A Shared Future

Working with communities to adapt to a changing climate

A REPORT BY **KALI MERCIER**

November 2023

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> “Working with communities is deeply rewarding and leads to better policy decisions and more durable solutions to the risks climate change presents. It can also be messy, challenging, time consuming and resource intensive. However difficult it may be at times, it is much easier to have those bold conversations when people are in a warm, dry home than when their houses are full of water, and no one has showered for a week.”
>
> **Gemma Greenshields, Technical Principal, Community Engagement, WSP**

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About Mahi a Rongo / The Helen Clark Foundation

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New problems confront our society and our environment, both in Aotearoa New Zealand and internationally. Unacceptable levels of inequality persist. Women's interests remain underrepresented. Through new technology we are more connected than ever, yet loneliness is increasing, and civic engagement is declining. Environmental neglect continues despite greater awareness. We aim to address these issues in a manner consistent with the values of former New Zealand Prime Minister Helen Clark ONZ, who serves as our patron.

OUR PURPOSE

The Foundation publishes research that aims to contribute to a more just, sustainable, and peaceful society. Our goal is to gather, interpret, and communicate evidence in order to both diagnose the problems we face and propose new solutions to tackle them. We welcome your support. Please see our website *www.helenclark.foundation* for more information about getting involved.

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He Mihi / Acknowledgements

Kali Mercier
Report author

With the impacts of climate change becoming increasingly hard to ignore, now is the time to be thinking about how we prepare our cities, towns, and rural communities – physically, financially, socially – to meet upcoming challenges. Humanity has never had to deal with anything quite like this before, and the challenges will be unique and long-lasting.

Despite the uncertain future we face, A Shared Future is a hopeful report. It sets out the case for – and many great examples of – communities working together to become more resilient to the impacts of climate change. Just as importantly, the report finds that developing solutions together can result in a wealth of other positive outcomes – such as increased social cohesion, community regeneration, and the development of more inclusive and equitable places – making our communities better places to live overall, despite the challenges we face.

To all those who helped with this report in so many different ways, ngā mihi nui ki a koutou katoa. I'd like to start with thanking the Helen Clark Foundation staff and board, particularly our Executive Director Murray Bruges and our patron, Rt Hon Helen Clark, for their encouragement, support, and feedback.

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We also rely greatly on our partners at AUT for the support that allows us to continue this important work – ngā mihi nui.

Kali Mercier

WSP Fellow, and Deputy Director of the Helen Clark Foundation

15 November 2023

Executive Summary

CLIMATE CHANGE IS EXPECTED TO HAVE A PROFOUND AND TRANSFORMATIVE IMPACT ON OUR LIVES, LIVELIHOODS, CULTURE, AND PUBLIC HEALTH. THIS REPORT IS CALLED A SHARED FUTURE IN RECOGNITION OF THE FACT THAT EACH OF US WILL BE IMPACTED BY CLIMATE CHANGE, AND BY OUR EFFORTS TO ADAPT TO IT – POSSIBLY IN MORE FUNDAMENTAL WAYS THAN BY ANY OTHER CHALLENGE TO HAVE FACED MODERN SOCIETY TO DATE.

If we take no action now, that shared future could consist of ongoing costly and traumatic recovery efforts from worsening climate-induced disasters. Instead, this report argues that climate change presents an opportunity for positive social and economic transformation. Making the most of that opportunity means designing adaptation responses that are inclusive, that consider the voices of those who will be most impacted by climate change, and that are led by a desire to achieve urban regeneration, socioeconomic development, and, most importantly, equitable and just outcomes for all.

Climate change, and the actions necessary to adapt to it, are complex, impactful, irreversible, and contain the potential to sow either great community division or cohesion (or both). The report argues that getting it 'right' in terms of engagement with communities therefore will be in many ways just as important as the physical adaptation solutions themselves. Maintaining trust in governing authorities throughout the adaptation process will be crucial to smooth the process, as will ensuring communities have a clear understanding of local risks, and a level of control over the adaptation responses that are implemented.

This report offers governing authorities, central and local agencies, and practitioners involved in climate adaptation, important principles, tools, and case studies on meaningful community engagement in adaptation. Communities need the space and time to engage with the issues, grasp the science, and contribute to decision making from a position of knowledge. Decision makers should expect to transition from a one-off model of 'informing' or 'consulting' on specific projects, towards developing long-term partnerships with communities, with decision making as an iterative process.

Successful adaptation processes will also mean acknowledging that Māori are likely to be one of the groups most negatively impacted by climate change. This report follows Aotearoa New Zealand's first national adaptation plan in supporting and advocating for an adaptation model that honours the principles of te Tiriti. Such a model should aim to recognise and enable the rights of mana whenua to develop and implement adaptation planning for their communities in a spirit of partnership and empowerment – by Māori, for Māori.

The benefits of more meaningful engagement with tangata whenua and the wider community are many, and include:

- reducing the risk of local social divisions arising around climate change and adaptation responses, and building trust in the long term
- promoting 'just transitions' – that is, reducing the chance of inequitable outcomes as a result of social and economic changes brought about by climate change and instead finding opportunities for community development and regeneration
- improving the quality and durability of policy responses

- getting community buy-in for adaptation projects, which can reduce both implementation and maintenance costs.

We present several principles and tools for implementing a change of approach towards more meaningful engagement, including the importance of transparency, inclusiveness, and tools for working with the inevitable uncertainty that pervades climate change and adaptation responses. We also look at case studies that demonstrate best practice and innovation in this space, from iwi-led adaptation planning in Maketu, to the regeneration of the Puhinui stream and environs in South Auckland, to the inclusive development of a coastal adaptation plan in South Dunedin.

Finally, the report profiles a range of innovative approaches that hold great promise and/or are already proving their worth, from the use of digital technologies such as 'digital twins', to deliberative democracy practices such as citizens' assemblies, 'gamification', and other creative ways to involve communities who might otherwise be difficult to engage via traditional engagement methods.

Our central finding is that climate change adaptation needs to happen urgently, and that it needs to involve communities in new, more participatory ways. This change of approach will require some regulatory change, along with funding, resources, and commitment on the part of local government authorities to bring about. It will also inevitably require some 'professionalisation' of community engagement processes, as well as an acknowledgement that effective engagement and partnership requires a particular skill set that must be nurtured. Investing in this process will be essential if we wish to create a shared future that helps our communities not just survive, but thrive.

Recommendations

This report provides four overarching recommendations for Government and councils to consider.

RECOMMENDATION 1

MEANINGFULLY INVOLVE COMMUNITIES IN PLANNING AND IMPLEMENTING STRATEGIC LOCAL RESPONSES TO CLIMATE CHANGE

1.1 Approach engagement as a long-term process, rather than a one-off.

1.2 Undertake engagement in a spirit of collaboration, partnership, and, where possible, empowerment of local communities.

1.3 Enable dialogue and deliberation to help communities understand the science and decide how best to respond.

1.4 Aim to reduce, not exacerbate, existing inequalities and vulnerabilities. Ensure those who will be most affected are not only invited to participate, but resourced to do so.

1.5 Aim for community development and regeneration, rather than only focusing on physical or engineered responses to climate change.

1.6 Require any external adaptation contractors to demonstrate capability in best practice relating to community engagement.

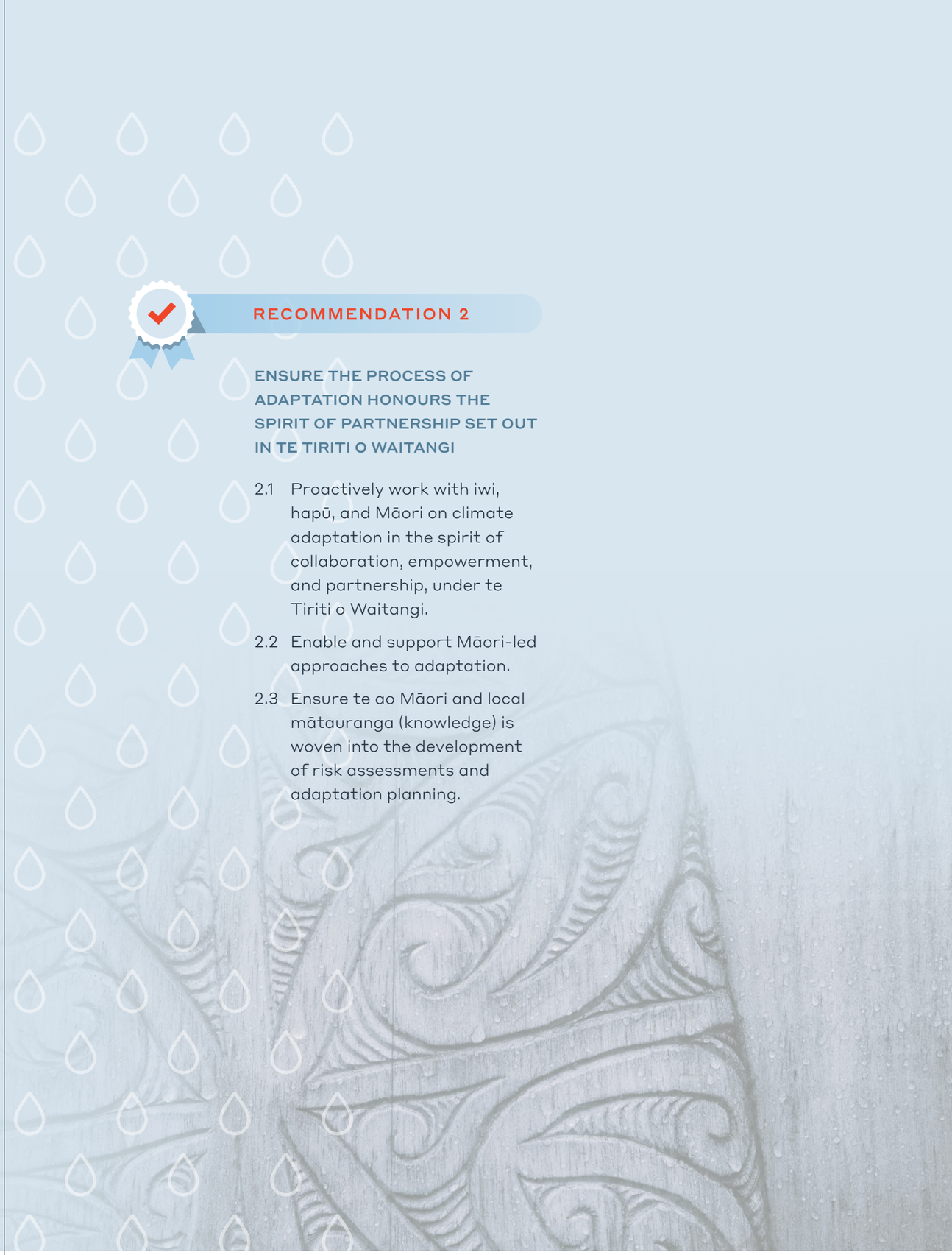
RECOMMENDATION 2

ENSURE THE PROCESS OF ADAPTATION HONOURS THE SPIRIT OF PARTNERSHIP SET OUT IN TE TIRITI O WAITANGI

2.1 Proactively work with iwi, hapū, and Māori on climate adaptation in the spirit of collaboration, empowerment, and partnership, under te Tiriti o Waitangi.

2.2 Enable and support Māori-led approaches to adaptation.

2.3 Ensure te ao Māori and local mātauranga (knowledge) is woven into the development of risk assessments and adaptation planning.



RECOMMENDATION 3

ADOPT AND FOSTER INNOVATIVE APPROACHES TO STRENGTHEN ENGAGEMENT AND PARTICIPATION

3.1 Use a variety of approaches to engagement to suit different contexts and to engage diverse audiences.

3.2 Use deliberative democratic approaches, such as citizens' assemblies, to inform or lead decision making on complex and politicised questions relating to adaptation.

3.3 Use visual and digital tools, as part of a package of approaches, to engage more widely, and to enable better decision making.

3.4 Use creative approaches such as 'serious games', art, role playing, and narrative tools to help community members understand the science, share what is important to them, and weigh competing options.

RECOMMENDATION 4

SUPPORT COMMUNITY ENGAGEMENT AT CENTRAL GOVERNMENT LEVEL

4.1 To ensure all councils can plan for and implement adaptation approaches in a timely way, help to fund local efforts following a transparent, needs-based process.

4.2 Promote the adoption of more participatory engagement processes in communities by funding research, development, and evaluation of innovative approaches.

4.3 Support councils with practical tools and resources to help with adaptation planning – via a digital hub or national centre of excellence, for example.

4.4 Support capacity building within the engagement profession, for example by investing in training and professional certification.

4.5 Pass the Climate Adaptation Bill, or equivalent legislation, into law as soon as possible. Give clear guidelines about what effective community engagement in adaptation looks like, when it should happen, and how it should be paid for.

4.6 Consider other legislative amendments, for example in the Local Government Act 2002, to provide further clarity about what is expected of local authorities.

Te Ara Awataha Community Celebration Day – image provided by Eke Panuku Development Auckland.

CHAPTER **1.**

The case for engaging with communities on climate change adaptation

CLIMATE CHANGE IS EXPOSING THE COUNTRY TO INCREASING RISKS

THE PRESSING NEED TO BEGIN ADAPTING LIVES, LAND, AND LIVELIHOODS TO ACCOMMODATE THE IMPACTS OF CLIMATE CHANGE HAS BECOME OBVIOUS TO ALL IN AOTEAROA NEW ZEALAND. THE EVIDENCE IS NOW UNEQUIVOCAL THAT HUMAN ACTIVITIES HAVE CAUSED GLOBAL TEMPERATURES TO WARM AND THIS WARMING IS EXPECTED TO CONTINUE INTO THE FORESEEABLE FUTURE (IPCC 2023).

The impacts of climate change will be experienced in the form of river and coastal flooding, slips and erosion, storm surges, extreme temperatures, bushfires, droughts, new invasive species and diseases, and increasingly wild and more frequent storms. These hazards will have the potential to significantly impact regional and national economies, infrastructure, transport, agriculture, biodiversity, and social cohesion. The impacts of climate change also pose a significant threat to public and private property: 750,000 New Zealanders and 500,000 buildings worth more than $145 billion are already exposed to the risk of extreme flooding *(Ministry for the Environment & Stats NZ, 2023)*.

Indigenous peoples worldwide are more likely to be negatively affected by the impacts of climate change *(IPCC, 2023)*, and Māori are no exception. Māori land, including burial sites and traditional food sources, are at risk from a changing climate, imposing increasing social, economic, health, cultural, and spiritual pressures *(Ministry for the Environment, 2023b)*. As just one example, eighty per cent of marae are built on low-lying coastal land or flood-prone rivers, making them particularly vulnerable to the impacts of climate change *(Kowhai, 2022)*.

ADAPTATION INCLUDES A RANGE OF RESILIENCE-BUILDING RESPONSES

Aotearoa New Zealand needs to cut emissions urgently as part of its binding commitment to mitigating this global problem. But, just as urgently, the country also needs to adapt and prepare for the inevitable impacts of climate change. Sitting back and waiting for the next disaster to strike is not only significantly more expensive than adaptation – it comes with far greater negative impacts on human wellbeing, ecological systems, and biodiversity *(Mercier, 2023)*.

Climate adaptation refers to strategies and actions that can be taken to build resilience to the increasing risks posed by natural hazards, now and in the future, as a result of climate change. Rather than being a one-off event, adaptation is an iterative process that allows for staged changes over time to reduce risk to people, property, and infrastructure *(Rouse & Blackett, 2011)*. 'Adaptive capacity' refers to a community's ability to adapt to potential impacts, as well as cope with specific events, based on its social, economic, and institutional resources *(Kristi et al., 2012)*.

The PARA framework (Protect, Avoid, Retreat, Accommodate) is used internationally and at home to explain the types of actions people and communities might take to adapt to climate change (Figure 1).

