



4th International Conference on Building Resilience, Building Resilience 2014, 8-10 September 2014, Salford Quays, United Kingdom

Shakes, rattles and roll outs: The untold story of Māori engagement with community recovery, social resilience and urban sustainability in Christchurch, New Zealand

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Abstract

On September 4, 2010 a 7.1 magnitude earthquake struck the Canterbury region of New Zealand, heralding a sequence of earthquakes, which included a fatal 6.2 earthquake centred under Christchurch City on February 22, 2011. In response, local Māori recovery initiatives were collaborative, effective and shaped by cultural values, including the principle ‘aroha nui ki te tangata’ (extend love to all). Disaster sector stakeholders are increasingly recognising the value of community-led initiatives that facilitate social resilience. In contrast, cultural approaches to facilitating community resilience receive minimal acknowledgement. The Māori response to the Christchurch earthquakes and subsequent recovery process constitutes an exemplar of best practice. The Joint Centre for Disaster Research in partnership with the Christchurch Iwi (tribe) Ngāi Tahu, conducted research to identify, and document the ways Māori cultural factors facilitated community resilience in response to the earthquakes. A Māori qualitative research methodology has shaped the community-based participatory research design. Māori research participants views were ascertained through semi-structured and focus group interviews. Dialogical and narrative interviewing approaches were used to foster community engagement, as well as capture Māori understandings and practices associated with disaster management, recovery and resilience. Data analysis drew on social theories, risk perspectives and indigenous epistemological concepts. Analysis of the results suggest that New Zealand’s disaster response policies may be enhanced by the integration of Māori approaches to facilitating disaster risk mitigation, community recovery and social resilience. This paper documents the different levels of support that were extended to whānau (families), communities and responding agencies. The cultural principles that underpin the extension of support are examined in relation to Bruno Latour’s theories about how technologies shape action and Putnam’s ideas on social capital. The impact of cultural support strategies on social resilience is addressed and the relevance to national and local authority disaster recovery strategies outlined.

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Selection and/or peer-reviewed under responsibility of the Centre for Disaster Resilience, School of the Built Environment, University of Salford.

Keywords: Māori; values; technologies; disasters; resilience

1. Introduction

Although the earthquake that occurred on September 4th, 2010 caused serious damage to buildings and infrastructure, the February 22, 2011 earthquake was socially, environmentally and economically catastrophic. The local Māori response was rapid and shaped by the cultural value ‘aroha nui ki te tangata - love to all people’ (Marae Investigates TVNZ, 2011). The actioning of Māori values and practices to facilitate community recovery following disasters has previously been noted. The Māori response to the 2004 flooding disaster, in the Manawatu and Rangitikei Regions of the central North Island of New Zealand, may be considered a recent case in point (Hudson & Hughes, 2007). However, the specific nature of Māori cultural technologies has rarely been documented, and the ways in which they have been operationalised to facilitate community resilience is also neglected within the research literature, which raises concerns about the applicability of existing models of resilience (Boulton & Gifford, 2011).

The resident Māori tribe in Christchurch Ngāi Tahu, has developed culturally specific and locally oriented systems for ensuring the sustainability of Māori communities over an extended period of time in response to the imposition of social (tribal movement), natural/environmental and political changes including colonisation. Based on Ngāi Tahu knowledge and values, these systems are evidenced in Te Rūnanga o Ngāi Tahu, organisational, hapū (sub-tribe) and whānau (family) cultural practices and continually evolve to facilitate the sustainability of Māori communities in response to the destabilisation of their environment. Anecdotal evidence has suggested that Ngāi Tahu cultural knowledge, values and practices are interrelated, co-constructive and might collectively constitute both a framework and a technology for enhancing the resilience of Māori communities impacted by catastrophic disasters. Māori researchers at the Joint Centre for the Disaster Research in conjunction with the leadership of Te Rūnanga o Ngāi Tahu agree that knowledge, principles and practices embedded within Māori approaches to coping with daily life might be contextually relevant for disaster recovery policy development. A research partnership was established to examine the potential value of cultural attributes for informing and innovating disaster preparedness and risk management strategies, as well as facilitating initiatives that encouraged community recovery and resilience in post disaster contexts. Ngāi Tahu residing in Christchurch and surrounding areas (e.g. Kaiapoi and Horomaka) and who had experienced the Canterbury earthquakes were invited to participate in the research project.

