/doughnut/>). Doughnut economics provides a model based on a circular economy, that operates within both social and environmental boundaries. The DCC has been working on its 'City Portrait' that establishes what these local level boundaries are and how the City is performing against them. A participant noted that it provides 'a framework that we're really clear about around what's our methodology within council, ... and it's really just aligning it around our core purpose, which is enhancing, strengthening residents' wellbeing.' Figure 1 below demonstrates what this might look like, where the outer ring presents the ecological/ environmental boundary, and the inside of the doughnut represents the social foundations.

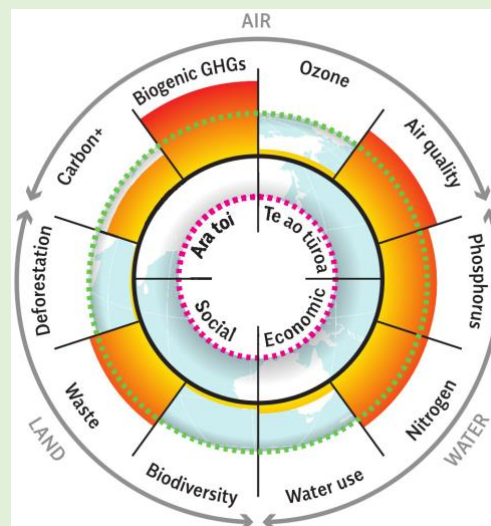


Figure 1: Draft City Portrait, designed by Planetary Accounting Network for the DCC (McKinlay, 2023)

A council officer indicated that this was one way in which climate change could be embedded across all Council operations, and commented that '*being super brave and adopting Doughnut Economics is huge. It's using informed practice. It's using scientific methodologies that are robust and rigorous and is a blend with both our academic knowledge systems around climate, city development, planning, law, etc, etc.*' These methodologies then create the baseline that provide the indicators for sustainable development, and can be used for financial planning and project development through the LTP.

### *Collaboration and engagement*

All participants described how they have been working with other Councils, mana whenua groups, and community groups on climate related concerns. In addition to the increased recognition of the need for improved relationships and ways of working with mana whenua, one participant said, '*[c]limate change is too big of a challenge for Councils to do it all by themselves*' (Regional Council Participant D). In all three case studies cross-council collaborations are evident as regional climate change working groups. These working groups tend to be led by the respective Regional Councils and currently comprise Council officers and there are no formal governance structures that feed



back into the respective elected members. Participants described these meetings as *'a coalition of the willing'* (Regional Council Participant D) and they are used to:

- Understand the climate data needs and formats associated with downscaled climate projections and risk assessments
- Share information and build staff relationships across the different Councils in each region
- Update on climate response actions each Council are undertaking (e.g. organic waste, transport, three waters, flood protection, community engagement, and district/regional plan changes)
- Develop a shared sense of regional and district priorities and how action/s in one area can support another
- Align work programmes, mana whenua and community engagement, plan changes, and infrastructure investments where possible and practical.

One participant summarised the importance of this group:

*'So we have a working group where planners and engineers come together to share projects. And that's where we identify things when we say, 'okay, we're looking at doing this. How does that feed into your work? How does it feed into your plan change? What are your timelines? These are our timelines' ... So we try to coordinate where we can'* (Regional Council Participant C).

Participants had different views on the benefits and disadvantages of the level of formalisation and governance structure of these working groups. Some participants felt that they would benefit from more formal structures and elected member and mana whenua representation in due course. While other participants noted that the current flexibility enabled Council officers to build relationships and trust, progress and align operational actions, and elevate to elected members and mana whenua as needed through other existing governance mechanisms. For example;

*'Not everybody was ready, not all of the councils were ready to be at the same point on the journey. So we've basically just built it as we've gone. So at some stage we'll need to formalise it more with terms of reference et cetera, but we don't want to risk breaking the coalition by trying to'* (Regional Council Participant D).