*Figure **1**. Adapted from the National Adaptation Plan (Ministry for the Environment, 2022)*

Protect
Staying in place and building defences, eg, stopbanks and sea walls

Avoid
Staying away from areas where the risk is too high, eg, restricting or preventing development and making changes to existing land use

Retreat
Purposely moving away from areas where the risk is too high, eg, red zoning, placing restrictions on land use and relocating community assets

Accommodate
Staying in place and making changes to buildings and infrastructure, to improve resilience

A recent report on sponge cities by the Helen Clark Foundation and WSP New Zealand called for urgent adaptation to the impacts of climate change, and recommended prioritising nature-based sponge city solutions as a key climate adaptation response.

Sponge cities approaches include restoring wetlands, daylighting streams, retrofitting urban areas with green infrastructure (such as tree pits and bioswales) and creating blue-green networks across whole cities to absorb rainwater 'in place', in a way that mimics the natural water cycle. Nature-based solutions can reduce the impacts of increasing rainfall and drought, as well as bolstering biodiversity, reducing heat, reducing emissions, and improving human health and wellbeing *(Mercier, 2023)*.

Other adaptation approaches may include:

- preparing emergency responses such as early warning systems
- minimising the risk of flooding by clearing overland flow paths, dredging streams and building stop banks and sea walls
- enhancing resilience through initiatives that address the provision of key necessities such as water, food and energy
- moving key infrastructure from hazard zones (raising roads, for example)
- flood- and storm- proofing households and businesses, for example by raising homes on stilts, installing storm proof windows and improving roofing
- planting trees and creating barriers to reduce slips and erosion
- creating fire breaks to stop bushfires.

As rain intensifies, sea levels rise, and storm surges become more common, the human inhabitants of Aotearoa New Zealand will be required to make space for more water alongside rivers, streams, lakes, and at the coast.

Adaptation responses to increasing flood risk can include building engineered 'hard' protections such as sea walls. However, in many cases, the only viable - albeit deeply disruptive for many – long-term solution will involve moving homes, businesses and sites of cultural significance out of harm's way as part of a staged process. This is known as managed, or community-led retreat, and is the adaptation approach that receives the greatest focus in the media.

THERE IS PRESSURE ON COUNCILS TO ADAPT, BUT CHALLENGES IN DOING SO

Initial steps have begun at a central government level to take adaptation seriously, with Aotearoa New Zealand's first national adaptation plan

launched in 2022 (*Ministry for the Environment, 2022)*, and a new climate adaptation bill under development at the time of the 2023 election (though the future of that piece of legislation is now uncertain). There are also some promising examples of adaptation planning happening at a local level, and some case studies are given in this report.

However, there is increasing pressure on councils, especially small ones, to find money in already tight budgets for adaptation, while they also struggle to deal with ongoing reactive issues caused by climate change, such as flood clean ups, slip remediation and road repairs (not to mention addressing long term underinvestment in other key infrastructure, such as the three waters). Large-scale emergencies – such as Cyclone Gabrielle at the beginning of 2023 – can take years to recover from financially, leaving little time and few resources available for strategic planning.

Adding to the challenges facing councils, expectations have increased over time that they will engage meaningfully with their communities around significant areas of decision making, including adaptation planning. Public participation in decision making, in anything more than a token way, can be expensive, time consuming, introduce further uncertainty, and involve special skills, putting further strains on local governing authorities. However, despite these challenges, this report concludes that such engagement is not just worthwhile but essential for a range of important reasons.

A recent report exploring how regional and territorial authorities in Aotearoa New Zealand currently engage with communities around climate adaptation *(Barth et al., 2019)* found that apart from stakeholder forums, most engagement was reported by authorities to be one-off consultation type work, within the context of specific questions about infrastructure and zoning, rather than engagement on big picture, strategic issues. A number of those surveyed for the report noted they did not have the resources or knowledge to encourage more strategic participation.

Simon et al. (2020) note that the key way councils generally engage communities around climate change in Aotearoa New Zealand tends to be in one-off events such as forums or submissions, and these often do not adequately connect with young people, those from lower socioeconomic backgrounds, or Pasifika and Māori communities. One-off engagements also do not foster the longer-term relationships that are needed to deal with more complex issues such as climate change.

A challenge for governing authorities is to find the most cost efficient, but also human-centred way forward, while retaining the trust and buy-in of communities. We argue below that engaging meaningfully with communities in a spirit of true collaboration around climate change adaptation will bring multiple benefits, and failing to do so would be a critical mistake for several reasons.

COMMUNITY ENGAGEMENT IN DECISION MAKING ENHANCES DEMOCRACY, PROMOTES EQUITY, AND LEADS TO BETTER DECISION MAKING

While community engagement in policy making can take many forms, the purpose of it is to allow those who are affected by a decision to be involved in policy design and development. This can involve different levels of public participation, from simply informing the public about decisions that have already been made, through to empowering groups to make decisions themselves on issues that affect them.

In Aotearoa, different and special considerations apply in relation to the Crown's obligation to work with iwi as treaty partners. Under New Zealand's national adaptation plan for example *(Ministry for the Environment, 2022)*, the principles of te Tiriti o Waitangi are recognised as a central aspect of the Government's long-term adaptation strategy. The plan emphasises the importance of developing adaptation responses in partnership with Māori, and empowering Māori in planning for Māori, by Māori. This does not yet happen consistently in Aotearoa New Zealand, though there are notable exceptions (some covered below).

Outside of the special relationship with iwi (discussed further on page 37), local councils' mandate to govern the general public traditionally relies on 'representative democracy' – that is, elected representatives such as councillors provide democratic representation in decision making *(New Zealand Government, 2023)*. This is reflected in research that suggests many councils continue to see the primary role of engagement as being to inform and educate, and to build support for decisions that have already been taken *(Barth et al., 2023)*.

However, democracy via election of representatives, where not backed up by other forms of public participation, can mean

diverse communities are not fully represented in local governance. Local democracy in this country is hampered by low rates of participation in local elections and, in general, current engagement processes are widely seen as not meeting the diverse needs of modern communities *(New Zealand Government, 2023)*.

Councils often struggle to engage meaningfully with diverse groups during their engagement processes, leaving Māori, Pacific peoples, youth, and lower socio-economic whānau under-represented. Traditional forms of engagement, such as online submissions for example, overrepresent the views of Pākehā, those in high income areas, those with tertiary education, and older people *(New Zealand Government, 2023)*.

Communities exposed to increasing climate hazards due to climate change, and therefore required to consider disruptive adaptation interventions, face many physical, social, financial, and emotional challenges. There is significant potential for inequitable outcomes if these challenges are not well managed.

To ensure successful adaptation, local authorities will need to adopt new and more participatory approaches to engaging with communities *(Stephenson et al., 2020)*. If well executed, this participation can provide an opportunity for those with little voice in society to be heard, and to influence adaptation decisions,

while also enhancing a sense of community and belonging (*Barth et al., 2023)*.

The Future for Local Government Review, published in June 2023, emphasised the importance of building greater citizen-led democratic participation through the expanded use of deliberative and participatory democracy tools: “Active community participation is a feature of any robust democracy. It is important for people to feel connected to decisions that impact them, their whānau and community, and future generations” *(New Zealand Government, 2023)*.

The review panel favoured a model in which local government would be “an enabler of democratic decision making, not the holder of it”, and recommended a switch away from traditional forms of engagement towards greater citizen-led democratic participation and innovation *(New Zealand Government, 2023)*.

Participatory approaches are an effective means to get people on side, enable them to understand complex systems, and thus achieve outcomes through consensus. High levels of public participation can increase a community’s capacity for conflict resolution, innovation, and problem solving *(International Association for Public Participation, 2018)*. Meaningful engagement and the resulting upskilling of communities about the science relating to climate change can also have the benefit of leading to improved community cooperation, as well as positive behavioural change *(Mehryar & Surminski, 2022)*. Examples include people driving less, or retaining trees on their private land.

Importantly, while climate change is the cause of significant anxiety and distress among a large section of the population, research suggests there are mental health benefits for individuals involved in crafting creative responses to how they will deal with its impacts. Acknowledging and talking about climate change with others can help “maintain … creativity and motivation, avoid isolation, and find a sense of shared purpose with others” *(Clayton et al., 2017, p. 28)*.

Participation also increases the ambition of local climate change planning. A recent international literature review found that local adaptation planning processes that included a higher level of interaction and participation were four times more likely to exhibit a transformative outcome *(Cattino & Reckien, 2021)*.

Finally, if public participation is done well, and is allowed to influence decision making, it can result in far better policy decisions. Solutions will be

realistic, have buy-in from the community, and thereby be more durable. A useful side effect can be greater trust in governing authorities, and the development of positive long-term relationships that can also help inform future decision making *(DPMC, 2020)*.

> “Citizens’ participation in local government decision making is not just as a tool that contributes towards growing local democracy but a vital part of the essence of democracy itself”
>
> **New Zealand Government, 2023**

PARTICIPATION ON QUESTIONS OF CLIMATE CHANGE IS PARTICULARLY CRITICAL

There are several reasons that participatory approaches are fundamental to climate adaptation, as opposed to other questions local authorities may have to decide. These include the fact that climate change:

- includes longer time horizons than many other issues covered by local government. Dealing with its impacts will be a multi-decade process
- has the potential to become a greatly emotional, fraught and divisive issue, as the impacts grow, and the inevitable trade-offs of decision making become harder
- impacts a broader range of human and ecological systems than most sources of risk. Climate change presents some of the biggest and hardest issues we’ve had to deal with as humans
- is complex and ever-changing with no clear solutions. The science can be hard to understand and to apply to local conditions, and is sometimes contested
- will intensify a range of existing or familiar hazards, but may well also present hazards that are novel, and require different approaches (such as new pests and diseases, for example) *(Smith et al., 2016)*
- may lead to substantial and irreversible outcomes (e.g., sea level rise) that challenge conventional economic tools and environmental policy *(Ministry for the Environment, 2017)*.

In addition, some decisions made in the context of climate adaptation may be irreversible and create ‘lock-ins’, or path dependencies, that fix the direction of future decision making, thus reducing the adaptive capacity of communities (such as investing heavily in engineered flood defences that take many years to plan and build) *(Ministry for the Environment, 2017)*.

In short, climate change, and the some of the actions necessary to adapt to it, are complex, impactful, irreversible, and contain the potential to sow either great community division or cohesion (or both). All these factors make it essential that communities have an understanding of what they are facing, and a level of control over the adaptation responses that are implemented.

Local knowledge held by communities can add weight to decision making processes around adaptation, by integrating locally relevant social, economic, cultural, and scientific concerns into the agreed solutions *(Rouse & Blackett, 2011)*. Drawing on this rich local knowledge through public participation is not just a huge challenge for governing authorities tackling setting out on an adaptation process – it is also a huge opportunity.

Through respectful and meaningful engagement, communities have the chance to reframe how they see and live in their places, and communicate what is important to them. This gives us all the opportunity to develop our communities to make them more inclusive and more liveable, even while we prepare for an uncertain future.

South Dunedin Future stand at South Dunedin Festival. Photo Credit: Dunedin City Council.

PARTICIPATION IS IMPORTANT IN A CLIMATE OF INCREASING MISTRUST

Climate change and its impacts threaten to become the most polarising issue of our time *(Falkenberg et al., 2022)*, especially if not handled well. The disruptions climate change is likely to cause at every level of society could dwarf the divisions experienced since the COVID-19 pandemic. While both issues have serious and wide-reaching consequences, the pandemic has been relatively short-lived compared to the expected decades of disruption from climate change, many impacts of which will be permanent, and will continue to intensify.

Rated internationally, Aotearoa New Zealand has high levels of trust in its public services, and those levels have actually increased in the past decade *(Te Kawa Mataaho - Public Service Commission, 2023)*. However, levels of trust in government, NGOs, business and the media declined in this country in the year to 2023 *(Acumen Edelman, 2023)*. Sixty per cent of people believe Aotearoa New Zealand is more divided today than in the past, and Aotearoa New Zealand is rated, by Acumen Edelman's international scale, as "moderately polarised". This means, while the country is moderately divided on key societal issues, citizens are generally able to work through or overcome ideological divisions. However, falling levels of trust in institutions over the past year are being exacerbated by inflation, the cost of living and an increasing feeling of inequity.

An erosion of trust in mainstream information by some groups also reflects the damage done by the rise of dis-and misinformation, particularly on social media, and rise of conspiracy theories since the COVID-19 pandemic *(Classification Office, 2021)*. The ongoing climate of conspiracy theories leaves potential open for deep rifts to form around approaches to climate adaptation. Investigation of data on Twitter between 2014 and 2021 shows recent increasing ideological polarisation around climate issues internationally, for example, and this seems unlikely to recede as climate change increasingly impacts people's lives *(Falkenberg et al., 2022)*.

According to the Classification Office *(2021)*, resistance to belief in climate change, despite overwhelming scientific consensus that it is real, is at least in part the result of sophisticated disinformation campaigns – continuing over decades – that have been often funded by the fossil fuel industry. A 2021 survey reflects the impact of these campaigns, finding that around fifteen per cent of New Zealanders don't believe in anthropogenic climate change. Meanwhile three in four New Zealanders worry that false information about climate change presents an "urgent and serious threat" to Aotearoa New Zealand society *(Classification Office, 2021)*. Anecdotally, it is not unusual for climate change deniers to turn up to council meetings and attempt to disrupt proceedings around the country.

*Figure **2**. New Zealanders' response to the statement "climate change is mainly caused by human activities". Adapted from Classification Office (2021)*

In a climate of distrust, top-down decision making (sometimes accompanied by an attempt to inform the public about why decisions have been made) often fails because it does not consider the complex social, cultural, and economic context in which information is interpreted and evaluated. Community members may disbelieve the information provided due to suspicion regarding the motives of the source and their perceived underlying interests *(Rouse & Blackett, 2011)*.

By contrast, bottom-up decision making, in the form of robust participatory engagement in decision making processes helps build relationships of trust that can contribute in the long-term to creating an inclusive society. Importantly, it can also ensure planning is responsive to local concerns, and thus increase the legitimacy of decision making *(Barth et al., 2023)*.

CHAPTER **2.**

Principles of community engagement

BEST PRACTICE IN COMMUNITY ENGAGEMENT FOLLOWS A SERIES OF ACCEPTED PRINCIPLES

While no single recipe for community engagement exists, a series of key principles for effective and meaningful engagement has been built up in the literature over several decades. Given the complexity and sensitivity of adaptation to climate change, it is fundamental that these principles be applied to decision making around adaptation.

First and foremost, Aotearoa New Zealand's context must be seen as particular in that local government engagement with both mana whenua (Māori who hold traditional authority over land) and with mātāwaka (Māori living outside the rohe of their iwi affiliations) is integral to decision making processes here *(Ombler et al., 2016)*. The first consideration must therefore be how to ensure the engagement process is managed in a spirit of partnership according to the principles of te Tiriti o Waitangi. This is discussed in more detail in the following chapter.

Outside of the requirement to work alongside Māori in decision making, some of the key principles emerging from the literature in relation to engagement around climate adaptation include the following:

- The community engagement process is to **create and maintain a safe space for dialogue, deliberation and negotiation**.
- The engagement space must be **strongly grounded in the local communities** where the impacts of the proposed changes are likely to be felt, allowing the engagement process to be tailored specifically to suit the local context and societal structures.

- Governing authorities should **take the time to listen** to communities to understand their perspectives, experiences and needs, before then developing a clear vision together of the nature, scope and purpose of the process
- **Transparency** about the process is crucial. Attention must be paid particularly to managing expectations about the kind of input that is sought and the ways this input may or may not impact the way decisions will be made
- One-off engagement is not as suited to climate adaptation planning as it might be for other types of decision making. Given that the impacts of climate change will emerge gradually, and will be felt over a long period of time, **multiple points of engagement** should be built into any engagement process, from conceptualisation through to the final outcome.
- **A variety of engagement tools** should be planned to suit different contexts, goals, groups of people and timeframes, with the goal to make the process as accessible as possible, and include the viewpoints of diverse communities.
- **Justice and equity of outcomes** should be addressed as a key focus as part of the engagement process.
- As much as possible, governing authorities should take the opportunity to **tackle issues of community development, as well as addressing other environmental and social priorities**, alongside a focus on reducing environmental hazards.

