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Reinvestigating social vulnerability from the perspective of Critical Disaster Studies (CDS): directions, opportunities and challenges in Aotearoa disaster research

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ABSTRACT

This article argues that resilience has been overemphasised in popular and scholarly discourse, while social vulnerability has been comparatively overlooked. We therefore need to shift the focus from resilience and adaptation towards vulnerability and the various structures that engender and maintain systemic inequality and disadvantage. This necessitates a shift from strict hazard management and resilience building to considerations of social justice. People should not have to be resilient to ongoing marginalisation and stigmatisation, and, in focusing on individual resilience, systemic disadvantage is obscured. Disaster scholars here must also reckon with the structural violence of colonisation. Aotearoa New Zealand has a unique hazard profile, and it has unique social infrastructures that can help deal with them. The best disaster mitigation and recovery programmes are inclusive and equity driven. Greater attention to Indigenous Knowledge – Mātauranga Māori – and Indigenous institutions, such as marae and the myriad relationships and connections that such institutions support, might potentially play a crucial role in future disaster mitigation and response.

Glossary of Māori words: Aotearoa: New Zealand; Awa: stream, River; Hapū: a division of people, Community; Iwi: tribe; Mātauranga Māori: Indigenous knowledge; Kāinga: home; Manaakitanga: respect and care for others; Marae: communal and sacred facility; Ōtautahi: Christchurch; Raupatu: conquest and confiscation; Rohe: home territory; Rongomau Taketake: Indigenous Rights Governance Partner; Tairāwhiti: Gisborne district; Te Kāhui Tika Tangata: Human Rights Commission; Te Tari Taiwhenua: Department of Internal Affairs; Te Tiriti: The Treaty (of Waitangi); Tiko; Poo; Tino rangatiratanga: self-determination; Tupuna: ancestor; Urupā, Cemetary; Whakapapa: descent, Geneaology, Lineage; Whakawhānaungatanga: the practice of establishing, Maintaining and nurturing relationships; Whenua: land

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Introduction

Disaster researchers in Aotearoa New Zealand (Aotearoa), and indeed worldwide, have tried to rethink the concept of community resilience in order to improve its utility (e.g. Manyena 2006; Cretney 2014; Hayward 2014; Tierney 2014; Chandler and Reid 2016; Uekusa 2018; Uekusa and Cretney 2022; Uekusa and Matthewman 2022). To date, resilience remains problematic. It has been heavily criticised for: (1) lacking conceptual clarity (Manyena 2006; Alexander 2013; Tierney 2014); (2) its incommensurability, as there is no standard way of measuring it (Olsson et al. 2015); (3) the ways in which it reinforces neoliberal ideology, 'responsibilising' victims (Chandler and Reid 2016) and (4) the tendency to downplay structural vulnerabilities to disaster, emphasising individuals instead (Uekusa 2018).

The rapid ideological, economic and political changes associated with the ascendancy of neoliberalism have also had a profound impact on Aotearoa's experiences of and responses to disaster. Wealth concentration is one of the great drivers of disaster risk, and in a few short decades, Aotearoa shifted from what was, ostensibly[1] at least, a much more egalitarian society to one marked by spiralling economic inequalities (see Rashbrook 2018). Neoliberalism has had significant impacts on our governance, with deregulation and the advocacy of notions of self-responsibility contributing to the strong focus on resilience over vulnerability. Neoliberalism has not only affected governance but has also shifted cultural expectations and ideologies among New Zealanders (or vice versa),[2] accepting the system of competition, the privatisation of public services, the normalisation of social inequality and the primacy of self-sufficiency. Additionally, generations of younger New Zealanders have grown up without any serious electoral opposition to neoliberalism (*There is no alternative*) and, as such, have come to internalise core aspects of neoliberal dogma (see Monbiot 2016; Trueman 2020). Consequently, neoliberalism has dramatically affected the way we plan for and respond to adverse events as individuals, as well as the ways we frame and practice disaster management, disaster response, disaster risk reduction (DRR) strategies, resilience promotion and the development of sustainable society. Promoting self-help and responsibilising communities for disaster preparedness and resilience building are central to many contemporary mitigation and response strategies. As with social capital promotion, resilience promotion, instead of vulnerability reduction, is a less costly political agenda and solution to social issues (see Portes 1998).