1.1. Background – Christchurch context

When the earthquakes commenced, the Māori demographic (25,725 individuals), constituted 4.1 % of Christchurch’s population (Statistics New Zealand, 2012a). Māori resided in all suburbs, but the majority resided in low socioeconomic areas, the Eastern suburbs of Bexley, Linwood and Aranui in particular (Statistics New Zealand, 2012b). The Eastern region of Christchurch was also the area that was most significantly impacted by the earthquakes. Māori were therefore disproportionately affected in terms of reduced access to basic necessities; adequate shelter, water, and nutrition. In the aftermath of the February 22, 2011 earthquake, disruption to welfare, emergency, health, sanitation and utility services compounded the effects of the September 4th and December 26 earthquakes in 2010, exacerbating community devastation (Canterbury Earthquakes Royal Commission, 2011).

Te Rūnanga o Ngāi Tahu tribal members constitute 37% of Māori residents in Christchurch and have cultural responsibility for protecting the wellbeing of the Canterbury community. Therefore the tribe was central to and instrumental in developing a Māori earthquake response and recovery network. After the February 22, 2011 earthquake, the tribal chairman Sir Mark Solomon invited key Māori stakeholders to a disaster response strategy

development meeting, which occurred at the Ngāi Tahu urban centre, Rēhua marae on February 23, 2011. The meeting focused on developing a collaborative co-ordinated approach to address the needs of the community. Representatives from the Christchurch Urban Māori Authority, Te Puni Kōkiri (Ministry of Māori Development), the Southern Māori electorate, the Police, the Ōtautahi Māori Warden's Association and Ngāi Tahu attended the meeting (Marae Investigates TVNZ, 2011). Attendees agreed that the Māori response to the earthquakes would be led by Ngāi Tahu, and Sir Mark Solomon was designated the media spokesperson. Ngāi Tahu subsequently mediated communication and collaborative decision making with Government ministries, local authorities, NGOs and other Māori tribes to ensure a coordinated response (Te Puni Kōkiri, 2011). It was also agreed that intertribal networks would be operationalised to facilitate community access to social, economic and material resources with the recovery leadership communicating their cultural approach to crisis management to the community through a multi-modal process. Media, telecommunications, internet sites as well as traditional social networks (commonly referred to as the kumera vine) and face to face responders were used and information dissemination was rapid.

1.2. Research focus and design

The Joint Centre for Disaster Research in partnership with Ngāi Tahu conducted research to capture Ngāi Tahu experiences of and perspectives about the Earthquakes, in order to identify cultural attributes that facilitate Māori community recovery and resilience in times of crisis. The specific objectives of the project included: Documenting Ngāi Tahu organisational and community responses to the earthquakes; capturing the experiences and views of Ngāi Tahu who coordinated emergency responses following the earthquakes; identifying factors that promote recovery and sustain resilience across Ngāi Tahu communities, following disasters; exploring the concerns and unmet needs of Māori organisations and communities as well as considering how Ngāi Tahu may respond to these issues.

The Māori community-based participatory research project was designed by Māori, addressed Māori concerns, implemented by Māori researchers and conducted in accordance with Māori values. The cultural practices of *kanohi ki kanohi* (face to face communication) and the oral tradition of passing down Māori knowledge through stories were employed during the data collection phase. Interview topics were collaboratively determined and a dialogical (Frank 2005) approach to interviewing was used to both disrupt power differentials between researchers and the 45 research participants (Sonn & Green, 2006) and enhance information gathering. A bricolage approach, drawing on theoretical concepts and research approaches from Western European and Māori paradigms, facilitated data analysis. Conceptualisations of bonding and bridging capital (Putnam, 2000) and Actor Network Theory (Latour, 2005) framed understandings of the moral and relational technologies that were identified during the analysis phase.

The qualitative research addresses existing gaps in the research literature relating to how cultural technologies promoted and sustained indigenous resilience in Christchurch following the earthquakes. Tribal infrastructure and resources which enhance hazard mitigation, facilitate Iwi organisational resilience as well as community disaster preparedness, planning and recovery have been examined. Cultural technologies from which identities are crafted, including understandings of extended family, the requirement to nurture support networks as well as forms of gift exchange and reciprocity have also been considered in relation to sets of understandings about resilience. Research findings are informing urban rebuild planning in Christchurch as well as the development of regional disaster preparedness planning and risk management strategies.