Regardless of these different views on governance, all participants noted that the cross-council working groups were useful. Given the current level of uncertainty and reform facing local government, participants felt that these cross-council working groups were useful for building relationships across Councils and provided a way to coordinate actions regardless of the reform outcomes.

As noted earlier, the lack of clarity relating to Council's role in climate change mitigation and adaptation creates challenges for Council's engaging with communities. In addition to resourcing uncertainties, participants also described balancing the need to manage expectations (what might be legally, economically, and socially realistic) and the need for open-ness (not going to communities with a set of pre-determined actions). Participants described different views on this balance, and recounted examples of colleagues and elected members with different views. These different views were also influenced by participant's positions in relation to legislation and mandated processes (e.g. consultation processes mandated in the Resource Management Act 1991 or Local Government Act 2002).

For adaptation in particular, some participants suggested that Council's need to 'get out of the way' and instead help resource those communities, mana whenua groups, businesses and others who are ready to lead and act. A practical example of this approach is through climate change adaptation

grants. Both Whanganui District Council and the Bay of Plenty Regional Council are using contestable community grants to resource community groups, businesses, and mana whenua for climate response. At the time of the second interview, Whanganui District Council had allocated \$100,000 for these grants and funded 8 projects<sup>6</sup>. Bay of Plenty Regional Council had allocated \$70,000 a year for the first three years of their Long Term Plan and funded 6 projects<sup>7</sup>. Similarly, the Dunedin City Council has supported the South Dunedin Community Network in their climate change response work through a contestable community development fund.

#### **Bay of Plenty Regional Council's Community Climate Adaptation Fund**

The fund was set up to help enable those communities and groups who are ready, to start developing their climate response. The grants provide 'seed funding' for communities to start their own adaptation planning that they can do independently with as much or little of Council's input as they like.

Recipients are using the funds in different ways. Some are using the funding for local risk assessments, while others are using it to facilitate workshops, increase understanding and develop action plans. One recipient group are using the funding to get risk assessments experts to train them how to do assessments for their three most vulnerable marae. They are learning by doing so they can train others, building capability through the process.

Reflecting on the fund, a Council participant notes that most of the funded projects to date are hapū or iwi led. The fund was not specifically designed for Māori, but the criteria seem to work well for them. Fund recipients are '*obviously very place based, very vulnerable to climate hazards, and they're also cohesive and ready to start those conversations. So that's a super interesting learning*' (Regional Council Participant D).

Council participants (both within and beyond the Councils with the funding mechanisms discussed above) described the following benefits of these approaches:

- Working with communities and groups who are ready helps build on what is already happening rather than trying to re-create it through other stretched Council processes
- A community development-led approach 'enables rather than dictates'
- Helps to build knowledge and expertise about climate change within communities, which community members then share more widely
- Works at local scales that make sense to people and grounds climate response in lived realities – these are generally place-based and specific to buildings, infrastructure, livelihoods (including food production), and cultural attachments
- Helps support mana whenua and community groups and networks to become the 'stable vessels' through which trust and understanding is built to help facilitate what will be more difficult climate response conversations in time
- Enables mana whenua and community groups to identify and realise their own aspirations for climate response, rather than assuming Council will provide the solutions.

One participant summarised the benefits of this approach as:

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<sup>6</sup> Funded projects included; a feasibility study for the Waimarie river boat to move away from/reduce coal use, a predator free initiative, a bicycle repair and distribution project, food rescue, and food production projects.

<sup>7</sup> Most of these funded projects are iwi/hapū-led and focused on understanding the impacts of climate change (sea level rise, coastal erosion and flooding) for coastal marae and kāinga, and impacts and options for food production and mahinga kai.

