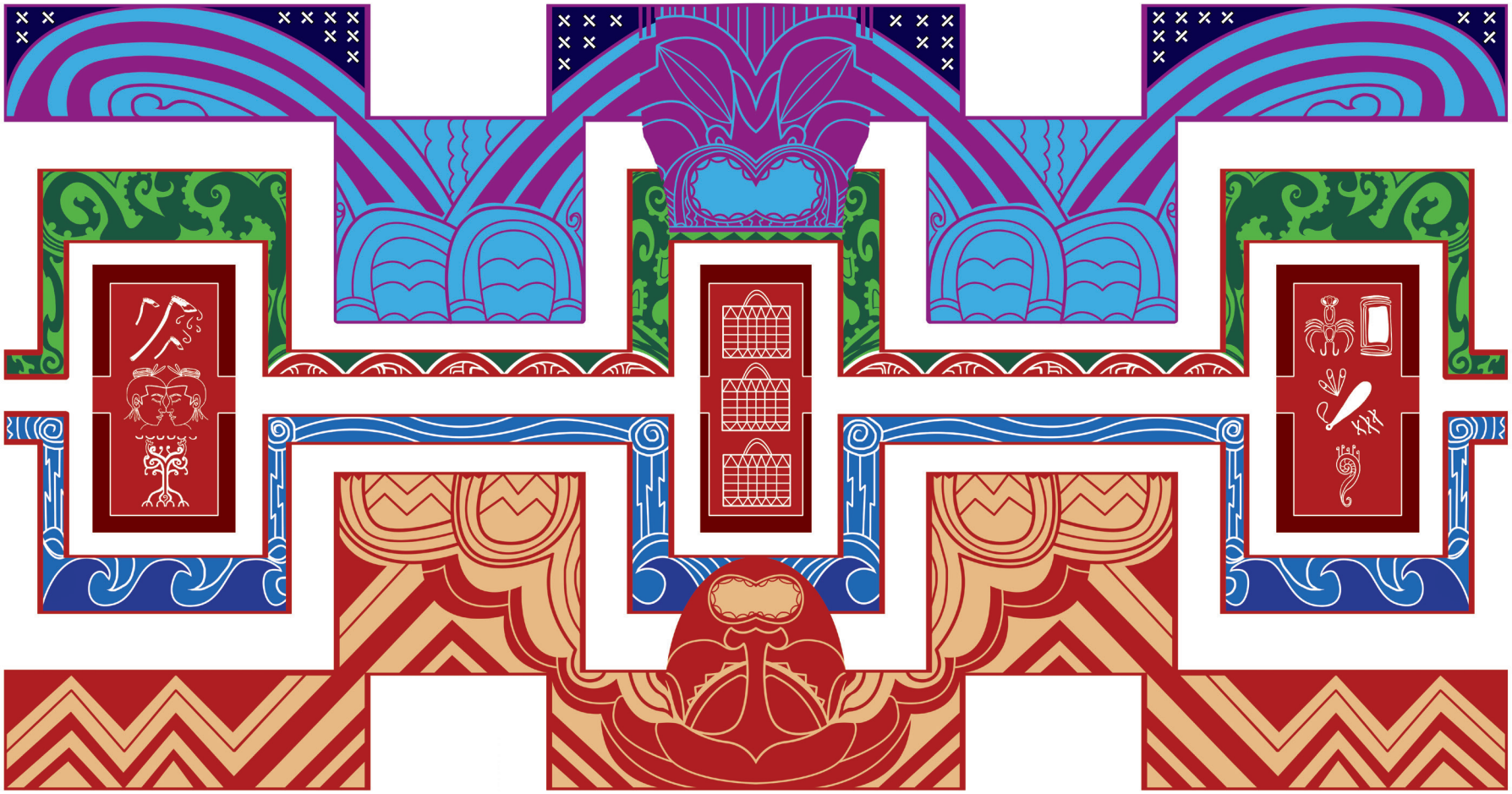
Guide to Disaster **Recovery Capitals (ReCap)**



Aotearoa New Zealand edition

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Further project information:
Access the ReCap resources online and find out more about the project:
recoverycapitals.org.au

Further work from the teams leading the ReCap project:
disasters.massey.ac.nz
beyondbushfires.org.au

The artwork:
The cover artwork and all other pieces in this guide were completed by Ariki Arts – Taupuruariki Whakataka Brightwell. Each illustration reflects the nature of the information expressed throughout the document, particularly as they relate to each of the seven capitals, through imagery and concepts that are representative of a Māori worldview. Please visit facebook.com/arikiarts/ for more work by Ariki.

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About this resource

This resource has been developed through the Recovery Capitals (ReCap) project. ReCap aims to support wellbeing after disasters by providing evidence-based guidance to those engaged in recovery. It is intended to enable strengths-based, holistic and inclusive approaches to recovery.

The guide emphasises the interacting elements of recovery, using a framework of 'recovery capitals' – natural, social, financial, cultural, political, built and human.

It has been created through an Aotearoa New Zealand-Australia collaboration. There is an edition tailored to each country, although both have broader relevance to other locations. This edition is designed for use in Aotearoa New Zealand.

How the resource is structured?

For each of the seven recovery capitals, there is a section outlining its role in disaster recovery, including how it can affect wellbeing and influence other recovery capitals.

The recovery capitals are deeply interrelated, so you will find information relevant to each capital throughout the document, and some recurring themes. Icons after each statement of 'what we know' illustrate some of the links between the capitals.

The statements of 'what we know' summarise academic evidence, but they do not represent all evidence and knowledge on each capital. Prompts to 'consider' in supporting recovery follow these statements as practical guidance.

Applying the resource in practice

The guide is designed for anyone involved in supporting disaster recovery. It can be used post-disaster, or in pre-event recovery planning.

Given the complexity and diversity of disaster contexts, the guide does not include specific instructions or universal messages for recovery. Instead it uses evidence from previous disasters to illustrate possibilities of what can happen and prompt reflection on how this may apply in a given context.

There are existing resources that may assist you to decide what to do in response to the insights and considerations raised in this resource, such as the Aotearoa New Zealand Rautaki ā-Motu Manawaroa Aituā National Disaster Resilience Strategy and the Recovery Preparedness and Management Director's Guideline for Civil Defence Emergency Management Groups [DGL 24/20].

More ReCap resources and suggestions for using the guide can be found at www.recoverycapitals.org.au

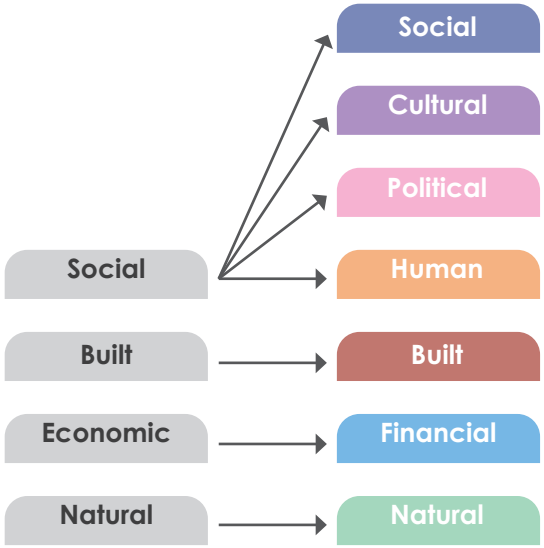
What is recovery?

Put simply, people and communities are recovered when they are leading a life they value living, even if it is different to life before the disaster event. Within ReCap, this is understood as a complex, non-linear, multi-layered process that occurs as people and communities work to resolve the impacts of a disaster. Recovery is intertwined with disaster reduction, readiness and response, and can provide an opportunity to improve upon pre-disaster circumstances and increase resilience for some.

ReCap and the four recovery environments

This guide can be used in tandem with the widely used 'four recovery environments' framework[1]. The four environments – social, built, economic and natural – are similar to the seven recovery capitals featured in this guide. The key difference is that the 'social' environment is expanded into four capitals – social, cultural, political and human – to enable deeper understanding of these important aspects of recovery.

The concept of 'capitals' expands our understanding beyond 'environments' in several ways. A focus on the capitals that people and communities have supports strengths-based approaches. It also allows us to see how these capitals ebb and flow over time, and to explore how they can be developed and drawn upon.



Four recovery environments **Seven recovery capitals**

The ReCap Framework

Community capitals framework

ReCap uses an adapted version of the Community Capitals Framework which was originally outlined in the context of community development[2]. It consists of seven capitals – natural, social, financial, cultural, built, political, and human. Definitions of each of the seven community capitals have been developed based on literature and consultation with project end-users to create the Recovery Capitals Framework for disaster contexts, as presented in this resource.