The danger of this recent resilience paradigm is the tendency to conceptualise vulnerability as the result of 'individual failure' rather than the failure of the social system. Typical 'victim blaming' is normalised in such an uncritical usage of the resilience approach. The mentality that 'if I can be resilient, you should be too' can make researchers, practitioners, policymakers and community members believe that the socially vulnerable people should blame themselves for their failures and for being in vulnerable positions. In the context of Aotearoa, this kind of thinking unevenly impacts on Māori. Neoliberal responses to disaster such as those listed above presuppose a level playing field, and, after a century and a half of colonial violence, the playing field for Māori is far from level. Social scientists have repeatedly argued that social injustices create and exacerbate social vulnerability, thereby causing greater disaster damages and limited disaster recovery among certain groups.

In the decade following the 2010–2011 Canterbury Earthquake Sequence and in the face of climate emegencies, researchers, journalists, practitioners and policymakers alike have tended to focus on resilience and adaptation. Media reports and academic research have highlighted how well survivors have dealt with a range of disasters including the 2010–2011 Canterbury Earthquake Sequence, the 2016 Kaikōura Earthquake, the 2019 White-supremacist terror attacks in Ōtautahi, the 2019 Whakaari White Island eruption, the COVID-19 pandemic and Cyclone Gabrielle (see Carlton and Vallance 2017; Monbiot 2020; Phibbs et al. 2022; Fallon 2023). In times of disaster, community groups such as New Zealand's Farmy Army, Dave Letele's Brown Buttabean Motivation (BBM) team and the Student Volunteer Army (SVA) work to identify vulnerable people and attempt to fill the gaps in the delivery of crucial services to the community (see, e.g. Nadkarni 2020; Carlton et al. 2021; Wynn 2021; Los'e 2023). People spontaneously bond, they selflessly help others, they share limited resources, and so on. This kind of collective community response to the adversity of disasters is characterised as disaster *communitas* (Matthewman and Uekusa 2021). However, Uekusa and Matthewman (2017) also note that these inspiring disaster stories should not distract us from some people experiencing social vulnerability because, in some cases, there are social barriers which exclude certain individuals and groups from participating in, or benefitting from, these collective responses.

So, what about social vulnerability?[3] How have the conditions of vulnerability been socially produced in these affected areas? Social scientists in disaster research stress that building resilience does not necessarily reduce social vulnerability to disasters (including unfolding climate change, the COVID-19 global pandemic, and the recent series of flood events in the North Island of Aotearoa) (Cretney 2014; Lambert 2022; Uekusa and Matthewman 2017; Uekusa 2018; Uekusa and Matthewman 2022). We argue that resilience has been overemphasised, while people's social vulnerability has largely been overlooked. Accordingly, this paper highlights some of the structural causes of vulnerability in Aotearoa.

While it is comparatively easy to find favourable accounts of peoples' disaster responses in the media (see, e.g. Truebridge 2017; Leahy 2023; Radcliffe 2023), the disaster experiences of socially vulnerable and marginalised communities and individuals appear to garner less attention, or, when vulnerable communities mobilise to secure their interests, they even face a backlash. One example from Aotearoa involved Māori communities in isolated parts of the country setting up local checkpoints/roadblocks to prevent the spread of COVID-19 into the communities that reside there (Hurihanganui 2020; New Zealand First Party 2021). The checkpoints were supported by Police and local government and were highly effective in protecting isolated Māori communities (see RNZ 2020). Nevertheless, they were vociferously criticised by conservative politicians and sections of the media (see, e.g. Du Fresne 2020; Du Plessis-Allan 2021; Small 2021).

Disasters do not affect all communities equally but rather serve to highlight and exacerbate existing inequalities. Certain phases of the COVID-19 pandemic, for example, unequally impacted Māori and Pasifika communities relative to others, thus highlighting pre-existing vulnerabilities and tensions (see Steyn et al. 2020; Meggett 2022). Gender, age and class also influence disaster vulnerability. In 2016, local news media website *Stuff* reported that, despite the physical recovery and redevelopment of

Ōtautahi following the earthquakes, 'the psycho-social recovery of the city [residents] is in desperate need of attention' (para. 2) as mental health issues were rising significantly, particularly among young people and other socially disadvantaged groups.