2. Research results and discussion – Māori communities, and cultural technologies of resilience

The Māori Recovery Network was established to ensure that the mainstream response to the earthquakes was inclusive of, and accessible to, the diverse communities in Christchurch. Initial response issues underpinned the importance of linkages created between the Māori Recovery Network, responding agencies and the community. The impetus for action was based in Māori values and practices which were operationalised to support community resilience and ensure Māori involvement in the recovery.

2.1 The Māori community and initial earthquake response issues

During the initial phase of the response to the February 22, 2011 earthquake, particular recovery issues emerged. In response to disrupted sanitation services, Māori Wardens and community responders accessed chemical toilets from the New Zealand Defence Forces and distributed them in the Eastern Suburbs. (Te Puni Kokiri, 2011). Due to damaged infrastructure and the traumatisation of healthcare personnel the accessibility and availability of health, psychosocial and support services decreased (Sullivan & Wong, 2011). Non-government agencies like the Red Cross provided mobile ambulance support but fractured roads and staff unfamiliarity with the local area limited service provision. Although Government ministries established outreach hubs at assistance centres to facilitate community access to services, research participants reported that people struggled to access hardship grants:

We were here (at Ngāi Tahu) advising whānau [family] members - This is the criteria... This is what they'll ask you and they were being turned away. These grants were available to them and they were having to provide more information than what we were told, and it was pretty much like they had to jump through a few hoops to get it...

Individual research participants also talked about personal difficulties accessing welfare assistance This Ngāi Tahu elder suggests that even though she had no power, water or a home she found it difficult to access welfare support:

Now we have bad experiences..., and even though I tried to stay calm over it, I felt myself getting anxious ... about what was going on..., and it was absolutely stupid stuff, it's unnecessary... I didn't have any problem filling out the forms; the problem was the person on the other side of the counter couldn't activate them properly. There was always an issue... I'd come out feeling really stressed out about it. ... Yeah really as if it was a type of abuse, you know ... Anyway, it took several goes to sort it out,... and when we finally got it sorted out, it was ok. ... (RN)

The elder needed to repeatedly organise whānau to take her to the agency and she was relieved when she did not have to deal with the agency any more. In contrast, some people lacked familiarity with the access structures and forms associated with receiving grants, while for others lack of access was compounded by decreased physical mobility and/or other disabilities (Phibbs, Woodbury, Williamson et al., 2012). With a significant percentage of houses red zoned and abandoned as well as approximately 100,000+ homes requiring major repairs, safe accommodation in Christchurch was rented at premium rates leading to accusations of landlord profiteering (Carville, 2011). Families residing in suburbs that were hardest hit by the earthquakes were the most marginalised in regards to accommodation access. Sleeping in cars was not uncommon and research participants who were transient due to uninhabitable homes reported that they were harassed by professional security forces who perceived them to be potential squatters and/or looters (Carville, 2011). Stigmatisation of these Māori families increased the levels of fear, social isolation, traumatisation and hopelessness as well as contributed to increased instances of domestic and social violence (Sullivan & Wong, 2011). Following the February 22nd 2011 earthquake, school closures negatively affected Māori children by disrupting peer support networks. Although most schools reopened, many families relocated to secure accommodation in the western and northern parts of Christchurch which contributed to falling school rolls. Ongoing social movement and the estimated costs for repairing earthquake damaged schools prompted the government to initiate school amalgamations and/or closures, which have further disrupted the support networks of Māori families with school-age children (Paton, Johnston, Mamula-Seadon & Kenney, 2014).

2.2. *The Māori Recovery Network's response*

Bridging social capital refers to linkages between diverse groups that maintain social cohesion through the creation of empathy (Putnam, 2000). The range of linkages that the Māori Recovery Network brought together to ensure a timely response to the earthquakes illustrates how forms of bridging social capital may be used to support communities in times of crisis. The Māori Recovery network was rapidly aware of community needs following the February 22 earthquake. As part of the commitment to supporting city residents, the Ngāi Tahu urban marae Rēhua was immediately designated an Earthquake Recovery Assistance Centre. Te Rūnanga o Ngāi Tahu also relisted the tribal organisation telephone number as a 24 hour emergency contact for accessing support information and assistance (Sharples, 2011). During the first weeks post the February 22 earthquake, outreach responders engaged with the community through a door knocking campaign. Face to face engagement was used to conduct assessments