Recovery capitals

The ReCap project uses the concept of 'recovery capitals' to help understand the ways that many elements interact and influence recovery in diverse disaster contexts, and how resources can be drawn upon to support wellbeing.

Capitals are traditionally defined as resources that can be used to generate more or new resources. However it is important to define how these capitals can support recovery[3], because it is not always the case that 'more is more'. **Within the Recovery Capitals Framework, capitals are defined as resources that can be maintained, increased and drawn upon to support wellbeing.**

By paying attention to recovery capitals, **each person or community can assess what strengths and resources they already have, and identify priorities** for enhancing their capitals to support their recovery **based on what is important to them**. This aligns with strengths-based and community-led approaches to resilience and recovery.

Different recovery contexts

Each disaster is different. Hazard types and scales vary, as do the characteristics of the communities impacted. These contextual factors affect how the various forms of community capital manifest, interact and influence each other and recovery outcomes. The ReCap project aims to support recovery decision-making that is community-led and responsive to different hazards and local contexts.

Interconnectedness

The Recovery Capitals Framework separates recovery into seven domains which, in this project, assists in the process of mapping evidence and producing useful outputs. However, of course, **these aspects of life do not exist in isolation from each other**, and the attempt to separate them may be particularly incongruent with te ao Māori, Indigenous and other worldviews.

ReCap emphasises the **deep connections between the seven recovery capitals**, and recognises that some things cannot be neatly categorised as part of one capital or another. Instead of being treated in separate silos, the capitals should be understood as interacting elements to be addressed together. Accordingly, this guide focuses on **how the capitals all influence each other.**

This project also recognises the 4Rs of emergency management in Aotearoa New Zealand: Reduction, Readiness, Response and Recovery. Recovery is directedly related and managed through activities across these phases. Including planning how recovery workers will be supported during response and building recovery considerations into planning documents. By allocating resources across the 4Rs it helps to reduce recovery efforts[1].

Multiple dimensions and levels

The Recovery Capitals Framework draws from a socioecological model[4] to explore multiple levels and dimensions of recovery, and the interactions between them.

People, households, communities

In terms of people, each of the capitals encapsulates whānau, hāpu and iwi. It can also be conceptualised at an individual level, family, or household level, and a community level (with varying meanings of the term 'community' e.g. based on place, identity, interest or context). This multilevel approach allowed us to explore the interplay between the recovery of people and communities.

Place: Local, regional and macro scales

In terms of systems and infrastructure, capitals can also be understood at multiple levels which intersect and interact with each other: local (neighbourhood or town), regional (city or state) and macro (national or global).

It is important to recognise that people impacted by disasters live in a range of geographic areas, and some may be mana whenua to those areas. It is also important to consider those that may be left out of local or place-based approaches to community recovery.

Time: prevention, preparedness, response, recovery

Capitals fluctuate and transform over time and have a dynamic influence on disaster recovery. Recovery is a lengthy process, and the experiences in the short-term aftermath of a disaster will not necessarily reflect the circumstances over the following years.

Looking at the complexities of time also allows for a nuanced approach to **the 'phases' of disasters** – reduction, readiness, response and recovery. ReCap treats these as **interdependent and overlapping rather than discrete and linear**. The focus of ReCap is recovery, but this is not at the exclusion of the other phases: for example, readiness activities influence recovery, and recovery processes can affect readiness for future disasters. In prolonged disasters, such as pandemics, these lines are blurred even further with reduction, readiness, response and recovery activities occurring simultaneously.

Māori kupu[25]

This glossary is a reference to te reo Māori in this document. Please note, while we provide basic definitions we do not assume there are literal translations of Māori kupu.

Atua – many Māori trace their ancestry from *atua* in their *whakapapa* and they are regarded as ancestors with influence over particular domains.
Hapū - kinship group, clan, tribe, subtribe.
Iwi - extended kinship group, tribe, nation, people.
Kaitiakitanga – guardianship, stewardship.
Karakia – ritual chants, pray, recite a prayer.
Kīngitanga – reign, majesty kingdom. King movement developed to stop the loss of land to colonists.
Kupu – word, vocabulary, statement.
Manaakitanga - hospitality, kindness.
Mana motuhake – self-determination and control over own destiny, autonomy.
Mana whenua - local *iwi* and *hapū*.
Marae - meeting grounds and the complex of buildings around the *marae*.
Mataawaka/taurahere - Māori living outside their *tūrangawaewae*.
Mātauranga - knowledge, wisdom, understanding, environmental knowledge.
Motu - island, country, land.
Pou - post, upright, support, pole, pillar, goalpost, sustenance.
Rahui – a temporary ritual prohibition on an area.
Rūnanga – Māori assembly or council.
Tangata whenua - local people, hosts, indigenous people - people born of the *whenua*.
Te ao Māori – the Māori world or universe.
Te reo Māori - the Māori language.
Te taiao - world, earth, natural world, environment.
Te Tiriti o Waitangi – The foundational treaty that was signed by Māori chiefs and the British Crown.
Tikanga – custom, lore, method, protocol.
Tino rangatiratanga – authority, leadership.
Tīpuna – ancestors, grandparents.
Tūrangawaewae - place where one has rights of residence and belonging through kinship and *whakapapa*.
Wairua - spirit, soul.
Whakapapa – genealogy.
Whānau - family group.
Whanaungatanga - relationship, kinship, sense of family connection.
Whenua - country, land, nation.

Māori and recovery experiences

This work acknowledges the significant and insightful contribution of Māori scholars and practitioners in disaster risk reduction and recovery research and practice in Aotearoa New Zealand.

For example an extensive body of research was conducted following the Canterbury and Kaikōura earthquakes in collaboration with the local rūnanga Ngāi Tahu[5-10] and communities that were impacted[11-14]. This gave an extensive evidence base for understanding Māori response and recovery processes, adaptivity and cultural resiliency. Additional research has explored Māori cultural experiences and knowledge of natural hazards[15-17] and responses to disaster events[18-24]. While this mātauranga belongs to Māori it can benefit all communities during disaster recovery.

This work embraces a Te Tiriti o Waitangi relationship and is underpinned by the values of tino rangatiratanga and mana motuhake. In this way, we recognise that Māori, as tangata whenua, should be given the rights and ability to carry out their own response and recovery efforts. ReCap supports Māori flourishment and wellbeing in a disaster context, and beyond[24].

Equity and diversity

ReCap does not just focus on the amount of capital available within communities, but also on the distribution of capital within and between groups of people. This reflects a commitment to social justice and an understanding that disasters do not affect all people equally – instead, **disaster impacts and recovery trajectories tend to reflect existing social inequities and often exacerbate them**, particularly for people who are disadvantaged in multiple ways. ReCap acknowledges that there are a range of culturally, linguistically, cognitively and physically diverse peoples who are all affected by disasters and each has unique needs that should be considered during recovery.

ReCap recognises that differences in disaster vulnerability are created and perpetuated by systems of inequity within societies. By focusing on recovery capitals, ReCap emphasises the strengths that exist within each community despite these inequities and highlights how these can be drawn upon to support community recovery.

ReCap frames each recovery capital broadly, to account for the richness of experience and diversity amongst people and communities. **Each type of capital will have different meanings and relationships to other forms of capital for different people, communities and contexts.** As a collaboration across Aotearoa New Zealand and Australia involving Māori, Aboriginal and non-Indigenous contributors, ReCap benefits from different perspectives based on cultural, environmental and societal contexts.

Natural | key considerations

'Natural capital' refers to te taiao, the natural environment and its resources, and the overall health of ecosystems that are necessary to support life. This includes air, land, soil, water, minerals, energy, weather, geographic location, flora, fauna and biodiversity[2, 26]. In te ao Māori a natural hazard can be a tīpuna or atua. For instance, a volcano can be recognised as a tīpuna, while Rūaumoko is the atua of earthquakes[27]. These relationships signify the connection to te taiao.

Connection

What we know

Due to our relationships to te taiao, any harm to it can cause distress and grief, in multiple ways, for many people[28]. Māori are particularly affected because of their genealogical relationship to whenua and as guardians and protectors of te taiao[5,15,18,22]. Māori have a deep understanding and connection to the earth's features and processes, which in turn connects to history, culture, identity and colonisation[15,17,18].

Following a disaster, the regeneration of nature can provide solace, and connection to the natural environment has been associated with better post-disaster mental health and wellbeing[28-31]. Pandemics can impact mental health by restricting connection with nature[29,30].