Wellington Citizens' Assembly, 2023.
Photo Credit: Wellington City Council.

The Ministry for the Environment's Coastal Hazards guidance for local government *(2017)* sets out six key principles for community engagement for addressing coastal hazards, and these are applicable to other forms of adaptation planning.

Some of the most important principles outlined here are discussed in more detail in the sections that follow.

1 **Be timely, and take the necessary time**

Recognise that achieving genuine dialogue and debate means taking the time to build relationships, understanding, and trust.

Take the time to understand the differing values, perspectives, and desired outcomes of community members. Different perspectives should be understood before taking action.

Plan for conversations to be ongoing rather than one-off, as adaptation presents an ongoing challenge.

Conversations should be initiated early, well before any decisions are made, or impacts felt.

2 **Be flexibile and adaptable**

Use adaptive approaches. Adopt processes that can evolve to meet changing needs or a shift in context.

3 **Be inclusive, empathetic, and ensure representative participation (equity)**

Ensure representation of vulnerable or marginalised communities and those with diverse interests, including future generations and others who cannot represent themselves (such as ecosystems).

Establish a process that is sensitive and empathetic, because a lot is at stake for many participants.

4 **Run a transparent process**

Transparency is critical to enabling communication and building trust. Ensure there is clarity around who will be involved in the process, how, and why.

Be upfront about how the process will proceed, how decisions will be made, and who will make them.

5 **Incorporate scientific input and local knowledge**

Develop a shared understanding by sharing local knowledge, including mātauranga Māori (traditional knowledge).

Support communities to consider multiple possible futures and high degrees of uncertainty around the timing and nature of climate change impacts.

Seek adaptable solutions that work in multiple possible futures.

6 **Secure committed resources and institutional support**

Ensure commitment to supporting ongoing leadership and a team with the right skills and resources to complete the process.

Commit to supporting active iwi / hapū and Māori participation through existing relationships and jointly agreed mechanisms.

THE SPECTRUM OF PUBLIC PARTICIPATION, AND WHY IT MATTERS

In Western liberal democracies, representation of community interests is conventionally expected to be achieved primarily via elections, with decisions then made by accountable elected representatives. More 'participatory' approaches hold that true democracy necessitates an active and engaged citizenry. 'Emancipatory' theories go a step further and argue that the accumulation of power and expertise within a governing elite promotes the continued disempowerment of certain social groups *(Ombler et al., 2016)*.

Arnstein (1969) was the first to attempt to make visual, as far back as the 1960s, the different levels of citizen participation in decision making. Her 'ladder of engagement' showed degrees of citizen participation in decision making from 'manipulation' through to 'citizen control'. For her, citizen participation was a political issue, with many forms of 'participation' tokenistic at best, and oppressive at worst:

"Participation without redistribution of power is an empty and frustrating process for the powerless. It allows the power-holders to claim that all sides were considered, but makes it possible for only some of those sides to benefit. It maintains the status quo" *(Arnstein, 1969, p. 216)*.

Probably the most widely recognised framework today is the 'spectrum of public participation', produced by the International Association for Public Participation *(2018)* (IAP2). The spectrum moves from left to right, beginning with the lowest levels of participation - '**informing**' and '**consulting**', through to '**involving**', '**collaborating**' and finally, '**empowering**', communities. Each step represents an increasing degree of community impact on the process about which governing authorities are engaging (Figure 3).

*Figure **3**. IAP2 Spectrum of Public Participation (2018)*

INCREASING IMPACT ON THE DECISION

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place the final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will impliment what you decide.

Examples of '**informing**' include commonly used engagement tools such as media releases, brochures, and websites - they provide information in one direction only. '**Consulting**' may include tools such as surveys and feedback forms, which collect feedback but do not provide space for discussion.

'**Involving**' may include workshops and public meetings where participants are able to feed suggestions into the process and get some feedback, with some degree of potential influence on the final decisions.

At the more engaged end of the spectrum, '**collaboration**' may include workshops, online discussions, and hui where the public can help develop options for preferred solutions, with the promise this will be incorporated into final decisions to the maximum extent possible. '**Empowering**' includes the promise to implement decisions made by the community. This may include a range of engagement processes such as hui, panel discussions, and deliberative democratic processes such as citizens' juries.

It is important to match the issue to be decided on with the right level of engagement. Guidance from the Ministry for the Environment *(2017)* suggests asking questions such as the following to decide where on the spectrum of public participation an issue might sit:

- To what degree do all the participants agree on the science?
- How complex is the problem?
- How contentious is the issue?
- What is the level of trust in decision makers, and in others in the community?
- To what extent will the issue affect relevant communities? How transformational are the proposed changes?

Where there is disagreement on the science, controversy, or significant complexity in terms of potential solutions, where issues will have a large impact on communities, or where there is a lower level of trust in decision makers and the wider community, this would indicate moving along the spectrum towards more engagement rather than less.

For example, a project to install a series of rain gardens on suburban streets, or to 'daylight' a section of piped stream, would call for a less widespread collaborative engagement process than the development of a long-term coastal adaptation plan that includes options to relocate homes. However, given the potentially transformative nature of climate change impacts, and of policies to adapt to these impacts, best practice for long-term projects in this space would in nearly all cases indicate engagement processes underpinned by a high degree of participation (towards the right of the IAP2 spectrum).

Clear expectations must be set out at the beginning of the engagement process about participants' level of influence over any decisions. If participants are encouraged to think they have a higher degree of influence on outcomes than they really do, this can lead to frustration and a breakdown in trust later in the process, as well as undermine the legitimacy of the resulting decisions *(Smith et al., 2016)*.

Photo Credit: Wellington City Council.

Te Whakaoranga o te Puhinui community activation day, Manukau, Auckland. Photo provided by Eke Panuku Development Auckland.

Case Study - Te Whakaoranga o te Puhinui

Te Whakaoranga o te Puhinui (Puhinui stream regeneration programme) in South Auckland, is an ongoing initiative originally conceived by Eke Panuku Development Auckland, which used the IAP2 spectrum of participation to design its strategy.

A wide range of project partners and collaborators are involved in the programme, with a governance group consisting of members of Te Waiohua iwi, Eke Panuku, Auckland Council, Kāinga Ora and local boards. They worked with Resilio Studio, a sustainable design practice, and other partners, to develop the project.

The strategy adopts an 'Empowered Communities' approach, meaning that the goal is to increase the influence, decision making and active involvement of local stakeholders. To help achieve this, project partners worked to determine where each group of stakeholders should be positioned on the spectrum of participation *(Resilio Studio, 2023)*.

For example:

- **Waiohua Iwi**, as Treaty Partner and Project Partner, sit at the 'empower' level of influence as part of an active, trusting and productive partnership. To make this possible, Eke Panuku funded a part-time position, selected by the iwi, to support them at project meetings, providing guidance, support, and advice throughout the project process.
- **Auckland Council cross-council collaboration group**, are key stakeholders at the 'collaborate' level, and serve as an informal advisory and to ensure alignment across complementary projects and programmes underway.
- **Residents of Puhinui catchment** are also treated as key stakeholders, and are involved in regeneration projects, activations, and co-design engagements. The project has hosted workshops and wānanga, as well as in-person and online sessions.
- **Other stakeholders** such as local community organisations sit at the 'involve' level. They are invited to hui and engaged via social media, events, and activations.
- **Local schools and tertiary institutes** sit at the collaborate/involve level. Schools play an active role in the regeneration project and there are multiple levels of engagement with them including interviews, classroom sessions, newsletters, and class site trips.

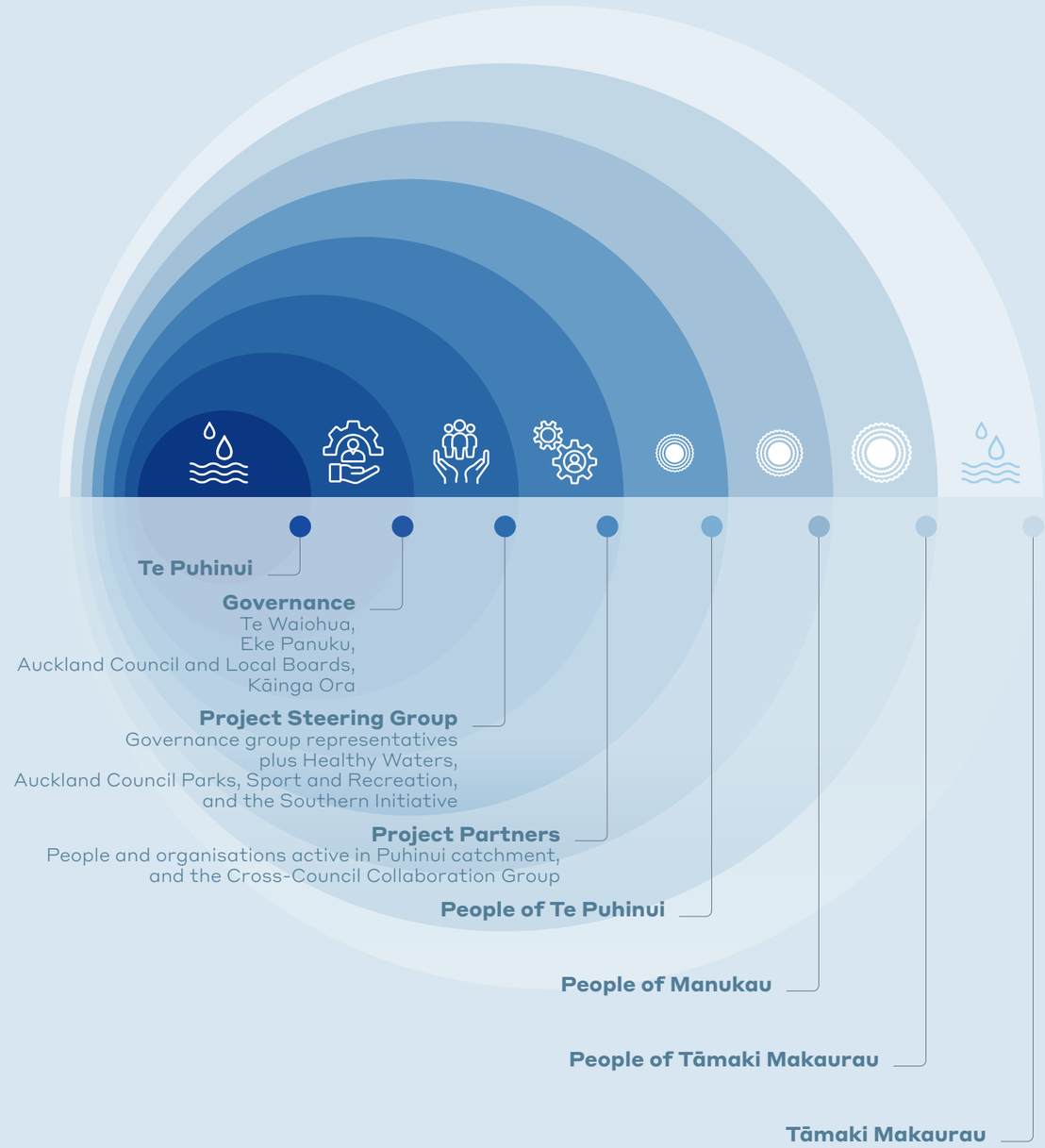
Iwi partnership: Te Puhinui Regeneration defines itself as a "flagship project utilising a living system and whakapapa centred wellbeing approach that integrates western ecological and regenerative development concepts with indigenous tikanga (protocols), frameworks and narratives" *(Resilio Studio, 2023)*. Key to the approach was the establishment of a partnership at the outset with local iwi Te Waiohua. From this partnership, principles and values were developed that everyone could get behind (such as respect for the environment). This helped lay the foundations of a positive programme, and other stakeholders were then brought on board – first other local Māori groups, and then the wider community.

Regenerative design: The project's 'regenerative design' approach seeks to uplift the health of the physical, social, and environmental systems impacting Puhinui stream. It consciously works to build the capability and capacity of local people to take part in the regeneration of the environment and the wider community. This approach ensures new physical infrastructure is appropriate to this area and creates a unique sense of identity and place. To contribute to regeneration for the community and its environment, the project team wove outcomes for three core components into its strategy: healthy environments, a focus on whenua/place, and empowered communities.

Co-design: Principles of co-design were also integrated into the project from the outset. Co-design is a well-established approach to engagement with roots in the participatory design techniques developed in Scandinavia in the 1970s, and is often used as an umbrella term for participatory, co-creation and open design processes *(Design for Europe)*. In the case of Te Whakaoranga o te Puhinui, this meant taking opportunities for community empowerment in decision making. For example, in the development of a local park, communities were invited to take part in the design process through a series of three workshops, in which they identified a nature play area and a community orchard as priorities, and developed concept designs for each. Some community members also went on to further refine the designs, and were then involved in delivery of the projects *(Resilio Studio, 2023)*.

> “This project has been a true example of shared power and partnership. Although Eke Panuku initiated the project, we are not the leaders of it. Our diverse project partners in the community run different parts of it, and provide funding, too. Our role has really been to work with our partners and facilitate, mobilise, and develop a framework for things to happen whilst keeping the momentum going. We steered away from traditional council engagement tools, such as town halls. Instead, we employed locals, went out into schools, hosted sessions at marae, worked with existing networks... we work with and in the community, rather than expecting them to come to us. ”
>
> **Sara Zwart, Principal Regenerative Design Lead, Eke Panuku Development Auckland (personal communication, 16 October 2023)**

*Figure **4**. Adapted from Empowered Communities Strategy: Te Whakaoranga o te Puhinui (Resilio Studio, 2023)*



WHO TO INVOLVE IN ENGAGEMENT PROCESSES, AND HOW

Key initial tasks when preparing for community engagement on an issue include identifying who to engage with via a stakeholder analysis, and deciding what level of engagement is needed with each of these stakeholder groups *(Ministry for the Environment, 2017)*. In New Zealand of course, identifying and engaging mana whenua is amongst the first requirements of project organisers. Engaging with iwi, hapū, and Māori is discussed in depth on page 37.

The range of stakeholders to engage may include:

- communities of place (i.e. those located in the geographic region of concern)
- communities of interest (i.e. those with a particular concern, but who may reside elsewhere, such as business owners)
- communities for change (i.e. those with related roles and/or responsibilities, such as council staff, researchers, the media and non-government organisations) *(Smith et al., 2016)*.

Within each of these communities there will be influential individuals, groups, and networks. The most effective engagement strategies will utilise these to develop engagement strategies, rather than creating new associations *(Ministry for the Environment, 2017)*.

An important caveat to this approach is that some people (often the most marginalised or socioeconomically vulnerable) may not be connected to existing networks. For many people barriers can impact meaningful engagement, including differing levels of time, knowledge, interest, and capacity, often related to existing disadvantage or social exclusion *(Kelly & Kelly, 2019)*.

The Government's Coastal Hazards and Climate Change guidance therefore suggests asking, as part of the stakeholder mapping process, who is not represented by the existing groups identified, how they could be reached, and by whom *(Ministry for the Environment, 2017)*. Creative actions and events such as beach days, street parties, and concerts can be a good way to include communities and individuals who are harder to reach if using traditional methods such as town halls *(Smith et al., 2016)*, and some of these ideas are covered in the case studies in this report.

Where possible, participation in engagement processes that involve a time commitment should be supported with remuneration, by covering expenses, or other support, such as childcare *(OECD, n.d.-b)*. This will enable those with more limited means to access a process they may otherwise feel excluded from.

