Supplementary document: robust and just decision making for local government climate response

A report from the Innovations for Climate Adaptation research project

May 2024









Introduction

Local government in Aotearoa New Zealand (AoNZ) plays a key role in environmental planning and regulation, transport, infrastructure, and responding to natural hazards and extreme weather events. Consequently, regional and district/city councils have an important role in responding to climate change. There is some national guidance, legislation and policy to support councils in undertaking these responsibilities. However, councils are relatively new to climate change response and this – combined with rapid policy shifts, outdated legislation, and increasing extreme weather events – creates uncertainty about their exact roles and responsibilities (lorns 2022; Lawrence et al. 2022). This document supports councils to take climate response that is informed by *robust* and *just* decision making. The document:

- identifies recent climate response by participating councils
- describes associated impacts and benefits of these actions
- provides guidance on aspects for councils to consider when making decisions about climate response.

Climate response is often framed in terms of mitigation and/or adaptation. Mitigation usually refers to 'actions or activities that limit emissions of greenhouse gases (GHGs) from entering the atmosphere and/or reduce their levels in the atmosphere' (IPCC 2023). Adaptation usually refers to '[t]he process of adjustment to actual or expected climate and its effects' (IPCC 2019, p. 118). In this document we often refer to 'climate response' and/or 'climate action' to mean both of these kinds of actions because they are increasingly understood as interconnected. Throughout this document we use the following graphics to indicate when a practice is more likely to support mitigation, adaptation, or both:



Can support mitigation



Can support adaptation

This document is focused on robust and just decision making for climate response. Research shows that considering these factors leads to better outcomes for people and the environment (Acheson and Bond 2024; Klinsky et al. 2016). While just and robust are inter-related – just decisions are more robust and robust decisions are more just – for ease of use, we distinguish key characteristics of each.

By robust, we mean decisions that:

- can account for uncertainty and complexity
- are informed by a broad knowledge and information base, including mātauranga
- are organisationally systematic, not isolated (e.g. embedded throughout an organisation rather than falling to one staff member or a small team)
- are long term (i.e. take into account long term trends and relationships rather than a quick fix)
- are collaborative (e.g. aligned with others' goals, or takes their aspirations into account)
- foster holistic outcomes (i.e. have multiple co-benefits, rather than fixing one aspect of a problem)
- operate within an enabling regulatory framework.

By *just*, we mean decisions that:

- do not create more inequitable outcomes, and ideally improve well-being and equity
- reflect obligations and responsibilities under the Treaty of Waitangi /te Tiriti o Waitangi¹
- distribute the costs and benefits from climate change, as well as rights and responsibilities
- recognise that decisions on the distribution of costs must account for existing inequalities and differences in exposure to harm
- consider the interests of the public and future generations alongside individual and corporate interests.

Making robust and just decisions is complex and often politically contested. Throughout this document we use the following graphics to indicate when a practice is more likely to support a robust and/or just response.



Can support robust decision making



Can support *just* decision making

¹ This includes recognising the injustices caused through colonisation for Māori and associated legacies where Māori, their assets, livelihoods, and taiao (environment) are at greater risk from climate change (Awatere et al. 2021).

Research approach and methods

As we were developing this research proposal, local government and mana whenua told us that climate change presents an unprecedented challenge to their governance and decision making. Many talked about 'just trying things out' as they adjusted their decision making processes or engagement to grapple with new challenges. Our research team were inspired by these innovations, and we designed this research to track changes in practices across local authorities and mana whenua in three case study areas over two years (2022–2024). For our research we used qualitative case studies and kaupapa Māori approaches. Mana whenua, territorial authorities, and regional councils in three case study areas were the key research partners² and included:

- Taranaki: Ngaa Rauru Kiitahi (iwi); South Taranaki District Council, New Plymouth District Council, Taranaki Regional Council
- Bay of Plenty: Ngāi Tamawhariua, Te Rereatukāhia marae and kāinga; Maketu iwi collective led by Ngāti Whakaue; Bay of Plenty Regional Council, Western Bay of Plenty District Council
- Otago: Aukaha (Kāi Tahu consultancy), Kāti Huirapa ki Puketeraki, Dunedin City Council, Otago Regional Council

This document draws mainly from our interviews with council staff but is also informed by our korero (conversation) with mana whenua research partners.