Consider

- **Recovery approaches should be respectful of the history, culture, strengths and circumstances of affected communities, especially Māori who should be given authority to manage caring for their people pre- and post-event. This involves enabling communities to lead their own recovery; developing trusting relationships and collaborations; and considering the significance of whenua, trauma, healing and resilience.**
- **Involve tangata whenua, local residents and communities in the development of local practices to restore, protect and connect with the environment and the whenua.**

Natural | key considerations

Restoration

What we know

Restoration of and reconnection with the natural environment is necessary for the wellbeing of people[28-30], especially Māori due to their genealogical ties to the land[16,18]. It can also provide other benefits for people including boosting local and national economies[32]. For instance, conservation or rehabilitation activities may create new jobs that attract outside workers[32].

Consider

- **Consult with tangata whenua and other communities about how to protect and restore the natural environment.**
- **How might local activity in industries such as tourism and agriculture be fostered? Explore opportunities to make these livelihoods more resilient and sustainable through recovery.**
- **Create diverse opportunities for connection with nature. Attention should be paid to appropriate engagement with places of particular significance to Māori, for Māori, and others.**
- **Provide information about the history of the local area and Māori knowledge and stories about the land as a way to engage and connect to nature.**

Remaining and relocating

What we know

Connection to the natural environment is an important part of people's sense of place, and as such people may be more likely to remain in a community after a disaster event[31,33].

Consider

- **Decisions about relocation may be further complicated for Māori whose whakapapa and tūrangawaewae are specific to a disaster-affected area.**
- **If appropriate, restore local features (such as walks and parks) and initiate diverse and accessible opportunities to enable people to engage with the spiritual and cultural significance of nature in their lives.**
- **Provide information about the history of the local area alongside Māori knowledge and stories about the land in ways that are cultural respectful and sensitive.**

Natural | key considerations

Risk and barriers

What we know

In hazard prone areas there is increased exposure to risk e.g. proximity to fault lines or flood plains[34-36]. Further, the natural environment can also pose barriers to recovery, such as access to services in remote locations[37]; insurance difficulties in high-risk areas[38]; lack of financial resources for recovery if local industries, such as tourism, are highly dependent on the natural environment[32].

Consider

- **What features of the natural environment increase exposure to risk, or pose barriers to recovery? What mitigation strategies are in place, or need to be developed?**
- **How can we best support people and communities to be prepared and to recover? What communities are we overlooking?**

Climate change

What we know

There is growing evidence of the psychological, physical and spiritual health impacts from the threat of climate change (including 'ecoanxiety' and 'solastalgia')[39,40]. Further investigation of the ways this could interact with disaster recovery is needed, given the importance of a sense of safety, hope and self- and community-efficacy in recovery[41].

Consider

- **How might increasing anxiety about climate change influence people's recovery and overall health?**
- **How might people engage in climate action, adaptation and planning for future events as part of the recovery process?**
- **How might climate change impact on Māori, Pasifika, and those from other island nations differently?**

Social | key considerations

'Social capital' refers to the connections, reciprocity and trust among people and groups. There are three types of social capital: **bonding** (strong ties between similar people e.g. family and friends), **bridging** (looser ties between a broader range of people, often cutting across race, gender and class) and **linking** (ties connecting people with those in power, such as decision-makers)[42].

Relationships and support

What we know

Social ties matter in people's recovery. They are generally helpful, but the relationship is complex. Family, friends and neighbours are important sources of support[43-49] and providing support to loved ones can also support resilience[43,50].

People with more social relationships generally have better mental health in recovery[51]. Wellbeing may be compromised if friends and family are depressed[51], have high property loss[51] or leave the area following a disaster[33,51]. Where disasters cause loss of life, the mental health impacts extend beyond the family to friends and community members, with particularly deep impacts where there are multiple deaths within a community[52].

Consider

- **Acknowledge the support people are providing to each other.**
- **Provide community information sessions about post-trauma support strategies to help them take care of themselves and others.**
- **Pay attention to carers' needs and ensure they practice self-care.**
- **If appropriate, create spaces for memorials and anniversary events in which people can reflect on community members they have lost.**
- **Be respectful or inclusive of the use of karakia or prayer as it can help with healing, connection and cleansing.**

Social | key considerations

Community cohesion and participation

What we know

Recovery is strongly influenced by the degree of connection and participation within and between affected communities[53,54]. Community cohesion can facilitate cooperation, enabling communities to respond to the needs of different community members[32,55]. Disasters can trigger shifts in community dynamics[32,33], with initial increases in community cohesion giving way to disagreements and tensions[56]. Pre- and post-disaster interventions can enhance social structures within communities to support resilience and recovery[55], if they are culturally supportive, empowering and engender self and community efficacy[41].

Community groups can play an important role in recovery decision-making and collective action[53]. Having many close social bonds within a group, as is the case within Māori and many migrant communities[6,12,22,57], is generally a strength likely to foster resilience and recovery[32,58], unless there is a lack of bridging and linking capital[53,59].

In Australia, following Black Saturday, people who belonged to community organisations and groups generally had better mental health and wellbeing years after, although being involved in many groups had negative effects for some[60,61] due to time and effort required[61].

Consider

- **Pay attention to patterns of group membership and support the capacity of local groups to continue operating (e.g. because they support many or they support those who are otherwise isolated). This may require funds for facilities, equipment and/or activities pre- and post-event.**
- **Participation in community organisations and groups should be encouraged, but it's important to share the load. Observe whether a few people are doing the heavy-lifting as they may become overburdened.**
- **Initiate opportunities for people throughout various communities to become involved and connected with each other in a range of ways, to build ties within and outside existing groups.**
- **Be prepared for conflict within communities and build capacity to navigate and resolve tensions.**
- **Work with hapū to understand how to best support them to lead the mobilisation of marae, if required.**

External support

What we know

Communities affected by disasters often receive support from wider society, including resources, guidance, and emotional support[43,53,55]. When this support is responsive to local needs it generally plays a positive role in recovery[62,63]. Communities with greater ability to draw on these external connections tend to fare better[32,53,64,65].

Consider

- **Identify the communities that are least likely to be able to draw on connections to government and broader society and support them to advocate for their needs. Make sure this support is driven by needs within the community and not what you determine is important.**

Social | key considerations

Communication

What we know

Social connections build trust and enable the flow of information, which is critical during recovery as it facilitates decision-making and access to resources[43,53,60,66-68]. This includes connections between whānau, family, friends, neighbours, service providers, media and government. Information delivered through strong relationships and effective methods can further strengthen social capital[43,55], whereas weak social ties can lead to a cycle in which poor communication leads to mistrust and blame, further damaging social connections[67].

Consider

- **The ways that people communicate in post-disaster settings may be very different from the way that they did before. It is important to assess how people want to access and provide information in post-disaster settings, noting this may change throughout the recovery.**
- **Central community websites, newsletters, noticeboards and meetings can be important means of sharing official information about recovery. Sharing that information through community leaders, groups, networks and social media can provide pathways to reaching more people, through platforms that they trust.**
- **Ensure that communications are accessible to all, taking into consideration people's diverse needs and circumstances.**

Inequities

What we know

Social capital is a double-edged sword – it can be a powerful engine of recovery and social progress, but it can hinder recovery and exacerbate inequities[53,59]. For marginalised groups, trusting relationships with peers, services and advocates can be crucial[68]. However, social capital can benefit those within a well-connected group at the expense of those on the outside[53,59]. Dominant groups often mobilise to protect their own interests, which can inhibit broader recovery, shift burdens onto the less connected and entrench stigma and disadvantage[53,68-73].

There is evidence from the USA that poverty increases more after disasters if there is a growth in the number of inwardly focussed organisations that bond people together as they can inadvertently marginalise people in greater need[74]. This can be due to restricting resources to the 'in-group' (e.g. religious organisations)[59,74]. By contrast, increases in advocacy organisations – which foster bridging and linking social capital across a broader range of people and institutions – appear to reduce poverty rates[74].

There is also evidence suggesting that the sense of community generated by involvement in community organisations is not only linked to relationships within the organisation, but also to the outward focus and influence of the organisation[75].

Consider

- **Advocacy and community organisations should be activated, supported and funded (along with direct service organisations), as they are able to attract external resources, foster sense of community and promote equity in the distribution of services and resources.**
- **Can marginalised groups access recovery support through existing, trusted service providers?**
- **Identify who is often excluded within local communities, and proactively include them in recovery decision-making.**

Social | key considerations

Physical distancing

What we know

Given the importance of social connectedness in disaster recovery, physical distancing measures in response to pandemics pose challenges to recovery, especially for communities affected by multiple disasters[76]. Further evidence is needed on interventions that can maintain and build social connections in these contexts[76].

Consider

- **How can social capital be built and maintained, particularly for those most at risk of isolation, in the context of a pandemic?**

Decisions: remain, relocate, return

What we know

Social networks and connection to whānau, hapū and iwi and various communities can influence people's decisions about living locally or relocating after a disaster. Neighbourhoods with high levels of social capital tend to be repopulated more quickly after disasters[53,77]. People with disabilities and those receiving low incomes may also have less choice regarding relocation due to lack of accessible housing options[78].