Finally, government guidance *(Ministry for the Environment, 2017)* suggests thinking about how to involve 'values without a voice'. For example, how can the engagement process ensure the interests of future generations be considered, and how can ecosystems or species be represented in the conversation?

Community coming together at the South Dunedin Street Festival. Photo Credit: Dunedin City Council.

South New Brighton, Christchurch.

Case Study - The How Team

In the context of the need to develop a regeneration strategy to address earthquake legacy issues in Southshore and South New Brighton, a local community group, Renew Brighton, urged officials to establish a "How Team' *(Local Government New Zealand, 2020)*.

The How Team became a group of community members and government agency staff who provided advice on how agencies should have discussions with the community. It didn't provide advice on substantive issues, but rather on the engagement process itself. The team developed an engagement plan, which set out how to bring genuine and effective input from the community into the development of the Regeneration Strategy.

Team members were chosen on their ability to listen and represent the common good, rather than as representatives of particular groups, demographics, or issues. Renew Brighton employed a community-based convenor to establish and manage the How Team project, which was paid for by the council.

One of the key challenges of the project was ensuring diversity was represented on the How Team. Other challenges included working out how to allocate weight to different community perspectives, as well as the tight timeframe to develop the engagement plan (around nine weeks).

Council staff felt the benefits of the process far outweighed the costs, and the How Team model is viewed as having been effective in supporting Christchurch City Council to build relationships and trust with local communities, and to engage with them in a genuine and meaningful way *(Local Government New Zealand, 2020)*.

South New Brighton, Christchurch.

TE TIRITI-BASED ADAPTATION

Land held by iwi, hapū and Māori is likely to be disproportionately vulnerable to climate impacts and natural hazards because such a large proportion is low lying, located in coastal areas, or prone to erosion *(Ministry for the Environment, 2022)*. Perhaps because of these particular vulnerabilities, many Māori are already undertaking adaptation planning *(Ministry for the Environment, 2023a)*.

Māori have a long history of facing natural hazards using mātauranga Māori (knowledge and wisdom). The health of the natural world, and the connections that exist between all living things, are of critical importance in te ao Māori, for which all aspects of nature are intertwined and connected through whakapapa – the Māori relationship to land and nature is one of kinship *(McGowan, 2021)*. As such, there is great value in ensuring Māori are involved in adaptation planning, even aside from the legal and moral requirement to do so.

A level of engagement is required under the law

Engagement with Māori on climate change responses varies around the country *(Ministry for the Environment, 2023c)*. Despite some excellent examples of meaningful and fruitful partnership between territorial authorities and mana whenua in adaptation planning (some of which are outlined below), historically, councils have often engaged with Māori following the bare minimum requirements set out in the Resource Management Act 1991 (RMA) and Local Government Act 2002 (LGA) *(Iorns, 2022)*. These Acts require consultation to a certain point, but arguably do not require the implementation of 'collaboration' or 'empowerment' approaches under the IAP2 spectrum of public participation.

Crown agencies are of course required to work with tangata whenua following the principles of the Treaty of Waitangi / te Tiriti o Waitangi. There appears to be less legal clarity in terms of the obligations of territorial authorities. While the Waitangi Tribunal has found that territorial authorities generally are agents of the Crown in relation to honouring treaty obligations, in relation to issues covered by the RMA, the Environment Court has held that territorial authorities are not required to uphold treaty duties *(Iorns, 2022)*. This is because the RMA merely requires all persons exercising functions and powers under it, in relation to natural and physical resources, to "take into account" the principles of the Treaty of Waitangi.

In contrast, the Natural and Built Environment Act 2023 (NBEA), which had been expected to replace the RMA as part of a staged process, requires all persons exercising powers and performing functions and duties under the Act to 'give effect to' the principles of te Tiriti o Waitangi – a greater requirement than "taking into account" and a nod to the Māori version of te Tiriti, rather than the English. It also establishes a National Māori Entity tasked with providing independent monitoring of the cumulative effect of decisions made under the NBEA and the Spatial Planning Act 2023 in giving effect to te Tiriti principles.

In other words, the new acts will likely require much more from territorial authorities in terms of engagement than is currently the case. At time of writing this report however, the fate of both pieces of legislation remains unclear *(National Party, 2023)*.

Meanwhile, under the LGA (s81), local authorities must maintain processes to "provide opportunities for Māori to contribute" to decision making processes, must consider ways to foster the development of Māori capacity to do this, and must provide relevant information to assist with this process. Providing opportunities to 'contribute' arguably falls significantly short of the IAP2 definitions of 'collaborate', much less 'empower'.

A higher level of engagement is indicated if principles of justice and best practice are also considered

Regardless of the fate of the NBEA and SPA, there are many excellent reasons for territorial authorities to work with mana whenua in a spirit of partnership, collaboration and empowerment, many of which are covered in this report. In addition to giving effect to the spirit of the principles of te Tiriti o Waitangi, robust engagement is more likely to produce just and equitable outcomes, as well as more comprehensive, more durable, and more well-rounded adaptation outcomes. Incorporating Indigenous knowledge into adaptation processes is internationally recognised as a way to improve climate resilience *(Global Commission on Adaptation, 2019)*.

For example, *(Donkers & Bailie, 2022)* note that partnership and collaboration approaches to engagement used by the Kaipātiki Project and Eke Panuku as part of their work to daylight the Awataha Stream in the Auckland suburb of Northcote, have helped

the wider community learn to value nature differently and begin to transform societal behaviours into more ecologically connected ones: “With guidance and support, non-Indigenous communities can develop new perspectives on nature and culture, learn to value these more dearly, and begin to help repair some of the ecological damage our ways of living have caused” *(p. 48)*.

A recent report by the Helen Clark Foundation and WSP New Zealand, *Sponge Cities: Can they help us survive more intense rainfall? (Mercier, 2023)* also addressed the importance of working on climate adaptation approaches drawing on the principles of mātauranga Māori (traditional knowledge and wisdom), which values nature as something to be respected and honoured, rather than controlled and dominated. The Māori way of viewing nature is more holistic than traditional western approaches, including both the physical and the metaphysical, and drawing on a vision of rauora (natural abundance), rather than simply aiming to achieve minimum environmental standards *(Ihirangi, 2021)*. A mātauranga Māori approach can therefore bring a richness to adaptation planning that may otherwise be lacking.

The importance of engaging meaningfully with Māori according to the spirit of te Tiriti o Waitangi is also reflected in the conclusion of the Ministry for the Environment in its climate adaptation issues and options paper *(2023a)*. This proposes a te Tiriti-based adaptation approach

Te Ara Awataha Outdoor Classroom. Photo Credit: Isthmus Group.

to local adaptation planning, summarised as follows:

- The Crown must proactively work with iwi, hapū and Māori to uphold Māori rights and interests, and kāwanatanga (governorship) obligations in a way that creates space for tino rangatiratanga (self-determination and sovereignty).
- Te ao Māori and local mātauranga should be central to the development of risk assessments and adaptation planning at place.
- Iwi, hapū, and Māori at place should be supported to prepare risk assessments and adaptation plans.

Ministry for the Environment *(2017)* guidance on responding to coastal hazards also stresses the importance of “adequate support and resources” to enable active iwi/hapū and Māori business participation, and that any project teams working on adaptation for coastal areas must have competency in fostering and managing these relationships.

Specific considerations for Māori in adaptation engagement

As part of the development of its issues and options paper *(Ministry for the Environment, 2023a)*, Parliament’s Māori Affairs Committee set out how best practice might look, concluding that engagement processes with Māori on adaptation issues should:

- give effect to Te Tiriti o Waitangi / the Treaty of Waitangi
- enable robust and deep conversations to be had between Māori communities, the Crown and local government
- enable local community leadership
- enable joint, shared, or preferably delegated decision making to Māori
- foster positive, collaborative working relationships and co-creation between all parties
- enable the inclusion of different communities of interest (for example, Māori individuals living in an area who are not members of the local tribe)
- engage with the correct groups responsible for making decisions about the whenua in question (for example, Māori land trusts).

The committee also recommended that the adaptation planning process recognise the value of mātauranga Māori equally alongside other knowledge systems. This reflects a vision of ‘empowerment’, with shared or delegated decision making or, at the least, strong ‘collaboration’ to the right-hand side of the IAP2 spectrum of participation (discussed on page 26).

There are several good examples of Māori leading adaptation planning effectively.

Maketu Estuary.
Photo Credit: Maketu Iwi Collective.

Case Study - Iwi-led adaptation planning in Maketu

Maketu, a small township in the Western Bay of Plenty, has suffered a number of floods in recent years. The area is low-lying, and particularly vulnerable to sea level rise. Development of He toka tū moana mō Maketu – the Maketu climate change adaptation plan, was conceived and led by the Maketu Iwi Collective (2022), working closely with the local community and Bay of Plenty Regional and Western Bay Councils. The plan won the NZPI 2023 Nancy Northcroft Planning Practice Award for excellence in planning practice.

The impetus for the plan began after large swells and heavy rainfall events exposed a cliff-top urupā (burial site) at Okurei, and bones belonging to ancestors fell onto the beach below (Paewai, 2022). A local iwi member and one of the coordinators of the plan, Roana Bennett, explains:

"We've been aware for a while about the future impacts of climate change on our coast. A marae project back in 2009 included raising the Whare Tupuna by almost a metre. We've been discussing the need to move parts of the village away from the estuary since then, and by 2021 we were hearing a lot from the regional council about climate change impacts and how they might affect us. There was a strong sense in our iwi that we did not want the solutions to come from the council and from the Government, and just be handed to us. So we decided to front-foot it, and set up a planning process that would be iwi-led but would involve the whole community."

The iwi secured $15,000 from the regional council to cover the basic costs of the process, and scheduled five full-day Saturday wānanga (workshops) at the local marae, to be held over a period of eight weeks. Bennett states:

"We felt it was really important to get our whānau all on the same page first, followed by the wider community and then the agencies... We started with an iwi-only hui, to set the kaupapa and to decide on the core values for the process. We spent a lot of that initial session processing some of the shared anger and mamae [pain] about climate change, which we see as having come about as the inevitable impact of colonisation."

(personal communication, 26 October 2023).

The iwi decided on seven core values at the hui, which went on to inform the rest of the engagement process: rangatiratanga (self-determination), kotahitanga (collective action), māramatanga (collective enlightenment), manaakitanga (collective care), kaitiakitanga (safeguarding the future), whānaungatanga (connectivity), and tikanga (Māori practice) *(Maketu Iwi Collective, 2022).*

"The second session was 'Climate 101'. We invited along the wider community and the session was facilitated by an independent expert on climate change. We thought it was important to bring in an external person to ensure the whole community would feel welcome and give everyone a chance to contribute. That session was about getting everyone on the same page in terms of the climate impact we are likely to see – the risks and the science."

(Roana Bennett, personal communication, 26 October 2023).

The three councils (two district, and one regional) were invited to the third wānanga along with central government agencies. They were invited to present their climate data and any plans they had in the

Maketu community celebrating their award win. Photo by Maketu Iwi Collective.

Engaging rangatahi and tamariki is a core part of the Maketu Climate Adaptation Plan.

pipeline that could affect Maketu. Bennett notes, “There were some confrontational conversations as part of that session, but it was a great way for the councils to build positive relationships, not just with the community, but with each other and with the central government agencies too.”

Armed with all the information they could gather, the community then had a strategic planning day, complete with white boards, sticky notes, and coloured dots for voting. The result was a draft strategic plan, which was then emailed around for further discussion. At the final session, the plan was signed off and the community had a celebratory kai together.

"What was interesting was that the community didn't want to limit themselves to just a few key projects as we had originally planned. Instead, the plan that we came up with was really holistic and looked at the whole community and what we value about this place and the people who live here. We agreed on five strategic priorities [Figure 5], which included protecting the water, the lands, natural biodiversity, and our community, but also focused on protecting and building our collective knowledge about climate change, and becoming more self-reliant and resilient. We ended up agreeing to twelve different actions, most of which deliver on several of the strategic priorities."

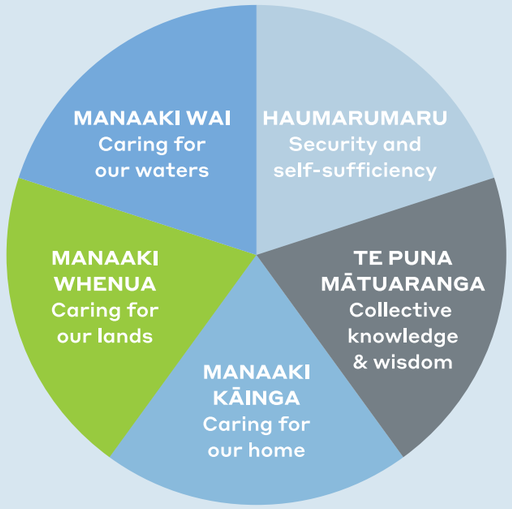
A very positive aspect of the Maketu plan is that the project re-framed the challenge and threat of climate change as an opportunity for the local community to grow knowledge and resilience and to create an economy that works in their favour. Planned actions include development of food gardens, tree planting and wetland restoration, a community emergency response plan, an education programme and a land-use change project to support the transition of local farms to become carbon neutral. Bennett comments:

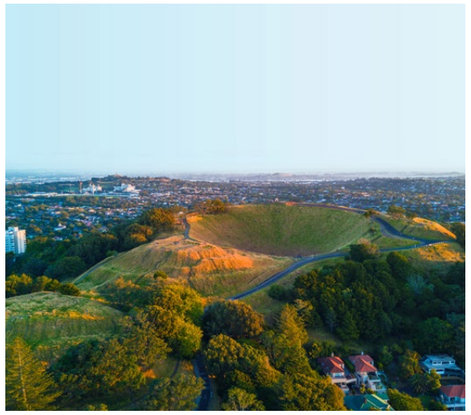
"Doing the planning this way, led by the community, means that we have a plan we can all stand behind and value. I think the councils got a really good deal out of it too – the whole process was really fast, efficient and cheap. I think councils could really benefit from looking to local communities to run their own climate adaptation processes, just supporting them with funds and advice on how to do it well.

“Our next step is to raise a little more pūtea [funding] to keep moving forward with the plan. Communities can make a small amount of money go a really long way. One thing that is really essential to a process like this is backbone support – someone that’s there to facilitate, and make everything happen. And that needs some funding, even if there’s a lot of willingness in the community to contribute voluntary labour.”

“Another thing that’s worth noting is that it is really important to ensure everyone feels able to contribute if they want to. We worked hard to engage with the different community leaders among us, and they spread the word through their networks. We managed to involve more than one hundred community members in the wānanga alone – not bad for a community with a population of around 1,200. I think people in the community felt that the process was pono [was sincere, and had integrity] – that’s really important.”

*Figure **5**. Strategic priorities of the Maketu Climate Adaptation Plan. Adapted from He toka tū moana mō Maketu (Maketu Iwi Collective, 2022)*





Aerial view of Auckland.

Case Study - Partnership with iwi on Auckland's climate plan

Auckland's Climate Plan, Te Tāruke-ā-Tāwhiri, is an example of iwi and mana whenua partnership and collaboration. From the outset of the process to develop the plan, the council partnered with the Mana Whenua Kaitiaki Forum (a governance forum of nineteen hapū and iwi authorities) to provide a te ao Māori perspective. The principles of te Tiriti o Waitangi – particularly the principles of partnership and active protection – underpinned the plan's development *(Auckland Council, 2020)*. The kaitiaki forum took the lead role in guiding a Māori response to climate change within Tāmaki Makaurau and working closely with Māori community organisations.

DEALING WITH UNCERTAINTY USING ADAPTIVE PATHWAYS (DAPP)

Adaptation planning is by its nature uncertain. While climate change science is now close to universally accepted, an analysis of how climate change might affect a particular location can present more questions than answers. Not only are the likely impacts difficult to understand in current science, the timeframes for impacts are also unclear and will be affected by many confounding factors (such as the success of global efforts to reduce climate emissions, for example).