² The research team also engaged with other organisations, including Waikato Regional Council, Whanganui District Council, and Te Ruunanga o Tuupoho (representing ngaa hapuu oo Tuupoho). This document draws on data from over 50 interviews, multiple hui, and document analysis.

Practices to support climate response decision making

Climate Change Risk Assessments







Robust, Just, Adaptation

Description

Climate change risk assessments are used at a national scale and at regional scales in AoNZ. For example, in 2019 The Ministry for the Environment commissioned the first <u>National Climate Change Risk Assessment (NCCRA)</u> to identify the most significant risks to inform the <u>National Adaptation Plan</u>. The assessment identified 43 priority risks across five value domains: natural environment, human, economy, built environment and governance.

Many Regional Councils have either completed or are in the process of completing regional risk assessments. These are often contracted out to consultancies and identify climate change risks from scientists, council subject matter experts, iwi, and external stakeholders. Regional climate change risk assessments tend to be organised using the same five value domains as the NCCRA and may be timed to fit into the six yearly cycle of the NCCRA and associated National Adaptation Plan. Regional risk assessments are often used to identify gaps in understanding, support district-level risk assessments, and inform future actions.

Examples

All three regions in our research - Bay of Plenty, Taranaki and Otago - had either completed, or were in the process of undertaking some form of a regional risk assessments. In all cases this involved the regional council commissioning a high level regional risk assessment using down-scaled climate projections to inform understanding of sea level rise and inundation, climatic changes (such as temperature, and precipitation distribution and intensity), and from these, the anticipated impacts on council infrastructure, activities, and communities.

For Taranaki and Bay of Plenty the regional risk assessment process partially prompted the creation of regional climate change working groups that include staff from the regional council and relevant territorial authorities. Upon completion of the regional risk assessment, the intention is that the territorial authorities will then complete more detailed risk assessments for their infrastructure, assets and communities. In Otago more localised risk assessments have also been completed for some areas and assets considered most at risk (for example, South Dunedin).

	In another council area, the risk assessment was undertaken, but an acknowledgement embedded within it stating it did not yet incorporate mana whenua perspectives on risk, because of the timeframes the assessment was undertaken in. Similarly, there was some critique of the NCCRA risk assessment in that Western methodologies for understanding risk do not always sit well alongside or encompass te ao Māori understandings of risk (Awatere et al. 2021; Pirini and Morar 2021).
Benefits	 Uses an established process to develop shared understandings about the impacts of climate change and can help build relationships across different councils Helps build clearer narratives for the public about climate change risk and what counts as 'robust' knowledge Could be used to inform just decision making (e.g. combining risk assessment data with socio-economic vulnerability to prioritise action) Provides a pragmatic starting point for councils, especially if there is limited appetite or uncertainty from elected members about whether/what to prioritise Helps frame climate response as collective learning across organisations and can help to bring colleagues and communities with you
Things to consider	 How to design the process to include and value a wide range of knowledge (e.g. Western science, mātauranga Māori, and local knowledge) Acknowledge and address what risk looks like in te ao Māori Timeliness – early discussions with mana whenua are especially important to enable sufficient time for engagement How to communicate scientific uncertainty in the risk assessments Data format and resolution – ensure that outputs from the process are in formats that fit with existing council systems and processes (e.g. GIS layers) Managing transparency to make sure everyone is working with the same information

Plan changes (District and Regional Plans)