In addition to the unequal impacts felt by Māori and Pasifika, the COVID-19 pandemic has also highlighted the increased morbidity and mortality risks of older adults and their general vulnerability to the pandemic here and worldwide (e.g. Brooke and Jackson 2020; Meng et al. 2020). International research also showed the higher rates of depression, anxiety and stress during the pandemic among younger age groups (Gasteiger et al. 2021), and the surge in mental health issues among them, especially due to the strict lockdown measures and consequent social isolation (Duan et al. 2020; Oosterhoff et al. 2020; Li et al. 2021).

Furthermore, as seen in the U.S. and elsewhere, the pandemic intensified already existing racism against particular groups, particularly Asian communities (Ho 2020; Reny and Baretto 2020; Nielsen 2021; Liu et al. 2022) and, in Aotearoa, Māori, Pasifika and other minority groups (Lewis 2020; Pickering-Martin 2020, 2021; Rolleston 2021). The long-term experiences of these ethnic minority communities provide important lessons for more inclusive, equal and effective disaster responses, disaster recovery and DRR strategies for future events. However, as Aotearoa disaster researchers we do not seem to learn as many lessons as we should from the experiences of socially marginalised groups because our focus tends to be on individual experiences of recovery and resilience: how people react to disaster rather than what made them vulnerable to it in the first place (Mussen 2011; Morton 2023). This tends to put a lens on individuals and communities, rather than the broader social structures that pattern advantage and disadvantage. Given the collective trauma associated with these and other disaster events, it is perhaps unsurprising that media and researchers tend to look at more resilient communities and successful cases (i.e. how well people coped with the pandemic and the recent series of flood events), but this only serves to obscure and heighten existing inequalities and vulnerabilities specific to Aotearoa. Consequently, disaster researchers and wider society have missed opportunities to address these inequalities and protect the most vulnerable from the impacts of disaster.

Social vulnerability to disasters is an established concept (see, e.g. Cutter et al. 2003; Wisner et al. 2004), and social vulnerability conditions are deemed to be created and exacerbated by the interplay of various cultural, environmental, physical, political and social factors. Since the 1980s, disaster sociologists have argued that, rather than seeing risk as a matter of being in the wrong place at the wrong time, '[historical and] social processes generate unequal exposure to risk by making some people more prone to disaster than others, and these inequalities are largely a function of the power relations operative in every society' (Hilhorst and Bankoff 2004, p. 2). An approach that uses Root Cause Analysis (RCA) together with a Critical Disaster Studies (CDS) perspective (see Oliver-Smith 2022 for details) can give us better and deeper understandings of how certain social groups are systemically predisposed to greater hazards (or threats from within the social order). Such an approach could change hazard risk management practices and DRR strategies in Aotearoa, which currently weigh more on promoting resilience rather than reducing social vulnerability. Again, an important point to consider is that promoting community resilience in its current form does not necessarily reduce the existing and emerging social vulnerabilities (Manyena 2006; Tierney 2014; Uekusa 2018).

If it makes communities responsible for their own recovery absent of adequate resourcing, it amounts to little more than victim-blaming.

Unlike Aotearoa, disaster scholars in North America and Europe have developed more balanced research between social vulnerability and resilience (even though positioning these two key concepts as being in an inverse relationship to each other is problematic) (see Oliver-Smith 2022 for further discussion; and also Uekusa et al. 2022b for recent key works in Aotearoa). This shift in emphasis from social vulnerability reduction to resilience promotion has revitalised disaster scholarship, although a deep conundrum remains in terms of the precise relationship between vulnerability and resilience (if there is any). The consensus is that resilience reduces vulnerability because they are viewed as opposite sides of the same coin (Manyena 2006; Tierney 2014). Since Aotearoa disaster social science research became prominent after this shift (boosted in large part by responses to the 2010–2011 Canterbury Earthquake Sequence), it is unsurprising that, unlike resilience and climate adaptation which are more recent concepts, social vulnerability was reduced to a minor role in natural hazard management issues. Furthermore, many of the key disaster experts in Aotearoa, broadly construed, are not social scientists. This means that they do not have formal training in the issues that we take to be central, which is to say, the structural features of society: power and social stratification, and the production of difference and division.