*'I'm most excited about the community led stuff in terms of once communities are actually given some tools and support and seeing how they respond, and then how we [Council] can support that. Because they're great integrators because they don't care about jurisdictional boundaries, they don't care about what the hell the sequencing of the Acts are and all that sort of jazz. So they kind of integrate it in the place and what's coming to this place and what they need to do in this place, and it kind of brings everything together. That's really useful'* (Regional Council Participant D).

### **South Dunedin Future Programme**

The South Dunedin Future (SDF) programme is a joint initiative between the Dunedin City Council and the Otago Regional Council. The programme is tasked with adaptation planning for South Dunedin, a significant area of the city on reclaimed land that was formerly a swampy tidal area, with sand dunes to the south, the harbour to the north, and drained runoff from surrounding hillsides. It was an important mahika kai area for mana whenua, and provided access ways inland. Gradually reclaimed from the mid 1800s, the area has become a mix of industrial, big box retail, schools, churches and provides a diverse mix of housing for some 13,500 local residents. The low lying nature of the area means it is at significant risk of inundation from high rainfall events and/or sea level rise. The director of SDF is a joint appointment, and both the ORC's adaptation team and staff dedicated to the SDF in the City Council work collaboratively.

SDF has emphasised the importance of relationship building with local communities and mana whenua. The Council recognised the need to improve relationships with the people of South Dunedin after significant floods in 2015, which highlighted high levels of distrust and a sense of being 'left behind' the rest of the city. In relation to local communities, this work has been facilitated by the South Dunedin Community Network and strong working relationships that have been established since 2015. The South Dunedin Community Network run two Community Hui a year, to which Council staff are invited to share information and listen to community members. In addition, the Dunedin City Council has made a significant investment in engaging with local communities in South Dunedin, by explicitly seeking and meeting with approximately 250 different community organisations and groups. The purpose behind this engagement is to understand the diverse values and aspirations people have for South Dunedin, and more importantly, to build trust and build relationships so that people are ready to engage on more specific adaptation initiatives so that the Council can take people along the adaptation journey:

*'[engagement] should be really open, transparent, inclusive around how does the Council go from this space [information gathering] to making a decision, ... It's, "we've lifted the curtain on all of that and here are all the bits, we've broken it down and these are all the ways that you're going to be involved". And everyone's going to be different, so not everyone is going to care about every stage, or have the capacity to engage at every stage, but our commitment is to making sure that we can say hand on heart, "we've given as many people as much of an opportunity to be engaged in that as we can"'*...

*'if we get really good engagement, if we get really good buy-in, if we make decisions that have strong community support, it will be an odd political environment to run against that, and probably a very short political life span that ran about that. So the objective is to have really robust technical information, really good community engagement and that's really as far as we can go, and then the decision makers make decisions on the basis of that'* (District Council Participant J).

Council participants described a range of ways they hope to further support these community-led adaptation approaches:

- Listening to what mana whenua and community groups say they need (e.g. technical knowledge, tools, resources) to maintain relationships and progress actions
- Developing and allocating internal Council staff time to help mana whenua and community groups with technical climate change data so they do not have to rely on expensive consultants every time they focus on something at the local scale
- Supporting mana whenua and community groups with aligned actions (such as events)
- Developing further funding sources and processes to continue supporting existing recipients in next steps and action (e.g. 'phase two actions')
- Using Council's Long Term Planning processes and other resourcing (such as emergency response) to support actions identified in community-led strategies and action plans from phase one funding.

An important theme that emerged through participants reflections on community-led approaches was recognising when a community might be ready to start discussions about climate response. Participants described this readiness in different ways. For some it was listening and noticing the emergence of community networks who could initiate, lead or hold processes, evidenced by:

*'[Seeing] your community starting to work together and wanting to take collective action on things as opposed to individual organisations doing their own thing'* (District Council Participant E).

For others, it was identifying what support and resourcing might be needed to build relationships and trust before attempting to even initiate conversations about climate response. For example, in relation to one complex community context, a participant described how they needed *'some sort of stability in terms of having a stable [social] vessel to be able to have those [climate response] conversations'* (Regional Council Participant D).