Robust, Adaptation

nobast, riaaptation	
Description	District and Regional Plans are required to include information on hazard risks, zone land, and to stipulate rules. Plan changes are an important tool for local government to mitigate environmental effects and manage risks of a changing climate. This can include introducing new hazard lines, rezoning land, and bringing in new restrictions on developments or subdivisions.
Examples	 New rules about landuse, building, and development in District Plans to reduce exposure to hazards (e.g. new building set-back rules and minimum floor levels to reflect increasing risks from flooding, coastal erosion and sea level rise). New rules related to freshwater and landuse in Regional Plans to take account of predicted climatic changes (e.g. rainfall, temperature)
Benefits	 Uses existing Resource Management Act (RMA) processes (including council committees and processes) to respond to climate change—related hazards Can help build understanding of climate change impacts within council and wider community Is one of the few existing legislative levers councils currently have to reduce the potential for maladaptation, stranded assets, and other associated socio-economic risks of climate change
Things to consider	 How proposed changes may impact communities (e.g. implications for insurance – like insurance retreat, increase in risk based insurance pricing and associated flow on effects for community such as mortgage defaults and devaluation of assets) Ensuring robust evidence supports decisions to provide confidence and supports a council's position should litigation follow How to manage community backlash and expensive litigation and appeals How to manage implications for local government 'liability' for permitting development in known natural hazard areas

Emissions profiles and audits





Mitigation, Robu	st
Description	There is increasing interest and expectations that organisations in AoNZ measure, report and reduce their greenhouse gas emissions. The approach is relatively well established in AoNZ and the Ministry for the Environment provides guidance on how to quantify and report emissions.
	Under the Resource Management Amendment Act 2020 local government must 'have regard to' AoNZs National Adaptation Plan and Emissions Reduction Plan when they prepare or change a regional policy statement, regional plan or district plan (Ministry for the Environment 2022). While not expressly stipulated in the Resource Management Amendment Act 2020, 'having regard to' could conceivably extend to councils' operational emissions as well as what they can influence through planning rules.
Examples	Most councils in our research had either completed, or begun the process of, quantifying their operational emissions. Some councils had committed to an emissions reduction target (e.g. <u>Dunedin City Council</u>), while others were in the process of considering whether to commit to a target. Some councils were only focused on their operational emissions (e.g. <u>South Taranaki District Council</u>), while other councils had completed profiles and audits that extend beyond their operations to wider industry and transport in their district (e.g. <u>Dunedin City Council</u>). Some of the councils in our research were using external consultants in some form to support their emissions profiles and audits.
Benefits	 Provides a pragmatic starting point to establish a baseline and then reduce operational emissions (i.e. start with what each council can readily control) Helps distribute responsibility for climate response across council, rather than relying on one staff member or small team Provides evidence of council leadership to the wider community and – where monitoring of targets and accountability is transparent – can help build social licence for further action Can provide a good news story for climate action to communities Can be used strategically to bring colleagues and elected members 'on the journey'

	 Can play a key role in turning climate strategies and declarations into action by helping to prioritise options using evidence for new business cases and investment in Long Term Plans and Annual Plans (e.g. decarbonisation of vehicle fleets, gas boilers, organic waste infrastructure) Councils don't need to wait on central government legislation, or wider community mandate to act; actions can often be done as business as usual (BAU) in Long Term Plan and Annual Plan processes (e.g. when replacing assets, submitting maintenance plans) Can be a relatively uncontentious and low risk place to start climate response
Things to consider	 Whether emissions-related work is undertaken by internal staff or external consultants External consultants may be seen as more credible than internal staff by colleagues and ratepayers, but they are also expensive and may not necessarily know more than staff Deciding what to include and exclude from council's 'operational emissions' (e.g. emissions associated with public transport that displace private transport, landfill emissions, wastewater treatment plant emissions) Lowering council's operational emissions (COCs) will usually lower wider community emissions (WCEs) because of the services councils provide – but in some instances COCs may increase while WCEs decrease (e.g. increasing public transport = higher council emissions, but lowers community transport emissions) Consider how to explain complexities such as increases and decreases in COCs and WCEs How emissions reduction plans connect with other councils' plans in your region and how you will share knowledge and align actions across council jurisdictions