In this paper, we use the perspective of CDS to discuss how the current resilience and risk paradigms have oversimplified the rather complex question of social vulnerability. The intersection of vulnerability drivers such as colonisation, globalisation, ethnic discrimination, migration, neoliberalism, and with it the widening of economic inequality, not only makes social vulnerability specific to Aotearoa more complex but, in some instances, unexpected. Our aim in this paper is not to provide a deep analysis of social vulnerability specific to Aotearoa but to make a sociological argument that proper understanding and critical application of social vulnerability is imperative for a better, safer and more sustainable future in Aotearoa. Ultimately, we would like to raise a critical question: How might countries like Aotearoa balance their interest in community resilience with a concern for the multiple and intersecting inequalities that generate and maintain greater social vulnerability to disasters?

Why reinvestigate social vulnerability?

As noted above, recent disaster scholarship and management in Aotearoa has tended to focus on community resilience and has served to obscure the various inequalities that make certain groups within Aotearoa more or less vulnerable to disaster. This focus on resilience over any concern for social vulnerability is, of course, problematic for obvious reasons. Disaster research has shown that some people may be less resilient in the face of disaster due to chronic social inequalities and institutionalised racism. The lack of critical perspectives and this consequent misinterpretation keep researchers, practitioners and policymakers away from considering the resource-dependent nature of resilience[4] and thus obscure the resourcelessness of certain individuals and communities. Put simply, some people have the material and extra-material resources to respond well to disaster while others do not. Some can be resilient, but others may remain or become vulnerable to disasters under certain conditions (MacKinnon and Derickson 2012). According to the

current resilience paradigm, ethnic minorities, Indigenous peoples, the poor, women, children, the elderly, the disabled, (im)migrants and other socially disadvantaged groups are typically deemed vulnerable. Research provides overwhelming evidence of this, but this conceptualisation is over-generalising and over-deterministic because social vulnerability is a dynamic condition, not a fixed category (Fordham et al. 2013, p. 12). Under particular circumstances, some socially vulnerable people can be resilient *because* of their vulnerability. For example, marginalisation can compel people to become more resourceful as they cannot rely on the same support structures as those in majority groups, this includes generation of their own networks within ethnic enclaves (Uekusa and Matthewman 2017). Some highly marginalised and geographically isolated Māori communities in Aotearoa, for example, responded to the COVID-19 pandemic by mobilising among themselves to protect their communities with checkpoints and to develop a locally specific and appropriate vaccination programme (see RNZ 2020; Neilson 2021). Indeed, Te Whānau-ā-Āpanui, a Māori iwi from the Eastern Bay of Plenty, were driven to protect themselves by the collective memory of vulnerability to the 1918 influenza pandemic that tore through the community and devastated Māori who died at seven times the rate of Pākehā (Neilson 2021). Consequently, a more nuanced conceptualisation of local social vulnerabilities is critical for hazard planning, risk/disaster management, disaster response, disaster mitigation, and resilient and sustainable community building.

One particularly pertinent example that highlights the complexities between vulnerability and resilience stems from a recent Te Tari Taiwhenua report into those communities most vulnerable to flooding. The report, released to the public in November 2022, identifies 44 communities spread throughout Aotearoa that 'have a high level of socio-economic vulnerability and are exposed to flood hazard' (Te Tari Taiwhenua 2022, p. 1; see also Scotcher 2022). Further, the local and regional authorities representing these communities may lack the material resources to construct adequate flood protection infrastructure and the wider communities themselves may have a diminished capacity to respond to disaster owing to socio-economic factors. Te Tai Tokerau, Waikato, Tairāwhiti and Te Moana-a-Toi have clusters of vulnerable communities exposed to flood hazards, all of which are areas with significant Māori populations and with high levels of socio-economic vulnerability rooted in the legacy of colonisation and the structured dispossession of Māori land and resources (see Wynyard 2019). Within hours of the report being made public, Māori in some of the most vulnerable parts of Aotearoa were decrying a lack of consultation in the preparation of the report. The processes of settler colonialism have long marginalised Māori voices and Māori ways of knowing and doing, and the lack of consultation here only adds insult to injury. Māori leaders also raised concerns that central Government flood planning may, in fact, undermine both the protective work already being done by hapū and iwi as well as their tino rangatiratanga (see RNZ 2022).