To help support mana whenua groups in particular, participants described how Councils were re-organising resourcing. These included; mana whenua representation on operational committees some of which include voting rights, allocating staffing FTEs to Māori organisations, providing office space, secondments for staff to move between Councils and Māori organisations, co-developing adaptation strategies and policies, and as noted earlier, seed funding to help catalyse actions. In Otago, there are several mechanisms by which mana whenua work in relationships with local and regional government. Aukaha, a Kāi Tahu organisation, provides a formal mechanism for the five Rūnaka in the region to engage with both local councils and the Regional Council on various statutory planning matters, conservation projects, and health and social services. They are also involved in work to embed mana whenua stories and values in regional development. Aukaha has a range of formal and informal arrangements with Councils across the region which have been developed over the last 20 years. In one case, in drafting a new statutory plan, the Council financially supported Aukaha to employ staff. The same Council also has a Mana to Mana committee including the Council's senior leadership and senior leaders from all Rūnaka in the southern region.

As noted above, cultural acumen and capability amongst Council staff is highly variable, and presents a challenge to increased partnership working with mana whenua. Two Councils noted they were developing Māori Strategic Frameworks in conjunction with mana whenua to identify their priorities and appropriate ways of working. In addition, one of these Councils is supporting all staff to attend courses on tikanga, te reo and Te Tiriti.

The data suggests that there has been a shift in the last 5-10 years in terms of how Councils work with mana whenua, and these relationships necessarily differ depending on context and those

involved. One participant who has extensive experience in representing their marae in Council committees at the operational and governance level, and has also worked for Councils, stated when asked about how far the relationship had come from her experience:

*'I think we've still got a long way to go ... with one step forward, ten back all the time. I think there's still a gap between full acceptance [of partnership] and just tokenism acceptance. They're trying really hard. ... a lot of operational managers are trying really hard to incorporate, get advice from iwi, get advice from [Māori organisations]. It's not like the willingness isn't there, it's just the way to do it a lot of the time is something that's missing. In some respects it's certainly a step forward, and particularly the two voting positions [speaking to the two permanent voting positions for mana whenua at Environment Canterbury] would certainly be a step forward, and the mana to mana committee as well. But I think it's still a long way to go. You can't help individuals with their individual personalities and opinions and political persuasions. We'll see'* (Regional Council Participant L).

## Conclusion

Despite the challenges Council's face managing climate response, these findings show a range of important innovations and shifts in practice. The key shifts include:

- Using carbon accounting to inform mitigation actions that connect across internal Council teams and processes, resulting in new business cases for actions in annual and long-term plans
- shifts towards increased cross-Council collaboration and coordination at a regional level as part of climate change risk assessments
- Internal reorganising within Councils to embed climate change considerations across decisions and valuing a wider range of knowledge and skills to inform these processes
- Resourcing mana whenua and community-led projects and processes for climate response.

These innovations and shifts show examples of 'just decision making' that recognises those who contribute least to the changing climate are likely to bear more of the impacts (without active interventions). Just decision-making takes account of, and seeks to address, both the inequitable distribution of climate change impacts as well as the potential for climate change adaptation to exacerbate existing inequities. Examples of just decision making can be seen emerging through examples where Council's resource mana whenua and community groups for climate response.

The innovations and shifts also show examples of 'robust decision making' that adopts principles of fairness, accountability and transparency, and is tika for the context in which the decisions operate and have effects. Examples of 'robust decision making' include Council's resourcing and incorporating a wider range of knowledge to inform climate response data gathering and decision making processes (including Mātauranga, social science and community knowledge), and collaborating across governance boundaries to help address regulatory and institutional uncertainties.

While these innovations and shifts may seem small and tentative, they provide important evidence and examples to build on as New Zealand continues to collectively navigate climate response.

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