This uncertainty has presented as a barrier for local adaptation planning. Uncertainty makes it harder to plan but also harder to involve and galvanise communities to respond to a clear threat.

Adaptive pathways planning, which has evolved into the dynamic adaptive policy pathways (DAPP) approach, is a risk-based approach that has gained traction internationally and has also been used successfully around Aotearoa New Zealand. Coastal hazards and climate change guidance for local councils sets out a detailed explanation of the process *(Ministry for the Environment, 2017)*.

DAPP is currently accepted as best practice in dealing with climate change adaptation planning because it allows uncertainty to be part of the process. The planning process aims in particular to avoid the risk of decisions and investments locking communities into pathways that may later become unfit for purpose, or even maladaptive (building a stop bank for example, that when overtopped causes greater risk).

The DAPP approach develops a series of actions over time (pathways). It is based on the idea of making decisions as conditions change, before severe damage occurs, and as existing policies and decisions prove no longer fit for purpose *(Auckland Council, 2023)*.

To determine which pathway to follow, a series of triggers is developed. For example, as the sea-level rises, the frequency of hazard events (such as coastal flooding) would eventually exceed an agreed trigger. At this point additional or different actions would be planned, and an alternative pathway taken to avoid further damage.

Adaptive plans include a mix of short-term actions and long-term options. In developing plans, stakeholders explore different pathways early and test the consequences before climate impacts are at the doorstep. An adaptive pathways approach avoids the need to have firm 'predictions' or to use only one preferred scenario as a basis for decision making *(Ministry for the Environment, 2017)*.

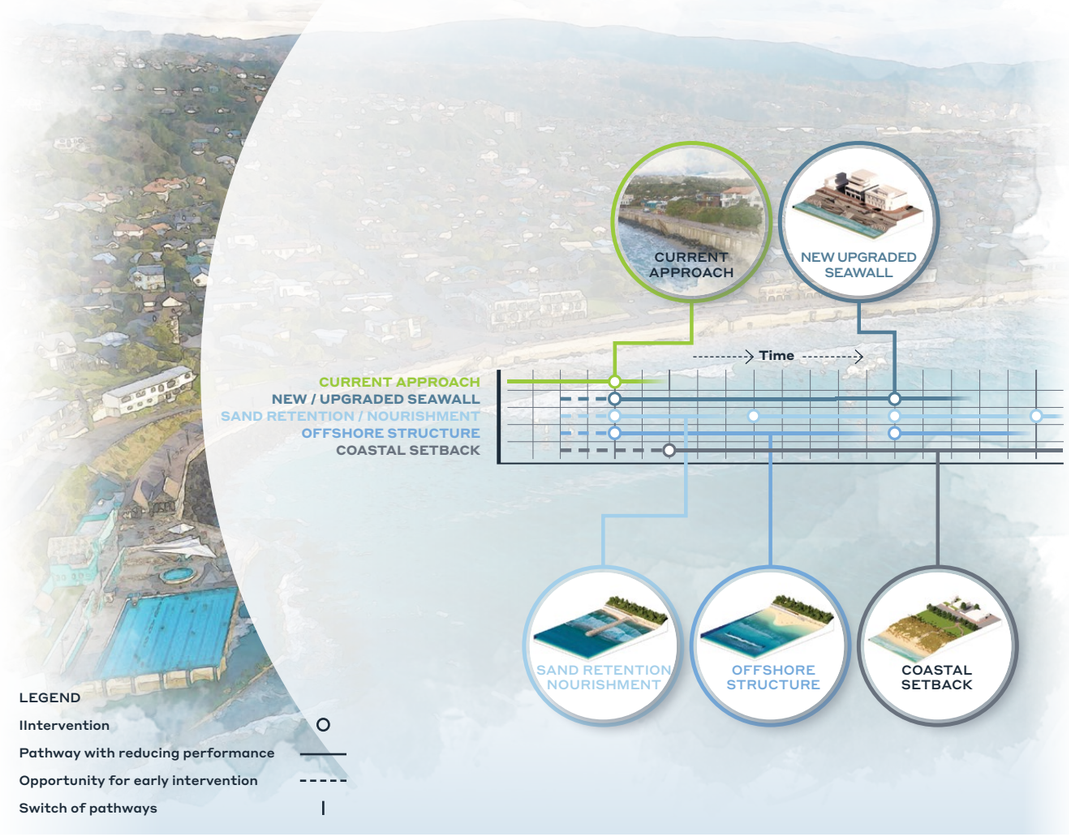
The DAPP process has been used in planning many times in Aotearoa New Zealand over the past decade in a range of settings, including coastal and flood risk management, water and transport infrastructure, and climate change action plans for cities and rural settings. However, commentators note that few of these projects have yet proceeded to the implementation stage due to governance and funding barriers *(Lawrence, 2023)*.

A recent symposium focused on a ten-year stocktake of the DAPP approach in Aotearoa New Zealand raised several critical points about how the process is used here. These included the need to:

- involve Māori and local communities more throughout the process
- share governance across all levels of government
- address funding barriers for implementation
- avoid investments that lock in problems for the future *(Resilience to Nature's Challenges, 2023)*.

It is also important to note that thresholds and triggers (i.e. the point at which a new adaptive pathway would be taken) can often be contested within the community. Climate-related thresholds, or the risks people are prepared to tolerate, may be different for different groups such as the disabled community, and refugee and migrant communities, for example. For this reason it is important to consider multiple perspectives and trade-offs when developing thresholds and triggers *(Resilience to Nature's Challenges, 2023)*.

Stylised and simplified DAPP plan developed for the St Clair to St Kilda Coastal Plan (Dunedin City Council 2022).



Hawke's Bay.

Case Study - Development of a participatory adaptive strategy for managing coastal hazards in Hawke's Bay

The Clifton to Tangoio Coastal Hazards Strategy 2120 was developed using deliberative and participatory engagement processes over a four-year period from 2014 to 2018.

The engagement team comprised three local authorities (Hawke's Bay Regional Council, Napier City Council, and Hastings District Council) and Māori representatives under a joint committee, together with panels of community representatives – an innovative decision making structure, especially at that time. The panel members were volunteers, recompensed for their time, who had responded to a call for involvement during public meetings. They were supported by a technical advisory group from the three councils *(Ryan et al., 2022)*.

An analysis of the engagement process by Ryan et al. *(2022)* noted the differing perspectives and tension within the community at the beginning of the process, along with some lack of trust in local government agencies. Despite this, the wider community, Māori and local authorities, together with external consultants, were able to formulate and agree in principle on a proactive, adaptive strategy to manage regional coastal hazard risk over a 100-year timeframe.

Various reports were produced initially to support the engagement process, including a hazards evaluation and a social impact assessment. A series of panel workshops was then held, after which the technical advisory group shortlisted a list of options to be vetted by community panels. A further workshop was then held using Multi-Criteria Decision Analysis – a structured process for evaluating options with conflicting criteria *(Ministry for the Environment and Hawke's Bay Regional Council partnership project, 2020)*.

Options were scored and ranked, allowing panel members to then develop adaptive pathway plans (DAPPs) for each coastal area. Ryan et al. *(2022)* note that the use of different analysis and planning tools helped participants build a shared understanding about how to plan for a range of future uncertainties. Efforts were made to emphasise the nuances of options, the complexity of the societal context, and the timeframes over which they are relevant.

By the end of the strategy development there was a visible shift in understanding about the long-term consequences of sea-level rise *(Schneider et al., 2020)*. As one example, in early strategy workshops, managed retreat was perceived as a one-off solution that would entail immediate removal of property, and was therefore seen as off the table for many participants. However, the deliberative process using the DAPP approach highlighted that relocation could be part of a staged long-term process responding adaptively to ongoing changes in risk. Participants consequently felt comfortable to select managed retreat as a potential longer-term solution for some areas:

> "The shift in how adaptation strategies were discussed and the context in which options were considered helped to lessen concern among community representatives that there were predetermined outcomes inherent in the process."
>
> *(Ryan et al., 2022, p. 7).*

GOOD ENGAGEMENT ACKNOWLEDGES AND RESPONDS TO CONCEPTS OF JUSTICE AND EQUITY

The impacts of climate change are highly likely to increase existing inequalities, including in income, housing, education, employment and accessibility. Thus, a key focus of adaptation should be to reduce risk for people who will be particularly affected.

As our national adaptation plan highlights, no two communities will experience climate change in the same way *(Ministry for the Environment, 2022)*. Some groups will be more susceptible to harm because of where they live – coastal communities, for example. Others may be disproportionately affected by financial impacts or lack the resources to adapt – such as low-income and beneficiary households. Others may have specific adaptation needs, such as older people and disabled people. While some regions are at risk from coastal erosion and flooding, others are already dealing with drought. Tangata whenua face the loss of wāhi tapu (sacred sites) and taonga species.

According to Ombler et al. *(2016)*, worryingly little formal attention is paid by local authorities in Aotearoa New Zealand to engaging with those living in greater social deprivation (who are often more resource- and time-poor) and to population groups like the young and old, women and the gender-diverse, as well as immigrants and refugees.

More meaningful partnership around decision making would seek to ensure that people within these communities are not only invited to participate, but are also adequately resourced to do so.

Glavovic *(2022)* argues that adaptation responses must address poverty, marginalisation, inequity, and other structural causes of vulnerability: "We need to focus on reducing social vulnerability to climate change impacts, especially for those on the 'frontline' of exposure ... Every region and locality needs to be able to identify and prioritise who is most exposed and vulnerable and catalyse proactive actions to reduce this vulnerability."

This concept of ensuring 'just transitions' to climate change has gained increasing momentum internationally and in Aotearoa New Zealand in recent years, and includes dimensions of social, economic, environmental, climate and intergenerational justice. The idea is now part of international policy commitments that have been taken by most of the world's nations, including Aotearoa New Zealand. The Just Transitions Aotearoa Group defines its potential as a "powerful invitation for communities to develop positive visions for change, transform unfair systems, draw on diverse strengths and worldviews, and come together to solve problems in ways that work better for everyone" *(Allen et al., 2023)*.

> "To be just, climate adaptation requires a counter-intuitive approach. It should prioritise community wellbeing and examine the risks posed by both climate change and adaptation. This perspective doesn't diminish the reality of climate impacts. It contextualises them within a complex history of Indigenous displacement, forced landscape alteration and ongoing social crises."
>
> (Chakraborty & Burgess, 2023)

Flooding in Maraekakaho, 2007.

MEANINGFUL ENGAGEMENT CAN REDUCE THE LIKELIHOOD OF 'MALADAPTATION'

'Maladaptation' refers to actions that, rather than leading to better resilience to climate change, may actually lead to increased risk, including increased vulnerability to the impacts of climate change and reduced welfare, now or in the future *(Ministry for the Environment, 2022)*.

'Maladaptation' may come about through the use of unjust processes, such as prioritising the interests of advantaged groups, excluding groups that are susceptible to harm, or short-term thinking *(Bray et al., 2023)*. It may also be the result of unjust 'outcomes', for example where protective measures are implemented that help some people to the detriment of others, or solutions proposed lead to an increase in inequality.

Choosing an option for adaptation that has a high cost, but a short lifespan, is also maladaptive. As one example, historically, Aotearoa New Zealand has tended to prioritise hard engineering solutions to adaptation, via 'hard engineered' sea walls, stop banks, and large flood control schemes. These adaptations have high potential to be maladaptive by giving communities a false sense of security that the area protected is now 'safe', by reducing the flexibility of future options, and by exposing communities to greater risk in the

long run *(Barth et al., 2019)*.

One example of maladaptive protection from flood risks might be the 250 kilometres of stop banks that lie between the Tutaekuri and Ngaruroro rivers in Hawke's Bay. In Cyclone Gabrielle, the two rivers breached their banks in a total of twenty-two places. *Whitten (2023)* argues that when water got in through these breaches, it had no way to get out and houses were more severely flooded than they might have been with no stop banks in place. Tragically, two people lost their lives *(Whitten, 2023)*.

Following best practice for meaningful participation in decision making can reduce the likelihood of maladaptation. However, incorporating considerations of what 'justice' means into that process is also essential *(Bray et al., 2023)*. Adaptation strategies must take particular care not to enforce or exacerbate existing inequalities, and not to create new ones. As *Chakraborty and Burgess (2023)* point out, climate adaptation is not a neutral or apolitical process – it can perpetuate problematic approaches, including colonial land practices and the exclusion of Indigenous voices.

The national adaptation plan suggests several ways to avoid this, including:

- working in partnership with Māori under the principles of Te Tiriti
- working inclusively with affected groups to understand their needs
- taking opportunities to reduce inequalities and support communities and regions to promote resilience, in line with local objectives *(Ministry for the Environment, 2022)*.

> "Ultimately, councils will need to be confident that when they engage on critical adaptation issues they are connecting broadly across the at-risk community, and that the community has sufficient trust, confidence and capacity to respond."
>
> **(Stephenson et al., 2020)**

CONSIDER SOCIAL DEVELOPMENT NEEDS AS PART OF THE PROCESS

The Parliamentary Commissioner for the Environment *(2023)* echoes many modern commentators in arguing that local government engagement around climate change should not be separated from broader community development and wellbeing initiatives.

Such approaches, referred to as Community Development for Adaptation (CD4A), Community-Based Adaptation (CBA), or, more recently, Climate Resilient Development (CRD), argue that the process of adaptation to climate change can, and should, be integrated with local development needs and economic trends, rather than simply being used to slow down physical environmental changes *(Ayers & Forsyth, 2009)*. Such approaches try to achieve equity and address power imbalances by strengthening local capacity and building on communities' expressed needs to address local development concerns.

Development adaptation approaches spring firstly from a desire to help develop the community, rather than from a council-led desire to implement a specific adaptation project *(Archer et al., 2014)*. Taking such an approach can lead to a 'triple win' of adaptation, mitigation and development *(Mitchell & Maxwell, 2010)*.

A particular benefit of switching to a development-focused approach is that, rather than focusing on risks and their mitigation, locals can rather band together around a positive vision to build a community that is attractive, resilient, and sustainable *(Swart et al., 2023)*.

Research arising from the Climate-Adaptive Communities project of the Deep South National Science Challenge, points to the need for development-led climate adaptation approaches to be:

- holistic (considering all the needs and issues faced by the community)
- supportive (for example helping to build a collective understanding, and using a variety of engagement tools)
- inclusive (engaging with a wide range of affected people, while recognising some may struggle to engage for a range of reasons. Inclusivity also means engaging with people in a way that suits their preferences, and bringing in different demographics that are often not heard from is essential)
- delivery-focused (involving community members in identifying possible options for the future and delivering on agreed solutions) *(Stephenson et al., 2019)*.

South Dunedin Future Programme - Community Engagement.

Case Study - South Dunedin Future Programme

Although still in the early stages, the South Dunedin Future Programme offers a good example of a community trying to address physical climate-related challenges while also explicitly aiming to improve wellbeing outcomes and urban regeneration through areas such as housing and urban design *(Dunedin City Council, n.d.)*.

South Dunedin has significant areas of poverty and poor-quality housing. It is also a low-lying coastal area, built on land largely reclaimed from a coastal wetland and is at significant risk of future flooding, mainly due to a shallow groundwater table and increasing intensity of rainfall combined with sea level rise *(Local Government New Zealand, 2020)*.

Through the South Dunedin Future Programme, the Dunedin City Council and Otago Regional Council aim to support the community over the long term to develop an adaptation plan and dynamic adaptive policy pathways for the area.

The councils have funded several part-time community workers whose role is to connect individuals, groups, clubs, and organisations to help build a more connected, collaborative, and resilient community.

An outcome is that the community has become more ready and more empowered to engage with the local and regional council on adaptation *(Stephenson et al., 2019)*.

