

Embedding Adaptation

Policy brief

National
SCIENCE
Challenges



Background and rationale for this project: Why community-based adaptation matters

Building adaptive capacity and community resilience is key to future proofing at-risk communities in Aotearoa New Zealand. Binding commitments to work together on an ongoing basis are vital. This necessarily involves at-risk residents, mana whenua, local government and community-relevant stakeholders that can influence community-based adaptation, e.g., NGOs, Government Ministries, and private sector organisations.

Many formal and informal community-relevant activities and planning initiatives are underway to develop and future-proof our communities, from District Plans to iwi management plans, emergency response plans and many more. Dedicated adaptation planning and action is necessary to complement this work. Adaptation takes place at the local level. It needs to be community-based, and where possible community-led. It facilitates prioritisation of short-term risk reduction and adaptation actions, and keeps future options open. It accounts for uncertainty, complexity, dynamism, and contestation. Importantly, adaptation planning identifies plausible response options, and their pros and cons, and outlines agreed pathways for medium- (10-50 years) to longer-term (50-100+ years) actions. It identifies key points at which a community needs to transition from one set of adaptation actions (e.g., reliance on warnings and evacuations) to alternative actions (e.g., protective works that might involve a mix of hard-engineering and nature-based solutions together with livelihood changes such as locally produced food). This is adaptation pathways planning. The Ministry for the Environment has issued updated guidance on how to carry out this work. But few communities have embarked on adaptation pathways planning in partnership with tangata whenua, local government, and other potential partners and stakeholders.

To date, adaptation efforts have focused mainly on technical analysis of exposure to natural hazards, and there is reliance on protective works like stopbanks and seawalls. Understanding physical exposure to natural hazards is necessary but not sufficient. The drivers and root causes of vulnerability – what makes people susceptible to harm – have been ignored. Consequently, natural hazard risk (which is the product of both physical exposure and social vulnerability) is seldom fully understood and effectively addressed. Moreover, the ways in which power and politics influence adaptation efforts are all but ignored. To make matters worse, community adaptation efforts are seldom mainstreamed into Local Government's formal regulatory planning provisions and even less frequently into relevant marae, hapū and iwi planning and decision-making processes.

What this project did

The focus of this project was on how adaptation politics and practices shape community-local government-tangata whenua interactions in a bi-cultural setting bound by Te Tiriti o Waitangi obligations. We sought to identify barriers and enablers for strengthening community-based adaptive capacity by building trusting and enduring relationships between residents, mana whenua and local government. Our approach was founded on participatory action research and co-design based on critical social science and analysis of power, politics, vulnerability, Te Ao Māori, and local government



practice. Our goal was to foster enabling and enduring community-based partnerships that build the adaptive capacity and resilience of those living in harm's way.

Identifying candidate communities and project partners

Communities are adapting to myriad changes, including climate change and many other environmental, socio-technical, and political-economic changes. They face distinct challenges and opportunities. The adaptation partnerships that need to be built are specific to each community. We set out to compare experiences in at-risk communities in two different regions: Manawatū-Whanganui and Taranaki regions, with a focus on two high-risk communities in each region.

Literature and practical experience attest to the pivotal role local government plays alongside tangata whenua and at-risk residents in enabling adaptation. To ensure that the work initiated through this Deep South project would continue beyond the project's two-year timeframe, we sought guidance from local government and tangata whenua in both regions about which communities along rivers and / or near the sea were priority candidate case studies. Much of this initial engagement took place between mid-2021 and the project start date in mid-2022.

The Manawatū-Whanganui Climate Action Joint Committee (CAJC) was the ideal forum to guide case study selection in this region. The CAJC has representation from leaders of each of the region's councils and tangata whenua. Ten candidate community localities were short-listed but the CAJC agreed that the project should focus on Pūtiki and Tangimoana.

No such regional-level forum was in place in Taranaki. After consulting staff in iwi liaison, emergency management, and policy and planning at the Taranaki Regional Council (TRC), New Plymouth District Council (NPDC) and South Taranaki District Council (STDC), two priority candidate case study localities were identified: the Māori owned Rohutu Block at Waitara East beach; and Waitōtara village with linkages into the valley. Consultation with the trustees of the Rohutu Block Trust and Ngā Rauru Kītahi kaumatua affirmed the merit of these candidate case study communities.