of community members' levels of well-being, resource needs and accommodation circumstances. Community needs and concerns as well as information regarding resources were communicated to specialised stakeholders through daily debrief meetings at Rehua marae, emergency support networks, tribal websites and facebook links. The reception and distribution of gifted resources was managed from the Ngāi Tahu base of operations at Wigram, and the first containers of supplies from Pipitea Marae in Wellington arrived within 72 hours (Marae Investigates TVNZ, 2011). Te Rūnanga o Ngāi Tahu, Māori community workers, wardens, students as well as support workers from the Red Cross, Salvation Army, and other NGOs facilitated rapid delivery of food, water and other necessities to approximately 18,000+ households (Te Rūnanga o Ngāi Tahu, 2012a). Following building inspections the 12 local Ngāi Tahu marae, (community centres) were opened as shelter and support centres (Paton, Johnston, Mamula-Seadon & Kenney, 2014). In response to aftershocks all South Island and several North Island marae assisted with hosting Christchurch evacuees. The Police requested the Māori wardens' support in the Eastern Suburbs, and 160 Māori wardens provided security services, as well as face to face needs assessments, support and delivery of basic necessities to on average 4,800 people per week until May 2011 (Te Puni Kokiri, 2011).

The national urban marae Ngā Hau E Wha was designated a Recovery Assistance centre on March 3 2011. Subsequently, various stakeholders including the Ministries of Justice, Health and Social Development as well as Red Cross, the Salvation Army and the banking sector established community outreach services. The Ministry for Māori Development (Te Puni Kōkiri), the Ministry for Social Development, Ngāi Tahu and several other Māori tribes jointly funded emergency financial grants which were administered by Te Rūnanga o Ngāi Tahu. When external grant funding ceased, Ngāi Tahu continued to provide households with financial support and NZ\$953,000 was distributed to the community (Te Rūnanga o Ngāi Tahu, 2012a). The Ministry for Māori Development (Te Puni Kōkiri) also funded an advocacy and assistance program that ensured residents were supported to engage effectively with Government, social services and insurance companies (Sharples, 2011). Māori health professionals from outside Christchurch volunteered services and provided primary health care to the community. Thirteen doctors, eighteen nurses and 10 counsellors operated as 'barefoot' medical teams delivering services to areas in Eastern Christchurch that were inaccessible due to liquefaction and fractured roading (Te Puni Kokiri, 2011). Services were also provided for residents who lacked the resources (money, transport) to commute to medical centres, were unwilling to leave homes in case of another earthquake, reluctant to leave damaged, unsecured homes for fear of looting or unable to access health care due to disability or illness. Separate to these efforts, other tribes arranged earthquake support centres. The North Island tribe Tainui for example, set up a recovery hub at Lincoln for a two week period following the February 22nd 2011 earthquake (Paton, Johnston, Mamula-Seadon & Kenney, 2014).

2.3. Future proofing Māori community resilience

Ngāi Tahu tribal development initiatives are shaping the longer term resilience of tribal members and local Māori through addressing factors associated with earthquake vulnerability such as financial hardship, unemployment and poor housing. A matched savings scheme has been introduced to facilitate Ngāi Tahu family and youth financial literacy (Te Rūnanga o Ngāi Tahu, 2012a). Māori workforce development is being fostered through He Toki ki te Rika (the Māori Trade Training Scheme). The scheme commenced as a partnership between the tribe, the Christchurch Polytechnic Institute of Technology (CPIT) and Hawkins Construction with the existing knowledge, experience and expertise of partner organisations being leveraged to up skill Māori youth for work in the recovery of Canterbury (Te Rūnanga o Ngāi Tahu, 2012b). Course completions have been high so the Ministry of Tertiary Education has invested additional funding in the scheme. Insurance and accommodation concerns remain ongoing issues for the Māori community. Amongst the various housing initiatives is a partnership between the Canterbury Community Trust and Ngāi Tahu which is contributing to the creation of social housing. In order to address complex insurance issues, Te Rūnanga o Ngāi Tahu and Ngā Maata Waka have provided system navigators to assist Māori families engaging with insurers including the government insurer, the Earthquake Commission as well as construction companies tasked with housing repairs. Ngāi Tahu have also ensured that professional scientific advice regarding geotechnical inspection reports is available to Iwi members. Rural land holdings have been set aside for the urban rebuild and purchase prices for land incorporated into housing developments at the time of the earthquakes have been fixed at pre-September 2010 rateable values. The Ngāi Tahu rationale for freezing land prices is that profiteering from the misfortune of others in the post-earthquake context is incompatible with tribal and

organisational values (Solomon, 2012). New environmental initiatives include the Mahanui Iwi management plan and Tuia a partnership between Ngāi Tahu and Environment Canterbury that brings together cultural conservation practices and statutory responsibilities to facilitate the sustainable management of natural resources (ECan, 2013).