Following the Canterbury earthquakes, community groups spontaneously organised to provide support to residents[10].

In Australia, following Black Saturday, a strong sense of community was a reason people chose to stay locally, while for others a damaged sense of community arising from disagreements and changes to the local area led to decisions to relocate[33,48].

In the USA, following Hurricane Katrina, survivors relied on information about the plans of their neighbours, friends and store owners when deciding whether to return to New Orleans or relocate[53,66].

Consider

- **What local groups, spaces, resources and activities help people connect with each other socially? How can these be supported? Be sure these opportunities are culturally sensitive and accessible to all.**
- **Provide information to people facing decisions about rebuilding or relocating, including the sorts of stressors and benefits they are likely to face in each scenario.**
- **Facilitate ways for people to connect pre- and post-event (e.g. through free local events) even if they are far apart or unable to meet in person (e.g. community pages on social media).**
- **Are there people who will have less opportunity to decide whether to stay or relocate than others (e.g. those in public housing or in rental homes)? Identify opportunities to help these people to connect and access support that best fits their needs.**

Social | key considerations

Experiences: remain, relocate, return

What we know

Relocating or living locally after a disaster is likely to alter recovery experiences, but the implications for long-term wellbeing are complex and variable. Benefits of staying locally include opportunities for community connection and discussion of shared experiences, although this can be undermined if friends, neighbours and whānau choose to leave[33,51,79]. Those who relocate may feel guilt over this and be less socially connected in their new homes, but may benefit from stepping away from the post-disaster disruption[33]. Their mental health may be protected if they have new neighbours who have also relocated from the same area[60].

At a community level, repopulation through return in disaster affected locations is often an indicator of recovery[77], yet relocation may become necessary if there is high risk of future disasters[80].

Consider

- **Establish a communications register or online platform so people who have been impacted by disasters can receive information about services, events, grants and research over time if they wish, even if they do not live in affected areas. This should consider the needs of culturally and linguistically diverse people, as well as people who do not have access to online technologies.**
- **Recovery support packages (and case support worker approaches) should be tailored to match the stressors that people are likely to face based on whether they are staying locally or relocating. Planning should include consideration regarding how those who have relocated will be able to access support services and information.**
- **When mass relocation is needed (temporarily or longer-term), enable people from the same area to live near each other when appropriate.**

Animal-human bonds

What we know

Animals play an important role in the social and emotional lives of many people, including as companion animals seen as valued family members[81]. These bonds are especially important in times of adversity, yet animals are often overlooked in disaster planning and response[82,83]. Loss of companion animals can cause acute distress and also leave people without an important source of support, increasing post-disaster mental health risks[84,85].

Consider

- **Understand the value that animal-human bonds may play in disaster planning and recovery.**
- **Ensure there are appropriate services and care for animals.**

Financial | key considerations

'Financial capital' refers to the availability of and access to resources including savings, income, assets, investments, credit, insurance, grants, donations, loans, consumption and distribution of goods and services, employment and economic activity[26,86].

Financial strain and assistance

What we know

Financial strain after disasters may contribute to reduced wellbeing and mental health[87-89] and increased risk of experiencing violence for women[90,91].It can also create disputes over funding allocation leading to community conflict[33].

Financial assistance from governments, charities and insurance is often helpful and necessary for people and communities to recover, yet it is not always accessible, timely, equitable, and adequate[55,63]. For example, there is a long history of institutional racism against Māori and other marginalised groups that has hindered access to support during a disaster[13]. Similarly, funding application processes often fail to accommodate people with disabilities, who may have urgent support needs[78]. Cultural values, such as humility or modesty can also act as barriers to accessing financial support[13].

Funding opportunities often come with timing and reporting requirements for accountability purposes, yet these can be difficult for community groups to meet and can impede community-led recovery efforts[63].

A lack of adequate reimbursement pathways in unofficial settings can mean certain organisations, such as marae, face additional burdens because they respond to and support the community following disasters[19].

Consider

- **Recovery is a long and difficult process with various needs emerging along the way, so funds need to be released at different stages over time. While there is a need for accountability in allocation of funds, it is important that processes for accessing financial assistance are as simple as possible.**
- **What assistance should be put in place to help people and organisations in accessing funds, especially for those that experience significant barriers? What support can be provided until these funds come through?**

Financial | key considerations

Equitable funding

What we know

Distribution of funds following disasters can be inequitable[14,92,93], and perceived inequities can contribute to a negative social environment[32,33]. People most likely to lose income include part-time and casual workers and women[93,94]. Following the Canterbury earthquakes, tailored funding for Māori was tied to their status as mana whenua and consequently proved difficult to access for those that lived in the affected area, but did not whakapapa there[12,14].

Consider

- **Provide clear information to communities about the basis for decisions about recovery funding.**
- **Is funding being fairly distributed?**
- **Recovery funding and economic initiatives should focus on those that are likely to lose income and on heavily impacted businesses and sectors. How can the impact be mitigated? Can people be supported to transfer their skills or retrain for roles in another sector?**
- **Funds for land management and restoration should include criteria for social, cultural and political interests in te taiao, as well as farming and business interests.**

Inequities worsening

What we know

What people, communities and nations had before a disaster tends to shape what they can access afterwards[32,72,93,95,96]. Income gaps often widen after disasters[93]. Following the Canterbury earthquakes, the ongoing effects of colonisation (e.g. substandard housing, location of homes, socio-economic status) led to disproportionately negative impacts for Māori. This included reduced access to financial resources, basic necessities (sanitation, power, road access), and support from front line responders[6].

Consider

- **What training do staff need to help them identify the ways in which inequities exist in communities and how they can be addressed?**
- **Critique proposed recovery strategies for issues of equity and unintended consequences for different groups within the community before proceeding (from multiple perspectives e.g. community, recovery experts, social justice).**

Financial | key considerations

External ties

What we know

Significant financial resources for recovery come from outside affected communities, flowing through social and political ties[53]. This means that financial capital at the regional or national level influences the amount of money that can flow to people and communities to support recovery. For iwi and hapū, inter-tribal connections and networks can enable those residing within disaster affected area to access support and resources, including financial aid, from other iwi and hapū around the motu[5-7,11,12].

Consider

- **Explore connections that community members may have with external decision-makers and networks that could be helpful in bringing additional financial resources into the community – but be aware that well-connected groups may benefit at the expense of others.**

Insurance and investments

What we know

Financial investments prior to disasters, such as insurance, can play a key role in the recovery of households, businesses, iwi, hapū and communities[14,97,98]. However, access to these investments is inequitable[99,100], and non-insurance or underinsurance are major problems that can hinder recovery[101].

Consider

- **What assistance is available for those that are not insured or are underinsured?**

Businesses

What we know

Businesses can be heavily impacted by disasters or disruption events[102,103], particularly when multiple events cascade[104]. This can lead to financial strain, loss of employment and training opportunities, relocation and reduced community cohesion[103,105]. Business impact and recovery is linked to the size, capacities and sector of the business[102,103,106,107].

Consider

- **Identify businesses that are threatened and may need support to recover. What role could they play within the community, and how can these community benefits be sustained?**

Cultural | key considerations

'Cultural capital' refers to the way people understand and know the world, and how they act within it. It includes ethnicity, habits, language, stories, traditions, spirituality, heritage, symbols, mannerisms, preferences, attitudes, orientations, identities, norms and values, and the process and end products of cultural and artistic pursuits[2,26,32].

Inclusivity

What we know

Peoples' thoughts and actions are influenced by their culture, including those of recovery workers[108]. Cultural norms and attitudes towards marginalised groups (e.g. LGBTQIA+ people[109,110], sex workers[68], Māori[13] and people with disabilities[111]) can have negative impacts on experiences of disaster and recovery through stigma, discrimination and lack of appropriate support. These experiences can be compounded for people who belong to multiple marginalised groups[112].

Consider

- **Reflect on your own culture, beliefs, values and background. How might these influence the way you provide support?**
- **What diversity training do staff require to help them ensure their work is culturally inclusive and appropriate? How can this be provided on an ongoing basis?**
- **Collaborate with a range of groups and organisations to design recovery approaches that are appropriate for diverse members of affected communities.**
- **What attitudes (e.g. taboo topics or stigma) exist within affected communities that may impact recovery? Consider the implications of these when providing support.**

Cultural | key considerations

Māori and Indigenous knowledges

What we know

The knowledge, values and cultural practices of Indigenous peoples around the world can be highly valuable in disaster preparedness, response and recovery[62,92,113]. For Māori, values of manaakitanga, kaitiakitanga, and whanaungatanga support response and recovery processes[5,6,9,11,12,22]. For instance, marae provide natural evacuation sites[19] and community support centres[6,7,12]. These spaces offer shelter, food, comfort and stress relief, in addition to the formal administrative structures of other mainstream community support centres[8]. However, this value might not be fully recognised, drawn upon or appreciated in more traditional approaches to emergency management, in part because it might not align with top-down, national or state-wide approaches[21].