Reorganising roles and internal structures within councils







Robust, Mitigation, Adaptation

Description	Our research participants described internal changes within their council during the research period to respond to climate change challenges. These changes included: restructures and changes to reporting lines, functions and focus, and work programmes; identifying new capabilities and roles; and shifts towards a greater emphasis on collective learning and upskilling.
Examples	 Prioritising different knowledge, capabilities and expertise in new roles (e.g. Mātauranga Scientists, social scientists, engagement skills, facilitation skills, relationship management skills, risk management skills) Specialist teams, joint appointment between City and Regional councils on adaptation project that spans the remit of both Expansion of existing roles to encompass new priorities or ways of working (e.g. coastal scientists leading community engagement) Shifting internal reporting lines to reflect increasing importance of climate response Inclusion of climate response/actions and related factors in existing council committees New roles that help provide and translate climate science data to inform mana whenua and community action
Benefits	 Values a wider range of knowledge and skills that can enable more robust decision making Can facilitate shifts towards more collaborative relationships with mana whenua and community groups
Things to consider	 Balancing the benefits of changes with wellbeing impacts on staff where workload is increased, or role altered Whether resources, expertise, data, personnel, and knowledge be shared across and/or within councils to avoid reinventing the wheel or duplicating work Recognise that climate response is part of wider socio-cultural shifts and that cultural change is often uncomfortable and may be resisted by some staff What activities can be de-prioritised to focus on climate response

Practices to support collaboration for climate response

Working in partnership with mana whenua Robust, Just, Adaptation There is increasing recognition of the relationship local government has with mana whenua as treaty partners (Bargh and Tapsell Description 2021; Review into the Future for Local Government 2023). However, there remains some uncertainty on what this means in practice and there may be some resistance amongst elected members and/or community members. Nevertheless, research shows that Māori are likely to be experience a greater range of impacts from climate change (Awatere et al. 2021). Partnership requires acknowledging that decisions significantly affecting Māori should be by Māori or should be co-designed with Māori. This relies good working relationships with mana whenua which will vary in different places across the country. **Examples** • Mana to mana mechanisms where senior leaders in councils regularly meet with senior mana whenua representatives to discuss matters of shared interest • Resourced mana whenua representation on council decision-making committees on matters of shared interest • Māori wards in some council areas, although sometimes those elected do not have mana whenua status • Cultural capacity and acumen training for all staff in the council • New recruitment of staff who are either mana whenua, or who have specific expertise in mātauranga Māori Cultural acumen and understanding of te ao Māori for working with mana whenua is specified in new job descriptions • Ngāi Tahu own and operate regional environmental planning and resource management consultancies who are a first point of call for mandatory consultation on statutory plans and other local authority matters including on water, biodiversity, coastal and climate change. Where significant renewal of statutory plans has occurred, FTE has been provided to the regional iwi consultancy for this work **Benefits** Can improve relationships between mana whenua and councils Can increase knowledge exchange, especially when early understandings of mana whenua concerns are raised and addressed Can improve council understanding of te ao Māori and be incorporated into decision making

	• Can improve council understanding of past activities relating to the land subject to adaptation, and how Māori relationship to that land have been affected by colonial processes, so the past can be acknowledged and addressed as appropriate
Things to consider	 Whether relationships are at appropriate levels, recognising the mana of both Māori organisations and councils Ensuring mana whenua are not treated as just 'another stakeholder', but rather as partners How projects can be co-designed and resourced appropriately How mana whenua want to be supported in Māori-led adaptation projects and what resources can be shared What mātauranga Māori exists and has it been appropriately incorporated in the project (with mana whenua involvement) Whether risk assessments and basic adaptation information appropriately included mana whenua and te ao Māori perspectives, and mātauranga; and what omissions a Western knowledge perspective might engender The history of the land involved in adaptation, Māori relationships to it, and colonial processes that affected it Funding arrangements – where projects directly involve mana whenua the partners are not contractors or volunteers, but have shared control and influence over project budgets and must be resourced appropriately Relationships between and with both mana whenua and mātāwaka (a term frequently referring to Māori who are not mana whenua in their area of residence)