2.4. *Ngāi Tahutanga: Values, knowledge and practices as co-constructive cultural technologies of resilience*

One reading of the earthquake response is that the drivers for the Māori Recovery Network's initiatives to support community recovery were Māori kaupapa (values) which are embedded in sets of understandings about cultural identity and operationalised as technologies to shape behaviours and actions. Participants identified diverse kaupapa as actants that shaped responders' support behaviours. Exemplars included: Kotahitanga (unity); whānau (family); whakapapa (genealogy); whanaunatanga (relationships); marae (community centres); manaakitanga (respect/support/hospitality), and kaitiakitanga (guardianship). Interview discussions identified various ways that these values framed responses following the February 22, 2011 earthquake, as one elder explained:

...in Christchurch they [our papatipu rūnanga members] said, 'we can't come home' [to the marae], we gotta look after the people in the street because they don't know how to look after themselves, and they don't know how to find water, how to find food and how to cook! There's nothing there, they don't know how to hunt for food.'... So they said, 'We is taking responsibility in the streets.' So our people were doing that all throughout Christchurch... (Kaumatua B)

Having a sense of responsibility for anonymous others was a reoccurring theme in the interviews and is consistent with Putnam's (2000) view that bridging social capital is required for social cohesion. The principle of kotahitanga (unity) underpins collective Māori responses to adverse conditions and involves setting aside agendas to facilitate a combined response. The need for a unified response to the earthquakes was expressed at the community meeting at Rēhua Marae on the 23 February 2011 and stated by Sir Mark Solomon in a televised interview:

We have met with the local Māori community - a beautiful message there is no you there is no me there is only us!... Look! everything we do is based on the community it is all of us.... This disaster has hit everyone and our response is for the people of Christchurch... You ride it out you survive you get on with rebuilding and the way to do it is that you do it together as a community. (Mark Solomon, 2011)

Kotahitanga was also noted amongst Ngāi Tahu employees who worked collectively to provide support to the community. Bonding social capital refers to the ties that bind groups together on the basis of shared structural positions within a particular social hierarchy; examples include class, age or ethnicity (Putnam, 2000). Unity is a characteristic of Māori families, which serve as the foundation of Māori wellbeing and the source of bonding social capital within Māori communities. Family members may be drawn upon for support in times of need, while families with resources will offer them willingly. These principles were evident in most participants' stories, for example:

We had power, food and water and others didn't, and for whānau that is what you do, you get on, ring around all your family networks and let everybody know ..., and say 'You need to do washing, somewhere to stay, kai?' Come over! (SH)

Pre-existing forms of family connectedness are an advantage following a natural hazard event ensuring whānau resilience. Whānau roles include ensuring the safety of family members, sharing resources such as food or clothing as well as providing emergency accommodation and transport. Whānau also provided assistance to secure damaged property and helped affected whānau to negotiate the bureaucratic requirements of responding government agencies. Connectedness to extended whānau is ensured through cultural obligations that are associated with whakapapa (genealogy). Whakapapa provides a stable emergency management infrastructure for Māori and by default the wider community, embodying the ties that bind the iwi together through identity, relationality as well as acts of reciprocity. Genealogies also shape infrastructure on marae (Māori community centres), as specific families are tasked with managerial responsibilities as well as day to day duties involved in running the marae. In turn, marae provide a sense of place that is central to Māori identity and wellbeing and for centuries they have been rapidly

mobilised centres of support for Māori communities when adversity strikes. In the Christchurch context, Ngāi Tahu used their marae to extend support to the entire community on an informal basis:

Welfare centres were set up on our marae; and they all opened even Rapaki who were one of our harder hit communities with boulders smashing through their houses. I mean they were straight down there..., the marae was open, and functioning, accommodating and supporting whānau. (DA)