Engagement and mobilising communities

The scope of this project was ambitious given the constraints of the Deep South budget and timeframe. Recognising the value of the project for the Manawatū-Whanganui region and the work of the CAJC, Horizons Regional Council (HRC) made a significant financial contribution that enabled the Massey team to employ a full-time post-doctoral fellow from the end of 2022 to progress day-to-day project activities in the candidate case study communities.

In the aftermath of Cyclone Gabrielle, the CAJC through HRC commissioned the Massey team to conduct interviews and identify lessons learned from real-world post-cyclone Gabrielle recovery experiences in Ākitio in the Tararua district of the Manawatū-Whanganui region. The aim was to better understand how to 'build back better' and adapt in the face of climate-compounded disaster. This focused study complemented the in-depth case study investigations outlined above.

After extensive engagement over a prolonged period, with guidance by the CAJC and leaders in marae, hapū, iwi, local government and the nominated communities, local communities in three of the four candidate case study localities opted to participate in this project: Pūtiki, Tangimoana, and the Trustees on behalf of residents of the Rohutu Block, along with their respective Territorial Local Authorities and Regional Councils. Much of this initial engagement took place in the face of COVID-19. This negatively impacted on our ability to do the 'deep' engagement work we considered essential at the outset of the project. Consequently, it took longer than anticipated to mobilise community



partners and initiate adaptation planning and action. Context-specific circumstances were instrumental in shaping progress in each case study locality.

Rohutu Block, Waitara East, Taranaki

Six homes on the shoreline had become unsafe to live in due to the impacts of coastal storms and accelerating erosion. The NPDC had identified this block of land as a priority concern and Long Term Plan (LTP) funding was in place to support the residents of these homes prior to the start of the Deep South project. A close working relationship had developed between the Rohutu Trust and NPDC. It was clear that the Deep South project could complement the LTP funded work already underway to support and relocate residents and demolish existing structures. The Deep South project could look beyond immediate risk reduction and support medium- to long-term adaptation planning.

Initial partners included the Rohutu Trust on behalf of the residents, the NPDC and Massey University. We recognised the imperative to include additional partners, notably the TRC and hapū and iwi, as soon as possible. Agreement was reached on foundational principles for how the NPDC, Rohutu Trust and the Massey team would work together to align the LTP project and the Deep South project. The importance of this initiative was discussed and endorsed by residents at a hui that explored community views on the risks faced and ways forward. The Rohutu community was mobilised and eager to better understand and address the risks faced and prepare an adaptation plan.

Efforts to progress this work with meaningful resident involvement were, however, blocked because of then pending legal action to evict a person living unlawfully on the block and safety concerns arising from the squatter's gang affiliations. Nonetheless, the NPDC progressed work to support at-risk residents. An additional three years of LTP funding was allocated in mid-2024 to address this immediate risk. The NPDC and Trustees will reconsider ways to progress medium- to longer-term adaptation planning once the March 2024 High Court ruling is implemented and the squatter relocates. This work was hampered by capacity constraints affecting all partners, including NPDC restructuring and staff turnover.

A key lesson learned is the critical importance of binding commitments to work together by at-risk residents and relevant mana whenua and council authorities. It takes a long time and concerted effort to build trusting relationships and this is foundational for reducing risk and building adaptive capacity. Community-specific dynamics and interactions can close-down or open-up opportunities for adaptation planning and action. Community-based adaptation depends on having safe spaces for residents, mana whenua and local government to come together to build trusting, constructive partnerships. Only then can adaptation pathways planning proceed. Prospects for building adaptive capacity are nonetheless good, given the well-established NPDC-Rohutu Trust partnership.

Waitōtara village and valley, Taranaki

Waitōtara village has flooded many times over the decades, including in 2015 when parts of Whanganui, including Pūtiki, were flooded. The village is consequently an emergency management priority for the STDC. The Massey team was advised to explore Ngā Rauru Kītahi interest in partnering in this project because of the close connections between many people in the village and the extended valley. Initial interactions indicated that taking a 'valley-wide' perspective on adaptation would be more meaningful than solely focusing on the village. This would also shed light on practical risk reduction and adaptation challenges and opportunities when people at-risk cross district council boundaries, compelling joined-up council approaches.