The vision for the plan includes increased social and economic resilience, sustainable urban regeneration, environmental and cultural restoration, community ownership of the process and outcomes, and ensuring changes are 'fair and just'.

Photo Credit: Wellington City Council

CHAPTER **3.**

Innovative engagement tools

THIS CHAPTER SETS OUT A RANGE OF NOVEL AND INNOVATIVE APPROACHES TO ENGAGEMENT THAT ARE EFFECTIVE AT BRINGING DIFFERENT GROUPS AND INDIVIDUALS INTO THE PROCESS, HELPING THEM UNDERSTAND COMPLEX SCIENCE AND MAKE SENSE OF RISK, AND/OR EXPRESS WHAT THEY MOST VALUE ABOUT THEIR COMMUNITY.

DELIBERATIVE APPROACHES TO DECISION MAKING – THE NEXT BIG THING?

'Deliberative' approaches to decision making, in which a small subset of a population is convened to help make policy decisions through deliberation, have become increasingly popular worldwide in the past several years *(OECD, 2021)*, and have been trialled in Aotearoa New Zealand a number of times.

Common forms of deliberative democracy mechanisms include citizens' juries/panels, planning cells, citizens' dialogues, consensus conferences, and citizens' councils. While the approaches vary somewhat (particularly in terms of the number of citizens involved and the duration of the process), all involve convening a "wide cross-section of society for at least one full day – and often much longer – to learn, deliberate, and develop collective recommendations that consider the complexities and compromises required for solving multifaceted public issues" *(OECD, n.d.-a)*.

While the terms 'deliberative' and 'participatory' are often used interchangeably and share many features, in general, participatory approaches focus on empowering citizens to take action and be involved, whereas deliberative approaches focus on fostering high-quality discussion and debate. Deliberative mechanisms typically involve relatively small numbers of randomly selected but representative participants, whereas participatory processes generally involve larger groups of people, often self-selected, and are concerned primarily with promoting greater engagement in political processes *(OECD, 2023)*.

When deployed effectively, deliberative decision making processes present a range of advantages over more traditional consultative processes *(OECD, 2021)*. Deliberative processes have been found to:

- **result in better policy outcomes**: deliberative mechanisms are designed to be collaborative, leading to more nuanced, informed and practicable recommendations
- **improve the legitimacy of policy decisions**: deliberative processes give citizens a meaningful role in decision making, and promote greater trust in government and democratic institutions; resulting decisions therefore have more credibility
- **improve the inclusivity of governance and reduce polarisation** by bringing a wider range of people into policy decision making processes *(OECD, 2021)*.

While not yet common, there have been some recent efforts to apply deliberative processes to key policy issues in Aotearoa New Zealand. For example, Koi Tū: The Centre for Informed Futures has partnered with the Auckland Council to apply deliberative initiatives to decision making around Auckland's transport and water supply, concluding there was great potential to apply these mechanisms to public policymaking in Aotearoa New Zealand *(Buklijas et al., 2023)*.

In Wellington, a citizens' assembly made up of forty-three people stratified to match the demographics of the Wellington population was very recently convened to make recommendations on the development of the city's Long-term Plan. Facilitated sessions were held over four Saturdays and this resulted in the assembly providing the council with a list of thematic recommendations *(Rashbrooke, 2023)*.

Another example to watch is the People Speak climate assembly in Porirua. Led by a grassroots organisation, the assembly is currently being established so that "mana whenua and the people of Porirua can determine what a Just Transition is, and envision what it will look like in their communities" *(Te reo o ngā tangata, 2022)*.

According to experts, deliberative mechanisms are most effective where issues are complex, uncertain, and/or contentious, where there are low levels of trust between different affected stakeholders, and where there is a high potential impact of a given decision on affected stakeholders *(Hurlbert & Gupta, 2015)*. In other words, they are perfectly suited to decision making around climate adaptation issues, which are often all these things.

In order to be successful, deliberative decision making processes should meet a range of conditions. Key among these is that the group that is convened to consider an issue should be selected in a way that ensures it is representative of the general population (various stratification or sortition techniques exist to achieve this).

The group must have a clear decision to make, and the authority leading the process (typically a central or local government agency) should make a public commitment to respond to, or preferably to act on, the recommendations made by the group. While any meaningful deliberative process requires at least one full day, more complex issues may require multi-day processes, with decision making groups potentially supported by a coordinating team/secretariat.

It is also important to consider the particular challenges that may be placed on minorities participating in deliberative processes. These include practical challenges (e.g., meeting places should be accessible to disabled participants) but also extend to fundamental questions of who they "represent". For instance, Māori participating in a deliberative process should not be expected to be proxies for a particular hapū or iwi, or seen as representative of a wider 'Māori view' *(Buklijas et al., 2023)*. Rather, deliberative processes should be designed so they are informed by Te Tiriti and relevant tikanga, and supported by regular engagement with mana whenua, which Koi Tū considered "fundamental to making deliberative democracy

processes suitable for Aotearoa New Zealand" *(Buklijas et al., 2023, p. 5)*.

While deliberative democratic processes are in their early days in this country, they show great potential in the climate adaptation space to empower communities, build trust in governing authorities, and improve decision making. Importantly, a comprehensive review into the future of local government in Aotearoa New Zealand recently concluded that "local government needs new citizen-led democracy tools and approaches to fully embody its role as an enabler of democracy" *(New Zealand Government, 2023)*. The review therefore recommended councils invest in these processes.

Wellington Citizens' Assembly.
Photo Credit: Wellington City Council.

USING VISUAL AND DIGITAL TOOLS TO HELP WITH DECISION MAKING AND OVERCOME 'STATUS QUO BIAS'

Decision making about climate change and dealing with its impacts can be complex and marked by uncertainty. Climate change is likely to involve some big and difficult changes about how and where we live over time. Unfortunately, it is particularly hard for humans to make decisions involving change and uncertainty, because our brains are hard-wired to equate such change with risk. This leads to a preference for sticking with what we know, and have always done – known as 'status quo bias' *(Samuelson & Zeckhauser, 1988)*. The result of status quo bias is that, even in a situation where a better option is available, people may persist with the unsuitable solution they know and feel comfortable with.

*Figure **6**. Adapted from 'What is the Status Quo Bias?' (Decision Lab, 2023)*

A good framework to help communities to have difficult conversations, and to be open to looking at 'risky' options, is the adaptive pathways approach outlined in the previous chapter. An important tool as part of that approach is to help people understand options using digital and other visual tools. Such tools can make the impacts of, and potential solutions for, climate change feel more real. They can also be valuable to help explain the underlying science, and to reduce the sense of uncertainty about the future *(Meredith & Liette, 2021)*.

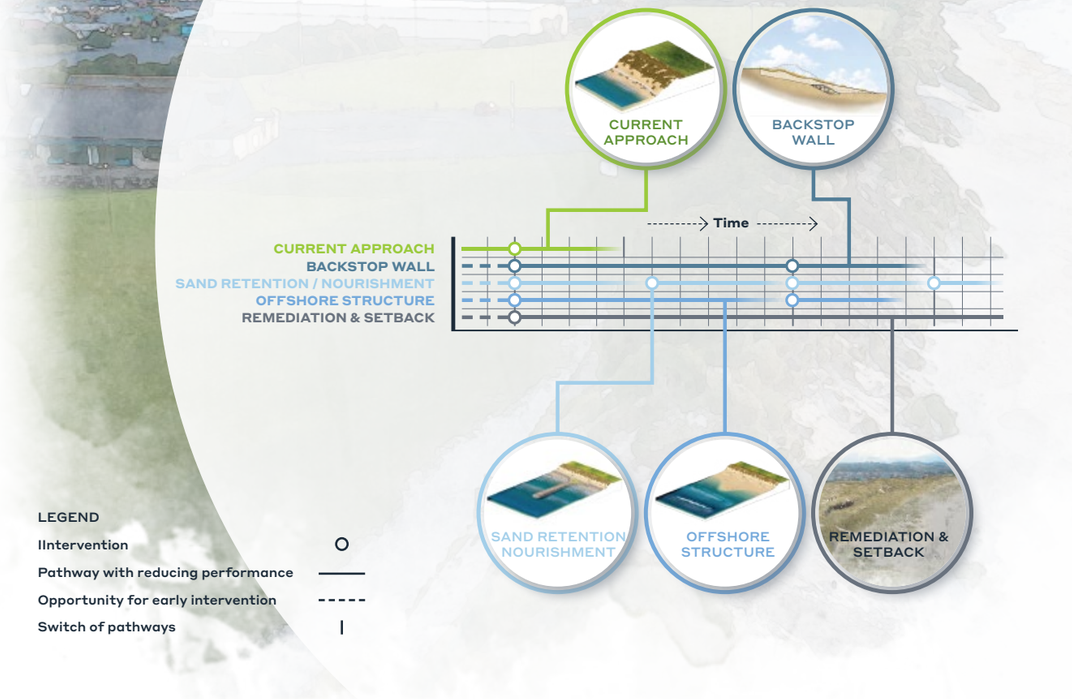
Visual representations of expected climate impacts can also be extremely valuable to help stakeholders understand likely future scenarios. Planners and researchers have experimented with and evaluated a range of visualisation tools, including static two- and three-dimensional visualisations, experiments with interactive and multidimensional visualisations that allow users to zoom between scales and timeframes, computer games, and augmented reality apps that can map future changes onto real cityscapes and allow people to feel as if they are moving through these spaces *(Kelly & Kelly, 2019)*.

Research concludes that while visualisation is very helpful in the engagement process, there appears to be no single format that works best for all contexts, purposes, and users. Different participants express preferences for different formats, partly depending on their familiarity or otherwise with digital media *(Kelly & Kelly, 2019)*. More traditional formats, such as posters or two-dimensional maps, can be just as helpful in some contexts, as they are easier to reuse and more user-friendly than more high-tech, interactive formats (and can be cheaper to produce).

Another useful visualisation technique is mapping (whether digital or not), which in addition to physical features can capture and illustrate community values, associations, and aspirations for a place, through a process known as Participatory Community Mapping. Collaboratively developed maps can help show what community members value, tell local history, and explore options for the future *(Abbott & Stephenson, 2023)*.

Screenshot from the State of Victoria's Digital Twin - a real-time digital version of the physical world.

Visual tools: Pathways Middle Beach Plan, South Dunedin.



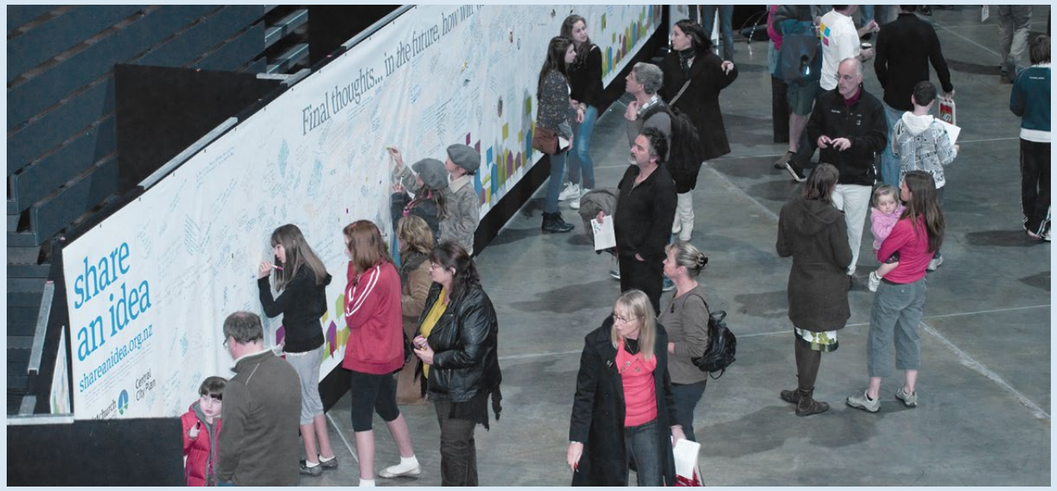
Digital tools can enable wide participation as part of a toolkit of approaches

Digital tools such as social media, interactive websites, and voting systems, have great potential to help gather more, and better, input from communities *(Town of Victoria Park Evolve Project Team, 2015)*.

As one notable example, the 'Share an Idea' campaign, which aimed to regenerate Christchurch after the devastating earthquakes in 2010 and 2011, used digital approaches such as social media, online videos and blogs as a key engagement tool alongside other more traditional methods *(Ombler et al., 2016)*.

Share an Idea gathered some 106,000 community driven ideas, and around twenty-one per cent of Christchurch residents participated – a very high rate compared to similar processes. The ideas were compiled by the Council, and formed the basis for the initial draft central city plan. Overall, the Share an Idea process was seen as a great success, not just because it led to such high participation, but also as a visionary way for the residents of Christchurch to feel hopeful in the immediate aftermath of the earthquakes *(Ombler et al., 2016)*.

Share an Idea Campaign.
Photo Credit: Christchurch City Council.



Christchurch CBD post earthquake.

While there is great potential for digital tools to help gather more and better participation than was possible in the pre-internet era, care needs to be taken not to directly equate the level of participation with success of an engagement process (Ombler et al., 2016) – the depth of the engagement is also relevant. An over-reliance on digital tools can also result in some members of the community becoming cut out of the engagement process, due to lack of digital literacy or online access *(McKinley et al., 2021)*.

'Going digital' should therefore not be viewed as a 'one-size-fits-all' solution to engagement, but rather as a helpful addition to a 'blended' approach, with different types of outreach tailored to different audiences *(McKinley et al., 2021)*.

Kerri Gray

DIGITAL TWINS HAVE EXCITING POTENTIAL

Real-time digital versions of the physical world have exciting potential as a tool in the climate fight – especially for involving communities in adaptation and emergency response planning. WSP digital advisory principal Kerri Gray explains.

The Australian state of Victoria is vast by global standards. Larger than many countries, it is home to tens of thousands of native plant and animal species, a bevy of outstanding natural landscapes, over 6.7 million people, and dozens of city and regional areas.

Victoria has invested in state-wide 3D digital datasets capturing and built form data in a digital twin that citizens, government, and industry can use to explore solutions to environmental and social issues *(Victoria State Government, 2023)*. Bringing together approximately three thousand local, state, and national datasets, it's been a huge benefit for authorities who work with communities to plan, manage, and build the future of the state.

Modelling a flood scenario in Victoria's Digital Twin.

Aotearoa New Zealand doesn't yet have this kind of digital twin, but could definitely benefit from one. They're worth their weight in gold in helping plan and prepare communities for the impacts of climate change and natural hazards – and more besides.

Joining up screeds of data to create live digital versions of the real world, including natural environments, buildings, infrastructure assets, and transport networks, gives us the ability to model and communicate the effects of hazards such as floods, storms, droughts, and sea-level rise – simulating potential outcomes from the safety of a computer screen.

Victoria's Department of Transport and Planning has previously used the state's digital twin to model how a township might appear if it was developed in a certain way. The model included features like hospitals and schools and was used in a flooding scenario to see how lifeline utilities would be affected. They also modelled the government's need to invest in land to divert flood waters away from critical infrastructure.

Representing information in digital twins opens a world of opportunity in engaging communities. A picture tells a thousand words, but a digital twin tells a thousand more. Crucially, Victoria's digital twin has been used for public community engagement – including on West Melbourne's Sunshine Precinct *(Victoria State Government, 2022)*. Planners visualised in 3D how a proposed transport hub would sit in the context of the existing area and made this available to the public.

In essence, Victoria's digital twin is being used in multiple ways to explore important planning scenarios and their consequences – harnessing technology to help with more informed, community-centred decision making.

Aotearoa New Zealand should follow their lead. How might that look in the climate adaptation realm? Well, coastal, land and weather-related datasets held by public sector agencies and other organisations could be included to 'virtually' predict significant climate impacts that might affect small and large communities.