The Canterbury earthquakes also highlighted Ngāi Tahu responsibilities as guardians and protectors of the land, residents of Christchurch and the wider Canterbury region. Responsibility to provide a safe environment for local residents was also evidenced in the way that Ngāi Tahu spoke about contributing to urban redevelopment to facilitate community resilience:

We have a responsibility as kaitiaki (guardians) of our land to work with CERA [the Canterbury Earthquake Recovery Authority] and the others to plan for the future. One of the ways we can help is by using our cultural knowledge to inform the redesigning and rebuilding of Christchurch. (TN)

As kaitiaki (guardians), Ngāi Tahu, have a moral obligation to enact manaakitanga, a foundational value for all Māori, which encompasses the extension of hospitality, respect and support, to the wider earthquake ravaged community of Christchurch. Manaakitanga in the form of accommodation, food clothing and access to utilities was extended to the community by Ngāi Tahu organisations as well as by individual families as the following interview extract illustrates:

We [Te Rūnanga o Ngāi Tahu] had people ringing families and saying what do you need? What can we get you? And then we'd ring up one of the boys and say: "Can you drop off \$50.00 worth of groceries this person needs coffee milk sugar, water whatever. (MA)

Manaakitanga also requires the reciprocal acknowledgement of and respect for the support offered by others. Ngāi Tahu demonstrated recognition for the efforts of international USAR teams and other professional responders by providing a koha (gift) of seafood.

Ngāi Tahu share a collective 'ensemble' identity that is genealogically linked across communities, tribes and land, that imposes relational obligations on tribal members to ensure the well-being of the environment, land and people following a natural hazard event. Framed with the collaborative gaze of a Māori world view, the earthquakes may be considered catalysts that have enabled the wider expression of Ngāi Tahutanga [ways of knowing and acting that are specific to Ngāi Tahu] through facilitating the revitalisation of traditional values and practices in the Māori community. Drawing on Western social theories analysis of participants' talk infers that Ngāi Tahu kaupapa are attributes which partially comprise an un-finalised assemblage of actors and actants (conceptualised here as artefacts or ideas that influence action), or an actor network (Latour, 2005). Physical actants such as marae, are interrelated with conceptual values such as respect and hospitality. Collectively these kaupapa are co-constructive and therefore contemporaneously material and metaphysical (or non-material) technologies of resilience. The geographic place of the marae, for example is also a psychosocially and emotionally safe space, while metaphysical concepts of respect and hospitality are materialised as physical necessities for survival. Operationalization of cultural technologies of resilience is intrinsically linked to bonding social capital which underpins whakapapa and whānau relationships. Bridging capital is accrued through the exercising of manaakitanga (support for others) and kaitakitanga (guardianship). It may therefore be argued that in this instance, kaupapa constitute moral and relational technologies that are dynamic, un-finalised and operate across government, community, organisational, family as well as intra- and inter-tribal linkages to create and sustain the resilience of Māori communities. In doing so these technologies, have facilitated accommodation, cultural, social, financial and health services support for the wider Christchurch community, as well as contributed to urban recovery and regional resilience.

3. Conclusion

Research into community resilience is relevant to the continuum of hazard mitigation, preparedness, response and recovery, as well as to sustainable development (Paton, 2007). Moreover, community-based programmes are an effective tool for building disaster resilience in communities (Johnston, Becker & Paton, 2008). In the post-earthquake context of Christchurch New Zealand, cultural strengths were collaboratively operationalised by Māori to facilitate the recovery and resilience of the wider Christchurch community. To date Māori resources and cultural strengths have not been integrated into pre-disaster planning and emergency response strategies at the local or national levels, in any meaningful way (Kenney, Paton, Johnston, Reid & Phibbs, 2012). The prompt and effective Māori response to the Christchurch quakes has acted as the genesis for increased engagement and collaboration between Iwi, local authorities, government and private parties who are engaged in civil/disaster preparedness planning and urban rebuilding in Christchurch. Māori epistemological perspectives and bodies of historical knowledge have been acknowledged by key stakeholders and are informing integrated approaches to urban redevelopment as well as shaping innovative strategies for ensuring the social and environmental resilience of the Canterbury region in the longer term. The Māori response to the Christchurch earthquakes has wider relevance for how governments and international agencies may think about cultural strengths as a mechanism for mitigating disaster risk, reducing vulnerability following a natural hazard event and facilitating recovery and resilience.

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