Adaptation work in the valley was already well-underway with the Ngā Rauru Kītahi Climate Change Strategy developed in partnership with the Ministry for the Environment in place by the end of 2021. A host of other related activities were underway or have since been initiated, from work on water quality to nature-based solutions and engagement with two other Deep South projects. After extensive efforts by the Massey team to advance this partnership, Ngā Rauru decided not to participate in this project given other commitments and priorities. Their adaptation work continues through iwi and hapū initiatives and partnerships with local government amongst others.

A key lesson learned is the need to align externally driven adaptation initiatives with local priorities and capacity constraints. Adaptation pathways planning cannot be externally initiated without local buy-in, no matter how well-intentioned. Concerted effort was made to initiate adaptation pathways planning in the village and valley. It slowly became apparent that engagement in this project was not a priority for Ngā Rauru. Establishing strong relationships between external teams like the Massey team and tangata whenua takes time. Establish close working relationships with local government is also important but was hampered by capacity constraints in the STDC and the small Massey team based several hours away. It is not feasible to 'switch on' desired partnerships at short notice, especially within the constraints of a short-term project like this Deep South initiative. Even when initial indications are affirming, adaptation pathways planning can only be initiated when the time is right: when there is strong support by local leaders and the capacity to mobilise tangata whenua, local government and local communities in ways that are credible and legitimate.

Tangimoana, Manawatū-Whanganui

Guidance by the tangata whenua and local government representatives on the CAJC led to focused interaction with the Tangimoana Community Committee as the main community forum representing at-risk residents. Such committees often struggle to represent community members effectively. We explored how best to progress community-based work in Tangimoana through extensive interactions with MDC staff, the Councillor liaison for the community, and many residents and community figures, from the School Principal to the shopkeeper through, among other things, numerous phone calls and emails; a mail-drop; a series of open-day sessions; one-on-one interactions; connecting through the community's Facebook page; and an expo event. Notwithstanding these efforts, it was difficult to secure active resident involvement. Efforts to partner with iwi indicated that iwi leaders were over-stretched and the benefits to iwi from active involvement in this project were not apparent to them.

Despite often challenging and contentious community-council interactions, the Tangimoana Community Committee, the MDC and HRC agreed to work together through this Deep South project. To this end, in November 2023, a Statement of Intent was signed to prepare an adaptation pathways plan. This was more than symbolic because it was a signed statement by community representatives and the leadership of local government to advance adaptation.

Ongoing efforts to meaningfully involve residents in the project proved challenging. One-on-one interactions helped create safe spaces for residents to voice their concerns about the risks faced; future uncertainties; exposure to insurance premium hikes or withdrawal; worries about property values falling if such information became common knowledge; distrust of local government; and concerns ranging from environmental degradation to ways to grow food locally.

The Massey team synthesised available risk information and sought resident feedback on their risk perceptions. Some of the available information was overly technical and difficult for lay people to comprehend. Property-level information about hazard exposure was considered important but was not available in a format that could be readily distilled and made available to residents. The risk worksheets distributed to residents to ascertain risk perceptions were thought to be too academic. There was sensitivity about how to express vulnerability in a constructive and enabling manner, and



reluctance to discuss managed retreat. It became apparent that co-designing an adaptation pathways plan with active involvement of residents would not be feasible in the last quarter of the project. It was decided to document a plain language synthesis of risk information and priority actions / concerns identified by the Tangimoana Community Committee as a platform for future adaptation pathways planning.

Somewhat paradoxically, but perhaps unsurprisingly, resident interest to participate actively in the project grew noticeably in the closing months of the project. But at that point the Massey team had to focus on meeting contractual reporting deadlines for the project funders. A draft follow-on addendum to the statement of intent was prepared to synthesise overarching community risk perceptions and list short-term priority concerns and actions expressed by the Tangimoana Community Committee. In practice, the struggle to deepen and extend resident engagement and the difficulty experienced in securing in-depth risk analysis meant that there was insufficient time and capacity to complete the envisaged adaptation pathways plan in the first half of 2024. The November 2023 Statement of Intent together with the high-level draft synthesis of risk information and outline of short-term priorities nonetheless provide a platform for advancing community-based adaptation work with the ongoing support of the MDC and HRC.