As a predictor of potential outcomes, climate scenarios can be visualised and shared with community audiences to illustrate how their land and built environment could change and best be fortified. It's essential to analyse these scenarios from different perspectives, considering, for example, the impact on vulnerable residents, and local iwi on the frontline of hazards, as well as civil, fire, and emergency or incident response teams.

In conveying how objects occupy three dimensions of space, digital twins can reveal how far storm surges may penetrate or how deep floodwaters may get. That's no small thing for Aotearoa New Zealand, where almost 750,000 New Zealanders and 500,000 buildings worth more than $145 billion are exposed to flooding in the event of extreme weather events *(Ministry for the Environment & Stats NZ, 2023)*.

Although there is huge potential for the technology, in Aotearoa New Zealand our ability to create real-time, 3D digital representations of objects and our ecosystem is not yet very advanced. There are examples of where organisations are taking great steps in this space; however, we're largely reliant on 2D, static data to show where things are located and how they behave.

It's important for the benefit of communities that Aotearoa New Zealand's public and private sector organisations better embrace the development of digital twins to analyse and model our places and spaces. Key to this is collaboration and a more open approach to data sharing.

There's no shortage of open data portals anyone can access for free. It's a straightforward way to share data without requiring a lot of technical effort. Surprisingly, not many organisations are taking advantage of this opportunity, even though Aotearoa New Zealand has strong open data policies in place.

Encouraging the sharing of information about the built environment and climate through open data is highly beneficial. This will help quickly advance the development of digital twins communities can use to make the right decisions for adapting to climate changes – decisions that are more important than ever for proactive protection in our shared climate future.

USING GAMIFICATION TO CREATE 'SERIOUS' FUN

One new and emerging field for engaging stakeholders is the use of games to foster both behavioural change and education around climate change. Gamification, also known as the use of 'serious games', uses games of all kinds, including video games, board games, card games, and quizzes, for purposes beyond simple entertainment *(Hamari et al., 2016)*.

Gamification is seen as a means of moving beyond trying to include the public in decision making by providing more and more information, towards processes that facilitate engagement of communities in the science of climate adaptation and better allowing them to contribute to decision making *(Fernández Galeote et al., 2021)*.

NIWA climate change game at Fieldays. Photo credit NIWA.

The potential of games to effectively inform and engage communities around complex issues has long been recognised, with games focused on climate change having existed for forty years *(Robinson & Ausubel, 1983)*. Studies have shown that when deployed effectively, gamification presents a range of advantages compared to more traditional methods of communicating science and engaging with communities *(Flood et al., 2018)*.

A well-designed game allows players to develop a deeper understanding of the complexities and trade-offs associated with climate adaptation, while simultaneously building their skillset to engage in real-life climate adaptation processes *(Blackett et al., 2022)*. By their nature, such games provide a safe space for experimentation and innovation, where players can test new ideas without fear that a poor decision will cause negative consequences to real people. Games are also a good way to involve young people in climate change conversations – an audience that otherwise can be hard to reach.

Adaptive Futures

The objective of NIWA's Adaptive Futures is to protect a fictional community from the adverse effects of climate change, where a player's ability "to take action depends on support from the community" *(NIWA, n.d.)*. This requires the player to build trust

with the community, recognising that each community experiences the effects of climate change differently (e.g., reflecting their personal values, their distance to the coast, etc.). In this sense, the game is primarily concerned with ensuring that actions taken to respond to both the short- and long-term impacts of climate change (e.g., building a seawall, relocating people most at risk, etc) have the support of affected communities.

Marae-opoly

Co-created by NIWA and a number of hapū in the Hawke's Bay region, Marae-opoly adopts a similar gameplay approach to Adaptive Futures. However, Marae-opoly is specifically focused on supporting and empowering decision making by Māori communities, which are likely to be disproportionately affected by climate impacts. Importantly, Marae-opoly was specifically designed to be playable by community members of all ages, as well as researchers and decision makers. In this way, experts and non-experts alike can draw value from engaging with the game, and observe how others make decisions when confronted with the same information. The developers of this game also concluded that gamification presented real opportunities to integrate mātauranga Māori into gameplay *(Blackett et al., 2022)*.

NIWA climate change game at Fieldays. Photo credit NIWA.

ARTS-BASED AND CREATIVE APPROACHES TO ENGAGEMENT

Arts-based approaches to public engagement are widely canvassed and positively viewed in the literature. The use of such techniques can help to tap into audiences who may not otherwise take part in public engagements. Using art and creative tools can give community members an alternative to share what is important to them, to narrate histories and to share values.

Stories and other narrative tools in particular are an important way in which people, both individually and collectively, make sense of who they are, where they have come from, and where they are going. In encountering complex issues, there is a strong tendency for human beings to "look for … not consistent and reliable facts but a consistent and comprehensible story" *(Kelly & Kelly, 2019; Monbiot, 2017)*.

As Kelly and Kelly *(2019)* describe, narratives can be collected and presented in a range of formats, combining verbal and visual means of communication. Mobile technology, for example, allows local residents to record their stories and memories of particular places, potentially adding to a larger mapping process that can include multiple perspectives. Local knowledge and narratives can thereby be recorded and shared relatively quickly, generating a rich picture of what matters to a local community and where potential conflicts may arise. Other creative formats for narrative include songs, films, games, theatre, children's books, and poetry.

Role-play and simulations have also been used successfully to support adaptation processes *(Kelly & Kelly, 2019)*. For example, simulations carried out as part of the New England Climate

Arts-based approach in print making, South Dunedin.

Adaptation Project "brought climate change risks and the need for collective adaptation action 'home'" *(Rumore et al., 2016)*. As part of a role-play simulation, participants took on stakeholder roles that differed from their own – a local official might take on the role of a town resident, for example. Each participant was provided with a clear set of instructions, and a general briefing about climate change and flood risk. Rumore et al. *(2016)* note that role-play and simulation may be particularly effective for shifting opinions among those who are 'concerned' and 'cautious'.

Placemaking is another creative engagement approach adopted in Aotearoa New Zealand. Placemaking refers to a collaborative process by which communities shape public spaces to maximise shared value according to the physical, cultural, and social identities that define that place *(Project for Public Spaces, 2007)*. Eke Panuku Development Auckland *(n.d.)* defines placemaking as the creation of vital public spaces: "the kind of places where people feel a strong relationship to the place, to each other and a commitment to making things better". The organisation uses different community activities and events to draw a diverse audience where they can test the use and function of a space and seek input from the community into future plans and designs (Zwart, personal communication, 16 October 2023).

Multi-criteria decision making process. Dunedin City.

Aerial of St Clair to St Kilda beach.

Case Study - St Clair to St Kilda Coastal Plan - Use of creative approaches to link in new audiences

The aim of the process that resulted in the Whakahekerau Rakiātea Rautaki Tai – St Clair to St Kilda Coastal Plan in Dunedin was to work with the local community to co-create a vision and climate adaptation plan for the coastline by:

- understanding the community's collective values and aspirations for the area, and
- identifying management options that could support the sustainable management of the coast in line with the community's ambition *(Dunedin City Council, 2022)*.

The Dunedin City Council took the community on a 'climate adaptation journey', educating a wide range of stakeholders on coastal processes, risks and management options and drawing out community values and ambition to inform plan development.

A diverse range of methods was used to encourage participation in the process. This incorporated both tried and tested methods (workshops, drop-ins, presentations, meetings, educational

videos, and hardcopy and online surveys) alongside innovative engagement activities including multi-media/ interactive surveys, guided beach walks, and ideas walls. Feedback was received from more than 2,000 individuals, using more than a dozen different engagement methods from across the spectrum of participation *(WSP New Zealand, n.d.)*.

Particularly notable was the effort to involve diverse communities and individuals, using a range of targeted engagement tools. Two innovative approaches in particular are worth highlighting:

- **Creative arts**: The project partnered with a local creative group to host a number of printmaking sessions to involve younger individuals and families who had previously been difficult to reach in the process. The process of making prints allowed community members to tell their story about why the coastline is important to them. Stories were analysed by the science communicator for data collection and reporting purposes. The project ran multiple sessions with local schools, where they also used sand models to communicate the science of coastal processes and sea level rise *(WSP New Zealand, n.d.)*.
- **Public participation in Multi-Criteria Decision Analysis (MCDA) processes**. Members of the community were invited to assess the suitability of options and possible futures against a range of criteria using the MCDA process. The values that had been shared by the community previously were used to inform the options that were compared and rated by participants. This allowed people to better understand the range of options and often competing criteria that need to be considered in decision making *(International Association for Public Participation, 2021)*.

Concept visual of St Kilda improved access and dune management. Photo Credit: Dunedin City Council 2022.

According to the organisers of the process, three key takeaways from the St Kilda engagement process were:

1. **transparency** was key to running a clear, upfront and honest process, providing opportunities for the community to be involved in a meaningful way
2. **inclusiveness, and accessibility** were built in, using a broad range of engagement tools targeted to different audiences. This allowed the project to gain insights from a diverse community
3. **adaptive planning** for an uncertain future is difficult, but can provide communities with genuine opportunities to contribute to adaptation planning – objective setting, plan direction, and ultimately what gets done *(International Association for Public Participation, 2021)*.

The Whakahekerau Rakiātea Rautaki Tai – St Clair to St Kilda Coastal Plan project was the winner of the IAP2 project of the year in 2021 and won the NZ Planning Institute's Nancy Northcroft Supreme award in 2022.

Concept visual of setback Middle Beach. Photo Credit: Dunedin City Council.

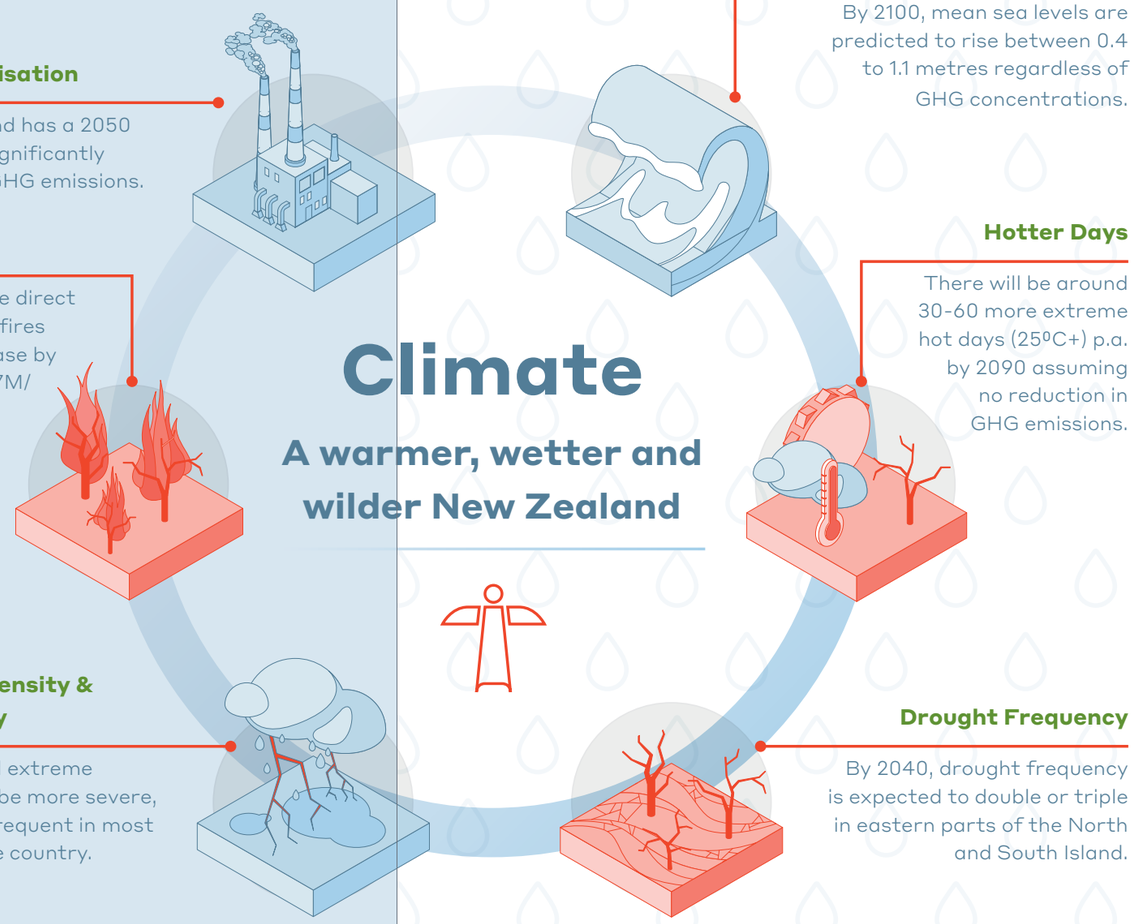
CHAPTER **4.**

Policy considerations

COUNCILS WISHING TO ENGAGE MORE MEANINGFULLY ON CLIMATE ADAPTATION FACE A NUMBER OF CHALLENGES

There is increasing pressure on councils and other governing authorities to do more with budgets that are already feeling the strain – from addressing long term underinvestment in infrastructure, to recovery from significant natural disasters, through to (now urgent) planning and implementation of climate adaptation initiatives. Meanwhile, councils are expected by their communities to find ways to engage more meaningfully with them on decision making than they have done in the past, a process that can be both time consuming and resource intensive – and which in some cases may result in recommendations that may be challenging for governing authorities to implement.

*Figure **7**. Adapted from WSP New Zealand (2023)*



Many councils are now planning for climate change adaptation; however, the quality and comprehensiveness of this planning varies. While there are examples of 'good practice' across the country, some of them outlined in this report, there are also many examples of risks that have not been properly identified or managed *(Ministry for the Environment, 2023a)*.

A central finding of this report is that 'good practice' in adaptation planning necessitates community engagement at a meaningful level, in ways that allow for open debate and discussion, and with a focus on building relationships and trust over the long term. There are several outstanding examples of this already happening around the country, from iwi-led adaptation planning, to use of deliberative democratic processes and creative engagement targeted at communities that are harder to engage with. However, many engagement processes undertaken around climate adaptation continue to sit firmly at the 'inform' or 'consult' end of the spectrum, relying heavily on traditional forms of engagement such as submissions and community town hall meetings.

Input may be sought, but this input does not necessarily influence the solutions proposed, nor the final decisions reached.

A number of perceived barriers to undertaking and progressing engagement were identified in 2019 in research completed by Dr Janet Stephenson and her team as part of the Deep South National Science Challenge, in which representatives from local authorities across the country were interviewed *(Barth et al., 2019)*. Key challenges expressed by council representatives included:

- uncertainty about their roles and responsibilities for adaptation, as well as around the scale and timing of climate change impacts
- a lack of knowledge or uncertainty about how best to engage with communities, and around what kinds of solutions will work, combined with a fear of pushback from the community about solutions that might be proposed
- concern about the financial costs of engagement.

Almost all participants felt the central government's primary role should be providing guidance and leadership on policy directions to ensure consistency and avoid *ad hoc* approaches that may lead to injustices. This included "making clear statements on the science" to allow councils to direct more resources towards taking action, rather than debating the problem *(Barth et al., 2019)*. Similarly, they felt the central government should clarify whether local, regional councils or central government should be responsible for certain decisions around adaptation, and who should be paying for what.

Participants also highlighted a lack of clarity about how much of a council's budget should be put towards adaptation planning – and how such processes should be designed – as well as how to finance and plan for adaptation (particularly managed retreat). There was a strong sense of the need to ensure the economic burden of adaptation should be spread justly.