Local government regional climate change staff forums







Robust, Adaptation, Mitigation

Description

In all three of our focus regions council staff participants described cross-council climate change working groups. While these initially started in response to the relevant regional council starting a regional risk assessment, participants described how these now extend beyond just the risk assessment work. For example, these forums consider and share climate data, discuss work programmes, and align activities where possible. Taranaki and Bay of Plenty council participants noted that these forums currently operate relatively informally and do not have formalised governance or decision making arrangements, but suggested these may come in due course.

Examples	 As part of the Taranaki Regional Council's climate risk assessment they initiated regular meetings with territorial authority staff in the region which has partially enabled a highly collaborative approach to <u>organic waste management</u> to reduce greenhouse emissions As part of Bay of Plenty Regional Council's climate risk assessment they initiated regular meetings with territorial authority staff in the region which has resulted in sharing data, closer relationships, and aligning public communications about climate risks and impacts where possible
Benefits	 Identifies shared information needs to avoid duplication and inefficiency Can build relationships and trust through sharing knowledge in contexts of high uncertainty and regulatory reform Can help to align work programmes, communications, and community engagement processes across different councils Can help build awareness of the downstream consequences of decisions being made in one council for another (e.g. the impact of changing a regional plan for territorial authorities' district plans) Can help build awareness of the internal dynamics and politics within and across different councils Can help establish an evidence base that supports collective action
Things to consider	 Who to include in climate change staff forums (e.g. council staff, elected members, mana whenua, community representatives), and how these groups connect back to internal council processes Whether those people included have the capacity and are resourced to engage effectively Who should be involved in collaborative arrangements; also who benefits and what are the costs Governance arrangements across multi-agency forums when the time comes to make decisions and allocate budgets

Community adaptation funds







Just, Adaptation, Mitigation

Just, Adaptation, Mitigation	
Description	Some councils have allocated funding through their Long-Term and Annual Plans to support mana whenua and community groups take climate action. While the approaches and criteria differ across councils, they tend to focus on supporting tangible actions to reduce greenhouse gas emissions (e.g. replace fossil-fuelled infrastructure), or support adaptation in some way (e.g. fund science, engagement processes, planning or monitoring).
Examples	 Bay of Plenty Regional Council established <u>Community Adaptation Planning Fund</u> that allocates up to \$20,000 for individual projects per financial year to enable groups to start climate adaptation planning Whanganui District Council established a <u>Community Climate Action Fund</u> to provide seed-funding for not-for profit climate action projects that reduce greenhouse gas emissions and/or improve the community's resilience to climate change in some way
Benefits	 Enables rather than dictates by using a community development—led approach where council supports people/communities who are ready and build on what is already under way Can prompt a 'halo effect' — building and sharing knowledge and distributing climate response(s) beyond council through wider community Supports climate response at local scales that resonate with how people actually experience climate change Can support mana whenua and community groups and networks to become the 'stable vessels' through which trust and understanding is built to help with undertaking more difficult climate-related conversations at another time
Things to consider	 Criteria – whether contestable funding is appropriate for communities and mana whenua, or whether a partnership model is more appropriate How funded actions can be supported beyond one-off projects (e.g. how actions can connect to other council processes like emergency management, plan reviews, Long Term Plan budgets) Recognising when communities are 'ready' to partner and take action

Community engagement, relationship building and supporting community led adaptation