Three of the underlying tensions or dilemmas that challenge community-based adaptation initiatives are highlighted by this Tangimoana experience. First, how does one actively involve residents in a community-based initiative in the context of fraught community-local government interactions, especially when an established community forum struggles to represent the community effectively? This project experience underscores the time-consuming and ongoing engagement work involved in addressing this challenge. Using a mix of engagement methods is critical. Active involvement of and support by 'champions' or advocates with standing in the community is also crucial. Establishing a community-based Working Group, possibly under the auspices of the Tangimoana Community Committee, is a possible way forward. Such a working group and building community facilitator capacity depend on the support of local government to carry out this important community work. Yet local government resource constraints are a potential barrier to providing this support. Crucially, the work to date provides a strong foundation for community-council deliberations about the challenges that lie ahead and how to chart a way forward by continuing to work together.

Second, how does one strike the right balance between providing technically robust hazard, vulnerability and risk information and making this information accessible in plain language for diverse community members? Participants expressed a preference for short, plain language information; and yet also wanted detailed property-level data, with some being underwhelmed by the high-level synopsis of risk information provided by the Massey team. Securing relevant data from local government was at times challenging and time-consuming. Active and ongoing contributions by council staff and buy-in and commitment by the Council Chief Executive and elected members are essential. Risk perceptions and awareness of climate change science vary widely within the community and amongst local government elected members. Building shared risk understanding is an ongoing challenge unless reluctance to participate in a community-wide initiative is overcome. Interactions in the last quarter of the project indicate potential to leverage the work to date.

Third, the majority of Tangimoana residents are Pākehā, but active partnership by mana whenua in the area is vital. How does one develop such partnerships when it is not an immediate priority for iwi leaders? This important work of relationship building between residents and tanaga whenua is best led by members within the community. Keeping the CAJC representatives up to date with regular progress reports was one channel of communication. Regular reporting to iwi leaders on progress made is advisable. Even more focused attention needs to be paid to this matter as the community and local government move forward with adaptation planning beyond this Deep South project.



Addressing these tensions and dilemmas in a constructive and enabling manner is supported by independent facilitation to broker agreements to work together; build shared understanding about the risks faced; craft a common vision for the community; identify plausible futures and the pros and cons of potential adaptation interventions over time; and identify and agree on credible pathways for community-based adaptation action over time. Despite severe constraints on local government, there are important opportunities and ways in which local capacity can be strengthened and 'internal' community capability leveraged. The absence of a clear legislative and policy setting for adaptation, and vexing questions about insurance and managed retreat, for example, hamper these efforts. However, strong commitments to continue to work together to build the adaptive capacity and resilience of the Tangimoana community are in place. This provides a vital and robust foundation for ongoing adaptation pathways planning and action.

Pūtiki, Manawatū-Whanganui

Initial engagement with the Pūtiki community stemmed from the CAJC endorsement and through online and face-to-face engagement with leaders of the community and WDC. Through these interactions, especially guidance by the Pūtiki Wharanui Chair and mana whenua leadership, it was made clear that the immediate priority was to reduce exposure to flooding from the Ngatarua and Awarua streams, especially the risk faced by elderly residents of the kaumatua flats in the lowest lying area of Pūtiki. Water from the surrounding hills is channelled by these streams through culverts under State Highways 3 and 4 that converge and run through Pūtiki. The culverts, primarily the responsibility of the NZ Transport Agency Waka Kotahi, cannot cope with the frequent heavy downpours that expose residents to rapidly rising floodwaters. Flooding from the Whanganui River is obviously a severe peril that is compounded by proximity and connection to the sea with spring high tides and rising sea level exacerbating this risk. The community also faces other natural hazards, including seismic and liquefaction risk. Initial engagement affirmed the merit of progressing this community-based adaptation work as part of this Deep South project.

Efforts to build on this initial engagement were, however, frustrated by a lack of clarity and direction about how best to involve residents directly in the project. Some community members expressed concern about the project's slow progress. This frustration reflected over two decades of cumulative community concerns, council analyses and reports, and repeated evacuations and flooding experiences. Concerted effort was made to mobilise the community, but it was difficult to gain real traction until a catalytic rainfall event in May 2023. This coincided with a community hui held to update residents about the project. Residents expressed their pent-up anger, frustration, and anxiety about the severe risks faced and lack of effective local government action. To address these concerns and take practical action to develop the community's emergency preparedness and response capacity, a new group called the Pūtiki Emergency Response Group (PERG) emerged. Driven by three community members endorsed by mana whenua leadership and the community at large, PERG became the pivot around which community-led risk reduction and adaptation efforts were mobilised. The most constructive way forward was for the Massey team to support PERG as much as possible.