An examination by *Local Government New Zealand (2020)* of several case studies of community engagement around adaptation picked up on similar challenges, summarised as follows:

- **Policy vacuum**. Without clear direction from the Government on how and when to plan and implement adaptation – and how it will be funded – councils struggle to know what should be in and out of scope for discussions.
- **Resourcing challenges**. With tight budgets, councils find it difficult to undertake comprehensive and meaningful engagement due to a lack of funds, human resources and access to the required expertise.
- **Communication and wellbeing challenges**. Councils find it difficult to determine the level of information a community needs in order to be able to meaningfully participate in engagement. They struggle to communicate uncertainty around the science, particularly where that uncertainty has the potential to impact their communities' well-being.

- **Hearing from the right people**. Councils struggle to ensure the diversity of voices within a community are adequately heard, and given appropriate weight. There is a lack of clarity about what legally constitutes adequate engagement with different parts of the community.
- **Lack of partnership with central government**. Councils receive limited support from the Government for their work on climate change adaptation and are uncertain what the whole-of-government position is on adaptation.

Since this research was completed, work has been undertaken at central government level on some of these issues (such as the release of the country's first national adaptation plan in 2022 for example; *Ministry for the Environment (2022)*). However, much of this work is still in progress. Most notably, the Climate Adaptation Bill, which was expected (under the previous Government) to address policy issues around managed retreat and to give guidance on local adaptation planning, is still being developed. It remains to be seen to what extent the newly-elected government will continue with this legislation, or whether it will propose something different.

Either way, certainty for councils and communities about what is required in terms of adaptation planning and engagement (who will do it, when, involving what level of engagement, and how it will be funded) will be critical to addressing the concerns outlined above.

CURRENT REQUIREMENTS TO UNDERTAKE COMMUNITY ENGAGEMENT FALL SHORT

In Aotearoa New Zealand, public consultation by local authorities is prescribed in the Local Government Act 2002 *(Ombler et al., 2016)*. In addition to a requirement to provide "opportunities for Māori to contribute to the decision making processes" (s 81) and the "special consultative procedure"' (s 83)[1], the Act lists the principles of consultation in section 82. These include:

- people affected by a local authority decision should be given "reasonable access to relevant information", and be "encouraged to present their views"
- those people affected should be clearly informed about the "purpose of the consultation and the scope of the decisions" to be made, and have a "reasonable opportunity" to present their views
- the local authority should receive such views with "an open mind" and give them "due consideration".

Observance of these principles is to be undertaken "in such manner as the local authority considers, in its discretion, to be appropriate in any particular circumstance" (s 82(3)). In other words, the requirement to consult with communities includes a considerable element of discretion. However, the underlying requirement is that "a local authority must, in the course of its decision making process in relation to a matter, give consideration to the views and preferences of persons likely to be affected by, or to have an interest in, the matter" (s 78) *(Ombler et al., 2016)*.

Taken together, the provisions of the LGA set out a level of required community engagement in decision making that perhaps best reflects 'consult', which sits towards the left-hand side of the spectrum of public participation (see page 26). The way the legislation is currently formulated does not encourage the more impactful 'involve', 'collaborate, or 'empower' levels of participation.

In terms of working together with Māori, the LGA requires that local authorities must "maintain processes to provide opportunities for Māori to contribute" to decision making processes, must consider ways to foster the development of Māori capacity to do this, and must provide relevant information to assist with this process (s 81). This perhaps sits closer to 'involve' on the spectrum of participation than is required for other community members, but still falls well short of the spirit of partnership, as might be expected under the principles of the Treaty / te Tiriti.

[1]*The "special consultative procedure" (s83) sets out a minimum standard of consultation that must be followed by local authorities when making specific decisions that have high significance to the community, such as when adopting a long-term plan, or when making or revoking a bylaw.*

Requirements for local authorities to engage with communities in various ways and at varying times are also set out under other legislation and in various policy statements. As touched on earlier in the report, the Resource Management Act 1991 requires all persons exercising functions and powers under it to 'take into account the principles of the Treaty of Waitangi' (s 8). Under the Treaty, Māori were guaranteed rangatiratanga (self-determination), which means the Crown must respect the right of Māori to control decisions in relation to their lands and taonga (things of value to them).

By requiring councils simply to "take account of" the Treaty when making decisions, the RMA does not require a high level of engagement with Māori around climate adaptation planning. Its planned replacement Act (the Natural Built Environment Act 2023) does better, requiring decision-makers to "give effect to te Tiriti" (also noting the use of 'te Tiriti' rather than 'the Treaty'). However, the future of this Act is uncertain, as the incoming National-led Government has promised to repeal it.

The National Policy Statement for Freshwater Management 2020 (NPS-FM) *(Ministry for the Environment, 2023b)* also requires regional councils engage with communities and tangata whenua to develop a long-term vision for freshwater management in their area . In addition, regional councils must 'actively involve' tangata whenua (to the extent they wish to be involved) in freshwater management. This wording appears to envision a level of engagement for all stakeholders towards 'involve' (in the centre) or 'collaborate' (towards the right-hand side) of the IAP2 spectrum of public participation, and potentially as far as 'empowerment' in the case of tangata whenua. The management of freshwater is of course closely linked to some of the work that needs to happen around climate adaptation – stream daylighting is an example – so the NSP-FM could be considered strong guidance towards more robust engagement.

Similarly, National Policy Statements for Indigenous Biodiversity (NPS-IB) and Urban Development include direction on engagement with tangata whenua. Under the NPS-IB, for example, every local authority must involve tangata whenua (to the extent they wish to be involved) 'as partners' in the management of indigenous biodiversity. Engagement must be early, meaningful and in accordance with tikanga Māori.

Aotearoa New Zealand's national adaptation plan *(Ministry for the Environment, 2022)* also emphasises that the principles of te Tiriti must be recognised as a central aspect of the Government's long-term adaptation strategy and that adaptation responses should be developed and implemented in full partnership with Māori, and should empower Māori 'in planning for Māori, by Māori'. Local government is required to 'have regard' to the national adaptation plan when they prepare policy statements and plans under the RMA.

Finally, the Climate Adaptation Act (still to be drafted) is, or was, expected to include direction on the extent to which communities should be involved in climate adaptation planning. This legislation, work on which was begun under the previous Government, may or may not be further developed in its current form under the incoming government. There are positive indications at the time of writing that the need to adapt to climate change will be addressed by the incoming government as an issue in need of multi-party, long-term planning, although the extent to which community involvement may be a part of that vision remains unclear for now *(Milne, 2023)*.

These upcoming changes in legislation and regulation provide an opportunity for central government to be more directive in terms of the requirements for governing authorities to consult, collaborate, or empower their communities around climate adaptation.

COSTS WILL NEED TO BE SHARED BETWEEN LOCAL AND CENTRAL GOVERNMENT

This report recommends that councils should be required to undertake a higher level of community engagement when planning and implementing actions to adapt to climate change. However, such a requirement would have significant implications in terms of council budgets and capabilities, and would need to be supported by adequate funding from central government.

The panel tasked with the recent review into the future for local government recommended that central government:

- set up an intergenerational fund for climate change
- more generally, (i.e. not just in the context of climate change) support councils to grow relationships with Māori, and trial and grow participatory and deliberative democracy practices *(New Zealand Government, 2023)*.

The conclusion that funding will be required from central government to support climate adaptation is backed by research that suggests some councils are already struggling to find the resources to undertake adequate planning and engagement *(Local Government New Zealand, 2020)*.

Different parts of the country will experience the impacts of climate change in different ways and on different timescales. Importantly, the impacts of climate change will not be spread evenly across the country according to the number of ratepayers in a given area. Some councils will therefore be in a better or worse position to undertake adaptation planning and implementation. The ability of councils to fund the adaptation process, or not, does not correlate with the urgency of them doing so, or the likely cost of damages if they do not. This strongly suggests that some level of central funding is called for, and will need to be allocated in a fair way according to urgency of need.

After all, failing to sufficiently prepare for the impacts of climate change will mean significantly increased costs down the line to clean up preventable climate-related damages. This cost is likely to be carried to a large extent by taxpayers, as has been the case in the past when natural disasters have struck. It is therefore in everyone's collective financial interest to ensure that the country is well-prepared for climate change.

Recommendations

There is a pressing need for local authorities to plan for climate adaptation and, just as importantly, to involve communities to the greatest extent possible in that process. Best practice suggests effective engagement should take place to the greatest extent possible towards the right-hand side of the spectrum of participation (see page 26), at the level of collaboration, or empowerment.

Given councils have expressed a range of ways in which they find this expectation challenging, there is an urgent need for support from central government level to facilitate this process with clear expectations and adequate funding.

RECOMMENDATION 1

MEANINGFULLY INVOLVE COMMUNITIES IN PLANNING AND IMPLEMENTING STRATEGIC LOCAL RESPONSES TO CLIMATE CHANGE

1.1 Approach engagement as a long-term process, rather than a one-off.

1.2 Undertake engagement in a spirit of collaboration, partnership, and, where possible, empowerment of local communities.

1.3 Enable dialogue and deliberation to help communities understand the science and decide how best to respond.

1.4 Aim to reduce, not exacerbate, existing inequalities and vulnerabilities. Ensure those who will be most affected are not only invited to participate, but resourced to do so.

1.5 Aim for community development and regeneration, rather than only focusing on physical or engineered responses to climate change.

1.6 Require any external adaptation contractors to demonstrate capability in best practice relating to community engagement.

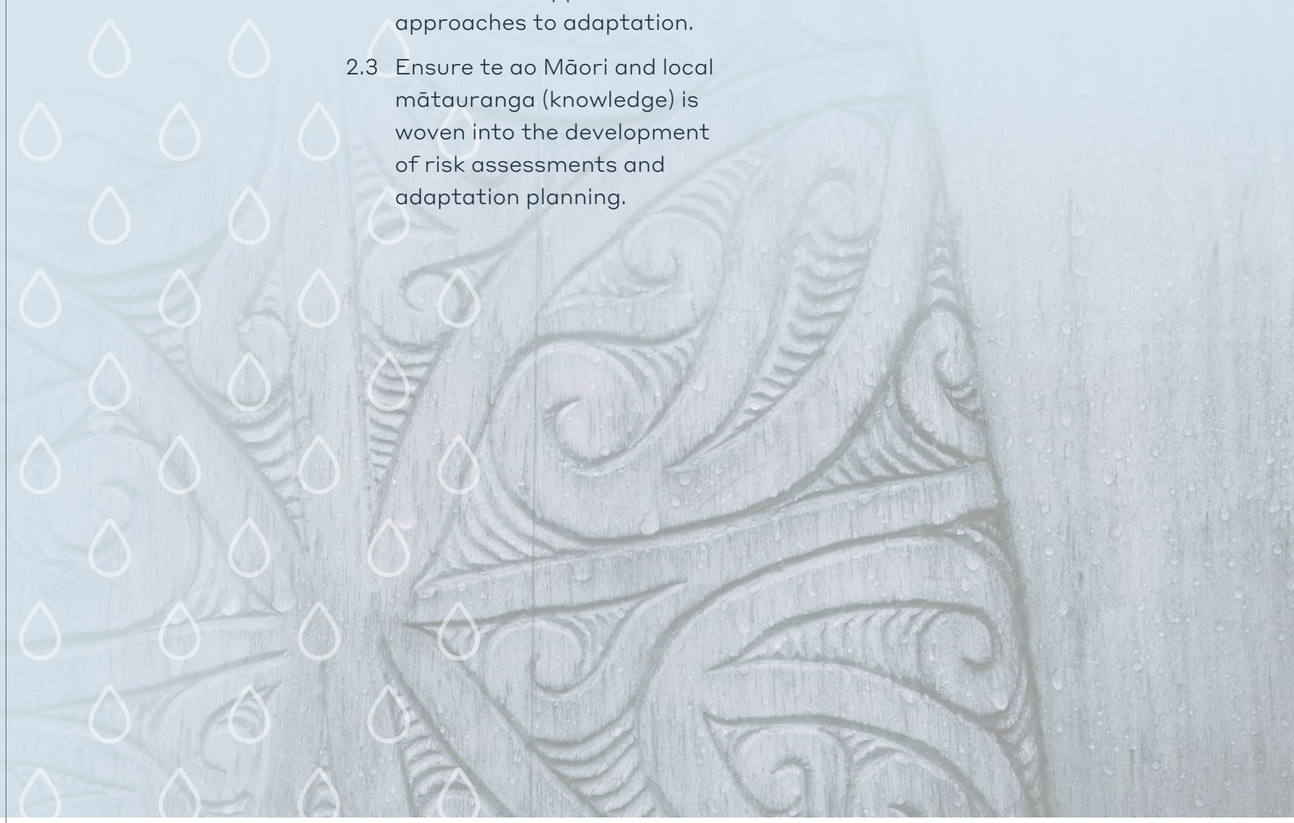
RECOMMENDATION 2

ENSURE THE PROCESS OF ADAPTATION HONOURS THE SPIRIT OF PARTNERSHIP SET OUT IN TE TIRITI O WAITANGI

2.1 Proactively work with iwi, hapū, and Māori on climate adaptation in the spirit of collaboration, empowerment, and partnership, under te Tiriti o Waitangi.

2.2 Enable and support Māori-led approaches to adaptation.

2.3 Ensure te ao Māori and local mātauranga (knowledge) is woven into the development of risk assessments and adaptation planning.



RECOMMENDATION 3

ADOPT AND FOSTER INNOVATIVE APPROACHES TO STRENGTHEN ENGAGEMENT AND PARTICIPATION

3.1 Use a variety of approaches to engagement to suit different contexts and to engage diverse audiences.

3.1 Use deliberative democratic approaches, such as citizens' assemblies, to inform or lead decision making on complex and politicised questions relating to adaptation.

3.3 Use visual and digital tools, as part of a package of approaches, to engage more widely, and to enable better decision making.

3.4 Use creative approaches such as 'serious games', art, role playing, and narrative tools to help community members understand the science, share what is important to them, and weigh competing options.

RECOMMENDATION 4

SUPPORT COMMUNITY ENGAGEMENT AT CENTRAL GOVERNMENT LEVEL

4.1 To ensure all councils can plan for and implement adaptation approaches in a timely way, help to fund local efforts following a transparent, needs-based process.

4.1 Promote the adoption of more participatory engagement processes in communities by funding research, development, and evaluation of innovative approaches.

4.3 Support councils with practical tools and resources to help with adaptation planning – via a digital hub or national centre of excellence, for example.

4.4 Support capacity building within the engagement profession, for example by investing in training and professional certification.

4.5 Pass the Climate Adaptation Bill, or equivalent legislation, into law as soon as possible. Give clear guidelines about what effective community engagement in adaptation looks like, when it should happen, and how it should be paid for.

4.6 Consider other legislative amendments, for example in the LGA and RMA, to provide further clarity about what is expected of local authorities.

Conclusion

THERE IS NOW A PRESSING NEED TO BEGIN THE PROCESS OF ADAPTATION TO ACCOMMODATE THE EXPECTED IMPACTS OF CLIMATE CHANGE. THIS ADAPTATION PROCESS WILL REQUIRE A RANGE OF RESPONSES AT THE LOCAL, REGIONAL AND CENTRAL LEVELS – INCLUDING MOVING PEOPLE, HOMES, BUSINESSES AND IMPORTANT CULTURAL BUILDINGS AWAY FROM AREAS AT RISK OF FLOODING AND EROSION.

Given the breadth and depth of the likely impacts on all aspects of our lives, and the long timeframes involved, it is essential that communities are meaningfully involved in the process of planning and implementing adaptive changes. This must be seen not just as a one-off, but as part of a long-term process of collaboration between governing authorities and all those affected by the expected changes. Benefits of engagement include enhanced democracy, more equitable outcomes, and more durable, credible, and legitimate decision making.

Some councils are already struggling to balance the need for adaptation with other priorities, and to dedicate the necessary time, resources, and specialisation of skills required to engage meaningfully with communities. Central government will need to strategically consider its role to ensure all communities are able to adapt themselves in a timely manner to climate change.

Given the challenges we face in our shared future, there is comfort in recognising the potential of the engagement process to create a shared and positive vision for communities that are equitable, resilient, and sustainable.

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