Consider

- **Establish authentic relationships and partnerships with Māori as valued and equal recovery decision-makers. Also establish formal mechanisms for engagement, when appropriate.**

Gender

What we know

Gender norms influence experiences of disaster and recovery in many ways. This includes influencing decisions made during emergencies (e.g. different social expectations of women and men)[114-116], how people behave afterwards and whether this is accepted (including violence and aggression)[90,91], and whether people seek support[91].

Consider

- **Embed an understanding of gender into support services in disaster contexts (e.g. through education of recovery workers) – include transgender and non-binary identities.**
- **How available and accessible are appropriate women's and family services (including family violence practitioners)?**
- **Ensure that specialist services are available to people of all genders. Some people may prefer to engage with peer support groups rather than seeking formal counselling.**

Cultural | key considerations

Cultural cohesion

What we know

Cultural elements that enable some communities to fare relatively well in recovery include cultural cohesion, common narratives of shared history, sense of collective identity, shared meaning-making and cultural practices[57,58]. In particular, the shared histories, values and whakapapa[5,22] that uphold Māori and many migrant communities have the potential to support resilience[5,6,57]. However, external forces during recovery may degrade this cultural capital or inhibit its use in recovery[6,32]. For instance, the absence of tikanga in formal recovery systems can have negative consequences for many Māori working in recovery roles[7,20].

Consider

- **What are the core cultural features of affected communities? Involve community members in reflecting on this to guide recovery priorities.**
- **How can recovery be enhanced by listening to Māori experiences and deep knowledge of resilience, healing and te taiao?**

Connection to nature

What we know

Cultural and spiritual meanings are often attached to nature, such that changes to the natural environment following disasters have implications for mental health and wellbeing[14,28,31]. Māori share a genealogical relationship with the whenua and as guardians and protectors of the whenua[5,15,18] and their culture and identity are inextricably interweaved to te taiao[15,17,18,22].

Consider

- **Recovery approaches should recognise the importance of Māori relationships to te taiao and ways knowledge may be storied through traditions, waiata, pūrākau and karakia.**
- **Enable iwi and hapū to lead their recovery; developing respectful, trusting relationships; and considering the significance of trauma, healing and resilience.**
- **Restore local features that enable people to connect to the natural environment and initiate diverse opportunities that enable people to engage with the spiritual and cultural significance of nature.**

Cultural | key considerations

Attitudes towards loss

What we know

Cultural norms and attitudes towards disasters, loss and support shape people's experiences of recovery. This includes how people express their experiences, and how others respond[6,47]. People may experience grief over loss of community members[52], animals[85,88,117] and the natural environment[28,92].

It is also important to recognise the loss of tikanga and customs, and value mātauranga Māori, for example the relationship with te taiao as a living being is central to te ao Māori. This often manifests as an acceptance of disasters as natural activity or expressions of mana[13,18].

Consider

- **It is important to recognise the variety of relationships and losses. What support can we provide whānau, hāpu, iwi, and communities to cope with losses that are meaningful for them?**
- **How might cultural norms and attitudes shape peoples' experiences of an event?**
- **If appropriate, create spaces for memorials and anniversary events in which people can acknowledge and reflect on their losses.**
- **Tikanga practices like karakia, and other forms of prayer, can help with healing loss and reconnecting. Respect rahui if placed on a space by iwi, hapū or the Kīngitanga.**
- **How might the loss of normal routines, traditions, beliefs, practices, and rituals impact people's cultural wellbeing?**

Creative pursuits

What we know

For many people, engagement in artistic, creative and cultural pursuits is an important part of healing, self-expression and growth after disasters[118,119]. Creative pursuits can provide opportunities for personal reflection, social connection and the sharing of experiences[118]. They can also be a means of revitalising a sense of place and community, as occurred through community-initiated art installations in empty urban spaces after the Canterbury earthquakes[120].

Consider

- **Foster a range of opportunities for creative pursuits for adults and children.**
- **How can community-led creative initiatives be supported?**

Political | key considerations

'Political capital' refers to the power to influence decision-making in relation to resource access and distribution, and the ability to engage external entities to achieve local goals[2,26,32]. It includes agency, voice, justice, equity, inclusion, legislation, regulation, governance, leadership and policy. It applies within and between groups and exists both formally and informally.

Māori and Indigenous peoples

What we know

In Aotearoa New Zealand, government is mandated to work with rūnanga and other Māori groups and services in a disaster[121]. This prioritises engagement with Māori communities to ensure their needs are met.

However, the voices of Māori are often ignored following disasters. It can take a number of days or even weeks for Māori to be included in formal emergency management response and recovery processes, if at all, despite Māori engaging rapid, self-organised community responses[12]. This results in recovery strategies that overlook historical, political and cultural contexts that have underpinned Māori resilience and the ability to respond to disruption[12].

Consider

- **Recognise the unique voices and perspectives of Māori in developing recovery strategies which minimise the risks of exacerbating existing trauma and vulnerability.**
- **How might formal response and recovery processes best engage with Māori response and recovery processes?**
- **Develop strong relationships with rūnanga, and mataawaka/ taurahere organisations in your area who will likely act on behalf of tangata whenua during a disaster to develop coordinated strategies.**

Political | key considerations

Power and voice

What we know

Power is not distributed equally within and between communities during recovery[32,64,65]. Decisions are often made for and by those with the most voice and agency, which can have negative impacts on marginalised groups[68,91,100,122].

Consider

- **How might the voices of diverse and marginalised people enhance community wellbeing and where might there be unequal representation within governance groups?**
- **Reach out to those in the community who are not typically involved in local decision making to gather insights about as many different local experiences as possible. Remember that chats in the street, over the phone or over a cup of tea can be just as helpful as group meetings or emails. Local health centres, schools and social services can be helpful in connecting with different groups.**

Community-led recovery

What we know

Community participation, agency, and knowledge are highly valuable in disaster resilience and recovery[32,55,123]. This occurs through volunteer and community organisations and networks[6,20]. Māori networks and marae provide natural evacuation sites[19] and support centres for the community[6,7,12]. Recovery outcomes are best when community capacity and local decision-making is complemented and supported (rather than overpowered) by external groups or agencies[62,63,124].

Consider

- **To what extent are recovery strategies being guided by local decision-makers and adapted to local contexts?**
- **To ensure external pressures do not override local interests, work closely with local government, businesses, services, Māori organisations and community groups.**
- **Support community initiatives and build local capacity wherever possible but be open to bringing in external resources, such as administrative assistance in applying for funds.**
- **What processes and structures are needed to support community participation in decision-making? Consider factors that may inhibit participation by some groups (e.g. need for childcare, transport, flexible meeting times, and accessibility for people with disability).**
- **Resist pressure to make quick decisions on behalf of communities – give communities time to regather and build their capacity to lead recovery.**
- **Ensure that people and groups who are not typically involved in local decision-making are given opportunities to contribute to community recovery and to be decision-makers in their own recovery.**

Political | key considerations

External support

What we know

Communities affected by disasters often receive support from those outside of the affected area and more broadly, including resources, guidance and emotional support[43,49,55]. When this support is responsive to local needs it generally plays a positive role in recovery[62,63]. Communities with greater ability to draw on these external connections tend to fare better[32,53,64,65].

For iwi and hapū, inter-tribal connections and networks allow those within the disaster affected area to access support and resources, including financial aid, from other iwi and hapū around the motu[5-7,11,12]. Coordination of external resource distribution should be carried out collaboratively with marae, iwi and hapū so that all groups receive the support they need[8]. For example, following the Kaikōura earthquake, there were issues with resources (e.g. food) being intercepted on route to marae by formal response agencies[8].

Consider

- **Collaborate with marae, iwi, hapū and other community members or groups to explore connections they may have that could be helpful in bringing additional resources into the community.**
- **Establish a multi-year framework for recovery from major disasters to support short- and long-term recovery.**
- **Identify and support the communities that are least likely to be able to draw on connections to government and broader society and advocate for their needs.**
- **Build relationships pre-event with key stakeholders, including local and central government, and media personnel.**

Influencing knowledge

What we know

Political agendas, public attention, power dynamics and mainstream media can influence what knowledge is produced and accepted after disasters[8]. This in turn can influence public perception and policy reform and changes to practice[125,126]. The way research and formal enquiries are set up shapes which voices are heard, and what is recommended[127-129].