Agreement on how mana whenua and local government, amongst other potential partners, should work together is foundational for building a robust and enduring partnership to sustain community-led adaptation. The critical foundation for crafting such an agreement is the Te Awa Tupua Act (2017) that affirms the legal personhood of the Whanganui Awa. It places the well-being of the awa at the centre any action affecting the awa and those it sustains. Te Heke Ngahuru strategy guides implementation of this law. It is values-based and places hapū at the centre of decision-making in Te Tiriti-based co-governance with local government and relevant stakeholders. Of fundamental importance are the values – Tupua Te Kawa – underpinning this legislation and strategy. These values are core to the indigenised Memorandum of Understanding – the Tākai Here – that binds the WDC



and HRC, together with NZ Transport Waka Kotahi, to work in partnership with the Pūtiki community. Massey University was a signatory to reflect its brokering role in crafting the agreement. The Tākai Here is a 'living agreement.' It not only guides the working relationship but will be added to and refined as community-led risk reduction and adaptive capacity and resilience building develops and circumstances change. Importantly, too, this Tākai Here affirms that adaptation planning and action centred on the residents of Pūtiki is an integral part of catchment-wide actions that extend from the mountains to the sea.

PERG progressed their community-led work on multiple fronts in partnership with local government, Waka Kotahi and other partners and stakeholders, within and beyond the immediate confines of Pūtiki's residential development. This included successfully securing LTP funding to strengthen community-based emergency response capacity; and a Master Planning process to meet housing and associated Papakāinga needs over the next 30 years. It became difficult to track how all these initiatives 'fitted together' and it was not feasible to complete an adaptation pathways plan within the Deep South timeframe given the myriad activities underway. Nonetheless, with the project winding down, and the values-based Tākai Here in place, the Pūtiki community is well-placed to lead ongoing adaptation planning and action with the support of their partners and other stakeholders.

A key lesson learned from this Pūtiki experience is the importance of a grounded values-based approach to crafting partnership agreements between mana whenua and community members, local government, and government partners. Local hapū know their whenua and awa. Therefore, it is not enough to merely talk about ways to work together. It is necessary to forge a binding agreement – a pact to work better together – at the highest and most-grounded level. The transformative Te Awa Tupua legislation provided the robust and enabling basis for articulating core values – Tupua Te Kawa – to bind partners together with the community in this Tākai Here. An independent party, like the Massey University team, can play a catalytic role in brokering such an agreement. Importantly, such an agreement would be reduced to mere words on paper if it were not for the emergent but strong community-led work by the members of PERG. Their efforts, along with support from Tākai Here partners, promises ongoing and effective risk reduction, resilience, and adaptive capacity. It was not possible to predict or anticipate the emergence of PERG. However, focused attention on opening-up opportunities for such community-led initiatives to flourish is essential in adaptation work. This is challenging and contested work, involving a complex blend of authentic engagement and technical analysis, and striking the right balance between these elements is dynamic and evolves over time, often through contested interactions. This is where the Tākai Here is indispensable. It binds partners together through the core values – Tupua Te Kawa – in support of the community and their whenua and awa. Buy-in and support at the highest level of local government and government partners is necessary but not sufficient. Staff and elected members in government play a crucial role in opening-up opportunities and supporting community-led adaptation. But the core is sustained community-led capacity and resources to deepen and extend collective understanding and capability as all partners work together to reduce flood risk and adapt over time.

10 key policy-relevant findings

1. Community-based adaptation planning is relationship building.
2. Adaptation is a negotiation process.
3. Embedding (or institutionalising) adaptation is 'messy' – not sequential but a mix of planning, action, reflection, adjustment, etc.
4. Enduring community-based adaptive capacity is enabled by institutionalised at-risk residents-local government-tangata whenua climate action partnerships.
5. Aligning adaptation planning and practice across Territorial Local Authorities and Regional Councils is key to building community-based adaptive capacity.



6. Local government support is foundational for building community-based adaptive capacity.
7. The absence of an enabling adaptation legislative and policy setting is debilitating for community-based adaptation, hampering action by residents, local government, and tangata whenua.
8. Build shared understanding about natural hazard risk, adaptation options and plausible pathways into the future.
9. Priority attention needs to focus on supporting those most exposed and vulnerable to climate-compounded risks.
10. Independent 'critical friends', potentially including university-based action researchers, can play a vital mediation and/ or facilitation role in building adaptation partnerships between key governance actors, especially where there is a lack of trust.

Changing with our climate

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