Robust, Just, Adaptati	ion
Description	Adaptation to climate change requires a different approach to community engagement than councils have typically adopted. Research shows that decisions are more robust, less prone to litigation, more cost effective in the long term, and more fair when effective community engagement is the foundation for adaptation (Stephenson et al. 2020). In recognition of these benefits, some councils have shifted to community engagement approaches that tend to be less episodic and focused on a specific set of options, and more focused on relationship building, transparency, accountability and trust (Barth et al. 2023).
Examples	 Engaging at the very beginning of adaptation work to encourage a shared journey approach Resourcing engagement with skilled personnel Seeking out and meeting with a range of community groups (churches, sports clubs, social groups, community support networks) and meeting them where they are at Providing mechanisms for informing communities on where adaptation processes are at, and how people can stay involved Fronting communities even when scientific knowledge feels incomplete, sharing uncertainties Working closely with community organisations (e.g. South Dunedin Future with the South Dunedin Community Network)
Benefits	 Can build relationships between communities and council staff, and improve council staffs' understanding of community knowledge, experiences, the well-being impacts of climate change and adaptation options, concerns, and aspirations for the future Can enable more robust decision making by resourcing a wider range of people and communities to contribute to council processes Can support the sharing of knowledge and building trust, particularly with groups that councils historically struggle to connect with, such as lower socio-economic groups
Things to consider	 Existing levels of trust amongst different sectors of affected communities What past events, actions, inaction need to be addressed/acknowledged to build trust Who shows up and who doesn't

- How council staff can reach those who don't usually show up; and creative ways to connect with such people and meet them in their own community spaces or environments
- Recruiting dedicated engagement specialists
- Resourcing requirements and balancing what you let go of or de-prioritise to enable new support
- What kind of communication will work best for the diverse communities involved and whether multiple strategies are needed

Practices that support translating information into climate response

Long Term Plans and Annual Plans







Just, Adaptation, Mitigation

Description	The Local Government Act 2002 requires council's to consult with their communities and prepare Long Term Plans every three years, and Annual Plans in the other two years. Long Term Plans must describe the council's activities, have a long term focus, show accountability and provide opportunities for the public to participate. Crucially, Long Term Plans must include information on the activities, goods or services provided by a council and how these will be funded and what will be done over the 10 year term. Annual Plans focus on year-to-year budgets and outline what will be done in the next 12 months to achieve the broader Long Term Plan goals.
Examples	Our council participants described an increasing emphasis on climate considerations in Long Term Plan and Annual Plan processes – particularly for infrastructure, maintenance, community engagement, and service delivery. Increasing extreme weather events were noted as a key instigator of these shifts, both in terms of community expectations and ability to continue current service delivery. Embedding climate considerations into Long Term and Annual Plan processes is being done differently by participating councils. Some councils have simple processes (such as the requirement to factor in more extreme weather events in maintenance plans

for council facilities), while others are more complex (such as asset management plans for three waters being informed by climate change predictions and shifts to green/blue infrastructure and nature-based solutions to manage weather extremes over the longer term). Dunedin City Council and Otago Regional Council are taking a collaborative approach, working jointly to develop an adaptation plan for South Dunedin. Funding for specific projects within the plan will be allocated through the Long Term Plan process, and embedded across the various BAU workstreams of each council's normal operations. For managed retreat, Dunedin City Council has identified ordinary housing turnover in the areas most at risk, and is working to model a timeframe through which the Council can purchase properties voluntarily as they become available on the market over the next decade(s). They are seeking central government funding to do so proactively, rather than as a reaction to disaster. Purchased properties would then be managed until such time as they are no longer habitable, or adaptation projects begin. This long-term approach provides for least disruption to residents, and provides options for both the implementation of green and blue infrastructure and housing intensification in areas at least risk. The goal is to maintain the current population in the South Dunedin area while improving flood resilience, housing quality, and amenity value. While there are useful examples of councils beginning to fund adaptation through existing processes, all council participants described the urgent need for new funding and revenue instruments to support this work going forward. **Benefits** Helps distribute responsibility for climate response activities across each council, rather than relying on one staff member or small team Helps embed climate response in each council's primary resource allocation process Can help to 'de-politicise' climate response and normalise investment in response as BAU Can help with opportunities for shifts in infrastructure investment (e.g. increasing investment in actions that have co-benefits for people and nature – like green infrastructure, nature-based-solutions etc.) Things to consider Which processes and templates are used to embed climate response in Long Term and Annual Plan processes (can range from complex to simple) • Showing awareness of the history and legacy of specific places where a climate response is planned - this is particularly important for just decision making with mana whenua – and may need to look backward and forward beyond 3-year political terms Whether significant resourcing may be needed (e.g. South Dunedin Futures Project) and the implications of this Moving to different kinds of investment in infrastructure (e.g. green infrastructure and nature-based-solutions) may require new cost-benefit analyses and engagement with communities to manage the social licence for change