For instance, during both the Canterbury and Kaikōura earthquakes, mainstream media channels misrepresented Māori response and recovery efforts. Focus was placed on individual actors rather than the work of the collective. Further, the active coordination and psychosocial support role as provided through marae was also undermined[8].

Consider

- **Political and social backlash are common in the post-disaster context so prepare people for this.**
- **In a post-disaster recovery phase tread carefully with your words and actions and keep focused on your main goal.**
- **Be aware that depictions in mainstream media do not always represent an accurate picture of the state of affairs, particularly regarding cultural knowledge and understanding. Draw on your own communication channels to confirm situational information.**

Political | key considerations

Policies and regulations

What we know

Policies and regulations, and their implementation, can shape disaster risk and recovery[68,93,130,131]. In turn, disasters can influence the regulatory environment, and while these changes may increase resilience[38,130,132,133], they may also create problems in recovery.

Consider

- **Stay up to date with changes in policies and regulations affecting recovery processes.**
- **Ensure engagement with Māori response and recovery processes that are based on genuine relationships, partnerships and inclusion.**
- **Do current policies and regulations engage with cultural values and tikanga?**

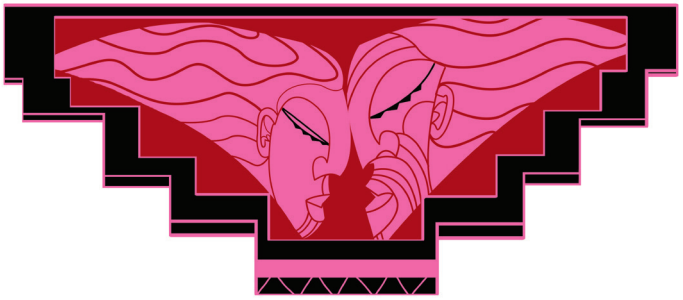
Leadership

What we know

Strong and adaptable leaders can help to access external resources, encourage innovation, support community mental health, and foster cooperation within and between communities[32,61,134]. Training and supporting leaders before and after disasters may build these attributes, with benefits to the community as well as the wellbeing of those in leadership roles[61,63,135-137]. For Māori, leadership is often shared, with decisions made by a collective caucus[8,9,22].

Consider

- **Provide leadership training and support, both pre- and post-event.**
- **Link local leaders to people with previous experience leading community disaster recovery, for mentoring and support.**



Built | key considerations

'Built capital' refers to the design, building and maintenance of physical infrastructure, including its functional and aesthetic value. This includes critical facilities and services, housing, vehicles, equipment, information technology, communications, water and energy infrastructure[2].

Risk and resilience

What we know

The location, density and design of buildings influence risk from hazards such as floods, fires, earthquakes and pandemics[34,35,138], including health risks[139] and financial impacts[98,102]. Planning and building regulations can reduce these risks[38], but this can also create problems in recovery by raising the cost of rebuilding, resulting in shortfalls in insurance pay-outs and higher ongoing premiums[99,101].

The design of housing and emergency shelters and other buildings is often not inclusive of people with disabilities[78,140].

For Māori, risk and resilience is informed by environmental contexts and what occurs in te taiao[12,15-18] such as disturbances in the environment through floods and weather events[15,17]. Historically this has directed iwi and hapū decision-making and mitigation responses across generations, such as where important infrastructure is placed[18].

Consider

- **What risks might communities face in the future? Consider resilience to future emergencies when making rebuilding decisions.**
- **How might mātauranga Māori best support current practices of risk management and mitigation?**
- **Prioritise accessibility and inclusion in rebuilding, involving people with disabilities in risk reduction and recovery decision-making.**

Built | key considerations

Rebuilding appropriately

What we know

Rebuilding is an important part of recovery from disasters that damage property, allowing those affected by disasters to re-establish routines, sense of place and identity[43,48,55]. Rebuilding can also foster community resilience and enable economic activity, which in turn provides resources for further recovery[32]. However, poorly designed housing and accommodation arrangements can disrupt social connectedness and lead to isolation[77]. Inaccessible housing is also a barrier to recovery for people with disabilities[78].

By contrast, new or temporary accommodation arrangements can foster social connectedness if they enable people from the same area to live near each other[77]. Decisions and uncertainties about rebuilding shared spaces can be major stressors after disasters[88], and disagreements about rebuilding can damage the social environment[33], for example the needs of marginalised communities, like sex-workers, were not met following the Canterbury earthquakes[68].

A range of strategies can enhance these processes, including appropriate consultation and relationship building, and allowing time for reflection before making less urgent decisions[124]. In Aotearoa New Zealand, Te Tiriti o Waitangi is foundational to relationships with mana whenua and local Māori should have a key decision-making role in the rebuild process. After the Canterbury earthquakes, Te Rūnanga o Ngāi Tahu was recognised by the government as a formal partner in the Canterbury Earthquake Recovery Act established to elect a governing body to manage response and recovery efforts, including rebuilding[12].

Consider

- **When providing temporary accommodation or mass relocation, enable people from the same area to live near each other if appropriate.**
- **Timing of rebuilding is important – where possible, rebuilding early can have benefits; however, be mindful that rushing to rebuild can place strain on communities and lead to different decisions that might be better made with more time and consideration.**
- **What may be causing uncertainty for people around rebuilding? What strategies could reduce this uncertainty? For examples, clear community information and opportunities for people to access expert or local advice.**
- **Arriving at consensus can be very difficult when there are different points of view. Careful, inclusive processes are needed to support collective decision-making e.g. have group discussions led by someone with facilitation and public participation expertise.**

Homelessness

What we know

People experiencing precarious living (e.g. rough sleeping and transitional housing) face increased risk from disasters and barriers to recovery, and disasters can result in short and long term homelessness[141]. Despite this, people experiencing insecure housing are often not considered in recovery policy and practice[142,143].

Consider

- **Critically examine whether disaster risk reduction and recovery programs, data, funding arrangements and policies account for people experiencing insecure housing or homelessness.**
- **Connect with service providers already working with people experiencing insecure housing or homelessness and invest in targeted support.**
- **Prioritise pathways to permanent housing for people, as well as those whose homes were lost during a disaster.**

Built | key considerations

Community infrastructure

What we know

Physical infrastructure can be crucial to preparedness, response and recovery (including telecommunications and transport)[62,144,145]. Public gathering spaces are important to the social and economic function of local communities. Disasters can undermine this through physical damage or, in case of pandemics, closure of facilities, with negative impacts on wellbeing[51,88,146], sense of community[33], financial security[47,88] and business viability[32,47]. This may also negatively impact on the wairua of Māori who carry spiritual and generational connectedness to physical infrastructure that are recognised as taonga, such as marae and urupa[147].

Consider

- **When restoring or reopening buildings and infrastructure, prioritise what is central to communities, such as the significance of marae, and roads, bridges, schools, community halls and local businesses.**
- **Ensure a diverse range of gathering spaces to foster opportunities for different groups to come together, while also enabling socialising in separate or smaller groups.**

Remaining and relocating

What we know

Choosing to live locally or relocate elsewhere is likely to alter the recovery experience, but not necessarily long-term personal wellbeing[33]. People with disabilities may have less choice regarding relocation due to lack of accessible housing options[78]. Following the Canterbury earthquakes, relocating was influenced by level of income, low standards of housing, renting and lack of resources[148].

In Australia, following Black Saturday, a sense of community was enhanced for some by the shared processing of the disaster experience and rebuilding, and this supported wellbeing. For others, sense of community was lost through damage to property, disruption and disharmony, and people were more likely to leave. They had fewer opportunities to process the disaster, but benefited from being removed from the ongoing disruptions and challenges in a bushfire-affected community[33].

Consider

- **Provide information to people considering whether to remain or relocate about the sorts of stressors and benefits they are likely to face in each scenario.**
- **Recovery support packages (and case support worker approaches) should be tailored to match the stressors that people are likely to face based on whether they are staying locally or relocating.**
- **Decisions about relocation may be further complicated for Māori whose whakapapa and tūrangawaewae are specific to a disaster-affected area or physical site.**
- **Explore support services and building adjustments for people with disabilities facing limited accessible housing options.**

Human | key considerations

'Human capital' refers to people's skills and capabilities, including the ability to access resources and knowledge[86]. It includes education, physical and mental health, physical ability, knowledge from lived experience and leadership capabilities.

Supporting others

What we know

Adults and children use various coping strategies following disasters and being able to help others can be particularly helpful to recovery[43,50]. People provide practical and emotional support to others in many ways, drawing on a diverse set of capabilities. For example, following Hurricane Sandy, volunteers who had already been experiencing homelessness played a valuable role in supporting the disaster-affected community[149].