New funding models for climate response





Adaptation, Mitigation

Description	AoNZ is experiencing significant infrastructure deficits which are compounded by high inflation and cost of living. Local government can barely maintain existing infrastructure, let alone the costs of climate adaptation and many are resorting to unprecedented rates increases to maintain service levels. In the absence of action by central government some local governments are trying to find alternative revenue tools to fund climate response.
Examples	South Taranaki District Council are reforesting 200 hectares of council-owned land over the next five years. This will include natives, non-native and non-wilding hardwoods. Non-natives 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.
	Greater Wellington Regional Council (GWRC) created a Low Carbon Acceleration Fund (LCAF) in 2020 to help drive climate action. The LCAF is funded through emissions units given to the council for pre-1990 forest by central government when they created the Emissions Trading Scheme. For GWRC this amounted to 255,660 emissions units because of the significant forested land it owns. The LCAF leverages the value of these emissions units to fund climate response. As long as the financial value of the units rises faster than interest costs, things balance out, and this has proved to be the case. Eventually GWRC will need to sell units, but as long as their value keeps rising they can be used as leverage to fund other work without imposing additional costs on rate payers. The LCAF is being used to fund GWRCs emissions reduction actions including restoration and planting in parks (funding almost 1 million new plants in regional parks), scoping and feasibility studies for decarbonising public transport, renewable energy generation, and reducing energy consumption (e.g. LED lighting replacements).
Benefits	 Can fund some climate action without increasing rates Can be used to fund projects that create multiple co-benefits Provides a good news story for councils and communities Can jump-start investment in climate response
Things to consider	 Emerging nature of these funding and financing streams – they can be volatile and unpredictable Adopting alternative tools requires elected member support and a certain tolerance for risk

What could further support local government with climate response?

The practices described in this report provide examples to build on as local government in AoNZ navigate climate response. However, this research reflects other work that identifies national level changes are needed to further enable local government in AoNZ to respond to climate change effectively (e.g. Hanna et al. 2017; lorns 2022; Lawrence et al. 2022; Expert Working Group on Managed Retreat 2023; Peart et al. 2023; Review into the Future for Local Government 2023). The research underpinning this document identifies the following needs:

- amending the Local Government Act 2002 to acknowledge the significance and importance of local governments' te Tiriti O Waitangi obligations that accompany roles and responsibilities that have been devolved to them from central government
- appropriate resourcing for mana whenua groups and capacity building even when there is resourcing (e.g. funding) available, there are often not the people on the ground to respond
- clearer legislative certainty relating to climate change hazards, plan changes, and existing use rights to reduce litigation and paralysing fears of it
- clarification of responsibilities and relationships between regional councils and territorial authorities, especially for hazards in relation to climate response
- a national framework for managed retreat that outlines processes, mechanisms and criteria for property acquisition, responsibility, and how funding and costs will be allocated.

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