For Māori, supporting others is often influenced by cultural values of hospitality [5,6,11,12,22]. For example, following the Canterbury earthquakes Māori response and recovery initiatives were led by the key principle 'aroha nui ki te tangata' meaning 'extend love to all people'. This kaupapa ensured that people's actions were unified and directed towards all members of the community[10].

Consider

- **People benefit when they contribute to recovery efforts, and so does the community. Which contributions can you identify and how can you validate them? How can you support all members of the community to use their diverse skills to contribute?**
- **Provide community information sessions about post-trauma support strategies to help people to take care of themselves and their family and friends.**

Recovery workforce

What we know

The recovery workforce must be assembled very quickly following a disaster. The increased demand means that staff and volunteers do not always have the knowledge and skills that they need, which in turn can negatively impact the wellbeing of those in need of support[150].

The wellbeing of service providers themselves is also undermined when demands exceed what they are able to meet[44,151,152]. For Māori, this can have further consequences through the absence of culturally appropriate response and recovery systems, such as recognising and practicing tikanga[7,20].

Disaster recovery support roles can be fulfilling but they can also be challenging and stressful. Workers and volunteers may face increased mental health risks, stress and burnout, particularly if they have also been personally impacted by disaster and if training and support is inadequate[20,153,154]. Planning and coordination by organisations and governments is crucial in meeting these workforce demands, across all aspects of recovery[62,129].

Consider

- **What additional demands and issues will staff encounter in this recovery context? Are they being provided with appropriate training and support?**
- **Ensure response and recovery processes are inclusive and respecting of cultural practices.**
- **What processes and plans does your organisation have in place to prepare for future risks? What is required for activating a rapid response and adapting to changes in operating environments?**
- **Explore opportunities to work with local service providers that have existing, trusted relationships with a range of community members.**

Leadership

What we know

Strong and adaptable leaders can help to access external resources, encourage innovation, support mental health and foster cooperation within and between communities[32,61,134]. Training and supporting leaders before and after disasters may build these attributes, with benefits to communities as well as the wellbeing of those in leadership roles[61,63,135-137]. Different approaches to leadership should be recognised, for example leadership is often shared within iwi and hāpu and decisions are made by a collective caucus[8,9,22].

Consider

- **Provide leadership training and support, both pre- and post-event.**
- **Link local leaders to people with previous experience leading community disaster recovery, for mentoring and support.**
- **Identify and build relationships with those who hold key roles and responsibilities within the local community.**

Human | key considerations

Vulnerability

What we know

Certain demographic factors are linked with vulnerability to disasters, including: age, gender, race, cultural and linguistic background, health, disability, education, household composition and housing status[72,96,155,156]. These factors intersect in complex ways for people who belong to multiple groups positioned as 'vulnerable'[117]. For instance, with financial vulnerability there is a greater risk of women experiencing violence[90,91].

Vulnerability is largely caused by social and financial disadvantage, and policies, messaging and practices that diminishes some people's circumstances, capabilities and needs[13,72,100]. Institutional racism, for instance, can prohibit Māori and other marginalised people from accessing and receiving agency and service support, for a variety of reasons such as cultural differences or discriminatory practice[13].

Consider

- **Who is most likely to be most heavily impacted by disaster, and face greater challenges during recovery? What targeted strategies can be used to support these people? Remember that this is not a simple 'vulnerability equation' – people and groups in disaster environments have a complex mix of strengths and support needs.**

Skills and livelihoods

What we know

Employment sector and status influence how people are affected by disasters. People are more likely to face reduced income if their employment is part time, low-paying, in particular fields[93], and if they are women[95]. Those working in agriculture, accommodation and food services are generally hit hardest, while income can even increase in some sectors[93]. During COVID-19 workers in these fields were considered essential to the health and wellbeing of Aotearoa New Zealand[157,158]. Community level economic impact will also vary based on the industries that make up the local economy[102].

Consider

- **Who is most likely to lose work or income? How can this be mitigated? Consider supporting people to transfer their skills or retrain for roles in another sector. This includes identifying jobs that require retraining, finding the providers who will offer this service, and securing resource to enable this.**
- **Recovery funding and economic initiatives should focus on those that are likely to lose income – part time workers and casual workers – and on heavily impacted businesses and sectors.**

Human | key considerations

Local capabilities

What we know

Knowledge and capacity within disaster affected communities influences recovery experiences. Experience of previous disasters or adversity can build this knowledge and recovery capacity, although lessons can also be misapplied if they do not consider the unique characteristics and circumstances of the event at hand[149,155,159-163]. Multiple disasters that occur in quick succession may have amplified impacts[164] and undermine community recovery capacity.

Māori have a unique understanding of disasters due to their longstanding relationship with te taiao and its processes[5,15], such as viewing a natural hazard as a tīpuna or atua[27]. This relationship is centred on respect and offers significant insight for understanding recovery[5,7].

Consider

- **What knowledge and skills do local residents have that will enable them to prepare, respond and recover from disaster? What gaps in knowledge or inaccurate assumptions might exist, and how could these be addressed? Consider multiple scenarios and all members of the community.**
- **Ensure that recovery processes reflect the value of lived experience. People who are often marginalised from decision-making, such as people with disabilities, are best placed to make decisions about their own recovery.**

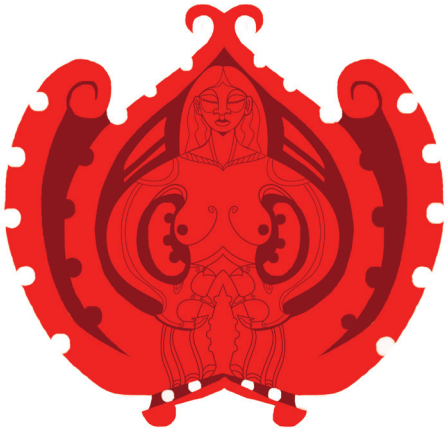
Education

What we know

Disasters can be disruptive to education, with long term impacts on school attendance and academic performance[165,166]. School communities play an important role in supporting children and families after disasters, but educators and staff are likely to require support to cope with these additional demands[167,168].

Consider

- **What assistance do schools require to meet the needs of children, families and staff? Provide staff with training on trauma impacts, support sessions, access to health professionals, additional staffing and evidence-based wellbeing programs.**
- **Initiate community-based psychosocial recovery programs to support students who are not attending school. Involve school communities in recovery planning.**



About the artwork

The artwork that appears throughout this guide was completed by Ariki Arts – Taupuruariki Whakataka Brightwell. Each illustration reflects the nature of the information expressed throughout the document, particularly as they relate to each of the seven capitals, through imagery and concepts that are representative of a Māori worldview.

About the artist

Ko Marotini, Orohena Te Upo'o ōku maunga.
Ko Mangahauini, Avamoa ōku awa.
Ko Tuatini, Taputapuwatea ōku marae.
Ko Rongowhakaata, Raukawa, Ngati Toa, Te Arawa ōku iwi.
Ko Te Whanau a Ruataupare, Ngati Maru ōku hapū.
Ko Tahiti, Ra'iātea, Moorea, Rarotonga ngā motu.
Ko Ruapani, Kingi Tamatoa Tautu, Wiremu Kingi Te Kapunga,
Te Rauparaha tōku tīpuna.
Ko Hawaiki Nui te waka.
Ko Taupuruariki (Ariki) Tony Tuorongo Brightwell ahau.

Kia ora, my name is Taupuruariki (Ariki) Whakataka Brightwell and I am an Indigenous artist of Māori, Tahitian and Rarotongan descent, born in Turanga Nui a Kiwa. As a 27th generation Indigenous artist like my father and my ancestors before me I have a deep passion in creativity, history and storytelling giving me a sense of duty to pass on the legacy of our art in te ao Māori. My goal is to share our culture and its beauty to our people and the world. To view more of my mahi (work) visit facebook.com/arikiarts/

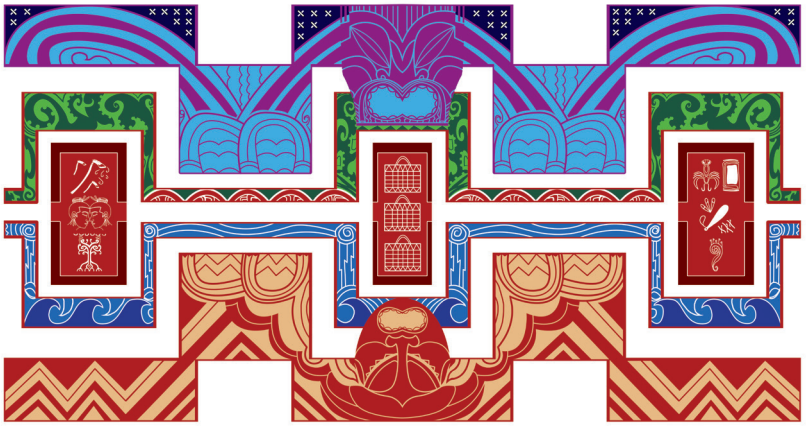
Cover page

This work is a homage to our Māori worldview as it depicts the layers that embody our environment.

The top represents the stars from where we come and the atua that share the realm of Ranginui (the sky father). Below this is the forest realm where Tāne Mahuta (a son of Ranginui and Papatūānuku) and his children keep Ranginui (their father) separated from Papatūānuku (their mother). The roots are reflective of this deep whakapapa.

In the centre are three pou with iconography that depict each of the seven capitals that stand as pillars of this work.

Below this is the realm of Tangaroa (a son of Ranginui and Papatūānuku), our sea, lakes and waterways and at the bottom of the image is Papatūānuku (the earth mother), as she represents the living realm.



Natural Capital

Papatūānuku

At the top of this image is Ranginui (the sky father) who represents the weather and atmosphere. In the centre of this image is Papatūānuku (the earth mother) with her hair signifying the forests, vegetations, water ways and lakes. She is embracing her children, the atua who look after the elements and resources of our environment. Her hands clasp Rūaumoko, her youngest child and the atua of earthquakes and volcanic fire, that resides in her womb shaking the earth. Other elements in this image are pointed shapes that represent the mountains and volcanoes and the natural environment in Aotearoa.

The entire artwork is framed by the tukutuku design Porourangi Poutama — the steps of knowledge, growth and the notion of striving for betterment.

Haumietiketike

This shows Haumietiketike, the atua of wild food and fauna. It represents the wild and the wilderness of the natural environment. The background shows bracken fern and in the foreground are wild plants on forest floor.

Tohu
Represents growth and nature based on pikopiko (native plant and source of food).

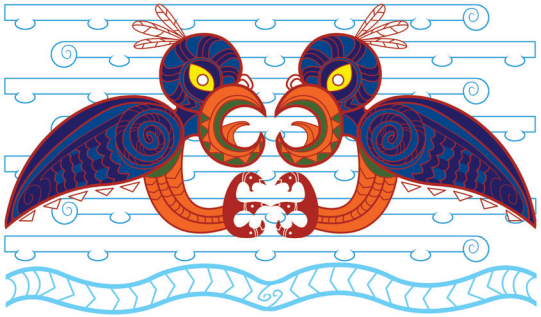
Social Capital

Hongi

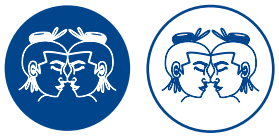
This work reflects the origins of hongi, a key social greeting for Māori where two people press their noses and thus share the breath of life. On the left is Tāne Mahuta (a son of Ranginui and Papatūānuku) performing the first hongi to awaken Hineahuone (the first woman) on the right. The weaved strands between them show the sharing of life force — this where the common phrase 'tihei mauri ora' originates.

Ngā manu

As transmitters of knowledge and language, manu (birds) have a vital role in the natural environment. This piece speaks to this with the patterns behind them signifying these lines of communication.



Tohu
Represents hongi and the connection of two beings – life and spirit.



Financial Capital

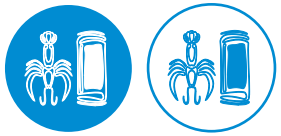
Tauhokohoko

Tauhokohoko means to barter, bargain or trade and is the central concept of this image. It depicts resources traded between land and sea and the older means of exchange before the introduction of monetary currency. Other elements represent the diverse landscapes affiliated with each natural resource, far left are forest and birds and far right ocean and fish.

Hokohoko

This piece reflects early trade between Māori and the Endeavour crew on Cook's voyage across the Pacific in 1769. The image itself is based on Tupaia's (famous Tahitian priest and navigator) painting of a European trading Tahitian tapa for a koura (crayfish). The ancient rock art style shows the exchange and represents the long history of Māori and the earliest settlers.

Tohu
Represents early trade between Māori and Europeans.



Cultural Capital

Poutama

This work reflects the origins of knowledge and whakapapa to the stars/heavens. It tells the story of Tāne Mahuta (in some versions this is Tāwhaki) who traversed 12 realms to meet Io Tikitiki the creator of the universe who gifted him three kete (baskets) of knowledge:

- Kete tuatea - negative actions and the ability to harm
- Kete aronui - learning and knowledge to help humankind
- Kete tuauri - sacred knowledge of rituals, prayer and memory

Each realm is depicted through the Poutama stair pattern representing the achievements of Tāne Mahuta/Tāwhaki in reaching these multiple realms.

Ngā kete

This image depicts the three kete of knowledge that were sourced from Io Tikitiki. Each kete brought traits that humans now possess. The triangular symbol at the centre represents Io Tikitiki and Mangoroa (the milky way).

Tohu
Represents three kete as the origins of knowledge.

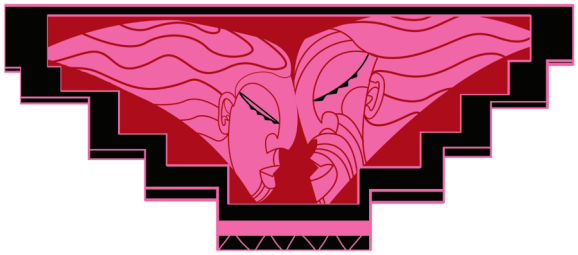
Political Capital

Whaikōrero

This piece reflects the origins of whaikōrero (speech making or debate), one of the core political structures in te ao Māori. The image is of the children of Ranginui (the sky father) and Papatūānuku (the earth mother) debating whether they should separate their parents (at the top of the image). Left is Tāne Mahuta and Tangaroa who support the separation, and right are Whiro and Tāwhirimātea who oppose it. The open area between them is the domain of Tūmatauenga, the atua of war and conflict. The darkness of the early world still envelops them, but a rift represents the the first sign of light.

Ranginui and Papatūānuku

This image represent the whakapapa of Ranginui (the sky father) and Papatūānuku (the earth mother) as they weave their life and spiritual forces through hongi (Māori social greeting). It is through their union and separation that the world is created.



Tohu

Represents the pōhiri process which is a traditional ceremony where hosts welcome visitors into their space. It depicts the initial challenge between a host and their visitors (rākau whakaara), the acknowledgement of each other's kaupapa (rākau tautoko) and the activity of clearing the way for peace (rākau whakawaha).

Built Capital

Toi Whakairo

Rata, a prominent ancestor and legendary waka builder of Hawaiki and Aotearoa , is adzing a carved-out tree into the hull of a waka. Rata continues to cut down the tree only to find it repaired and upright the next day. Without his knowledge, the insects of the forests were restoring the tree (depicted around the hull) because he did not seek permission before cutting it down. Once this is granted the insects help Rata build the waka with the blessing of Tāne Mahuta (son of Ranginui and Papatūānuku), the atua of the forest. This story is about showing respect to the natural environment as the source of many building materials.

Mū

This image highlights the healing energies of the insects of the forests. They play a significant role as protectors and creators.

Tohu

Represents three toki (ancient tools) used in the carving and construction of large objects such as waka, marae and art. These tools were passed down through generations and can be traced back to great waka that brought early Māori settlers to Aotearoa.

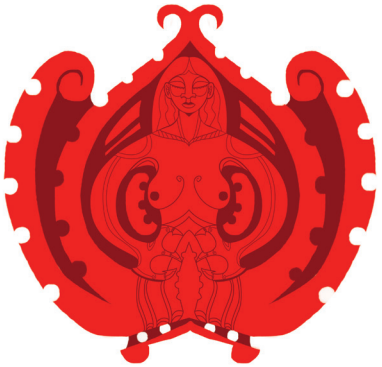
Human Capital

Whakapapa

This piece has Tāne Mahuta (son of Ranginui and Papatūānuku) sculpting Hineahuone the first woman, from the most fertile clay of Papatūānuku (the earth mother). It represents our whakapapa to the land. Papatūānuku can be seen enveloping her children in warm embrace with the patterns under her armpits the life force flowing into Hineahuone's frame. The story ends with the origins of hongi, the sharing of the breath of life from Tāne Mahuta to Hineahuone.

Hineahuone

Created from the whenua, Hineahuone means 'earth-formed woman'; she is our first female element. Hineahuone signifies the importance of tīpuna (ancestors).



Tohu

Represents the children of Tāne Mahuta (atua of the forest) keeping the sky and earth apart. It also depicts the family tree and the whenua (placenta) that is planted beneath the tree as a tradition that ties our lifeforce to the land.

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