In denouncing the lack of consultation with local Māori, Haami Piripi, the chief executive of Te Rūnanga o Te Rarawa, highlighted the rich repositories of local Mātauranga Māori or Indigenous Knowledge (IK) of the environmental hazards that iwi and hapū have built up over hundreds of years of occupation. As he put it:

> If it [the Report] didn't involve our input it wouldn't be any damn good because we are the people who have lived there for over a thousand years, we know more about the place than

> anybody else and we're intergenerational occupants. Any planning authority that's not prepared to access or utilise that information, or that data, or that understanding and knowledge would be foolish. (RNZ 2022)

Of particular note here, is the state's attempt to ride roughshod over Māori knowledge of the natural environment – Mātauranga Māori that Māori have drawn on for hundreds of years in order to remain resilient in the face of enormous changes and challenges. The Te Tari Taiwhenua report also raises the prospect of managed retreat from the most perilous parts of the country (see also Peart et al. 2023). This, together with the lack of consultation, sits uncomfortably with some Māori who view this as just another state-led attempt to undermine and interrupt their relationship with the whenua and awa of their tupuna.

> [They] have inhabited coastal and low-lying areas for generations, developing deep cultural and spiritual connections to these places. For some, abandoning their ancestral whenua and relocating elsewhere can be seen as a loss of identity and connection to their whakapapa. On top of that, past experiences of land loss through government-sanctioned land confiscation has resulted in intergenerational trauma. (Stewart 2023)

Almost 200 marae are within a kilometre of the coastline, urupā and other sacred sites are also under threat (Bailey-Winata cited in Stewart 2023). Managed retreat will arguably be a recolonisation of Aotearoa (Awatere et al. 2021).

The prospect of Māori being forced from the land must be viewed within the context of a settler-colonial apparatus that has, in two short centuries, systematically dispossessed Māori of all but a tiny fraction of their ancestral holdings. Civil Defence Coordinator for the at-risk community of Tokomaru Bay in Tairāwhiti, Lillian Ward, notes that, with such little land left to them, many Māori would struggle to re-establish themselves elsewhere. As she puts it, 'do they expect to go and live as tree people on pine trees?' (RNZ 2022).[5] Herein lies another factor that underscores the complexities between vulnerability and resilience. Settler colonialism has robbed Māori of over 95% of ancestral land holdings. What land remains to Māori is often marginal and sometimes prone to the kinds of flood hazards that make it unfit for productive use (see Wynyard 2019).

> Our rivers have been altered, our wetlands drained for farms, our food basket contaminated with silt and tiko, we're surrounded by developments that aren't ours. We're on remnant pieces of land prone to flooding because the government didn't uphold its Te Tiriti obligations'

said Hūhana Lyndon, Raukura CEO of Te Poari o Ngāti Wai, in Cyclone Gabrielle's aftermath (quoted in Hura 2023). Yet the experience of 200 years of economic deprivation and structural violence, of war, raupatu (the forced confiscation of 3,490,737 acres of communally owned Māori land) and the systematic dispossession of land, of the myriad assaults on Māori ways of being, and doing and knowing has also furnished Māori with resilience of the very kind that are required to deal with the challenges that beset us as a society, would we only listen and follow. As Kris Faafoi, then Minister for Civil Defence, acknowledged in 2021, 'Māori are disproportionally impacted by natural disasters [*sic*] and emergencies. However, we also recognise that iwi bring a great deal of capability in relation to emergency management and their contributions have been essential – before, during and after emergencies' (Faafoi 2021). Claire Charters (2023), Rongomau Taketake at Te Kāhui Tika Tangata concurs: 'The response of marae-based

communities in many ways defined our national response to Cyclone Gabrielle. Manaakitanga, respect and care for others was placed above all else'.

Marae are social infrastructure that are unique to this country. They are also uniquely well-placed to deal with disasters, having multiple advantages over other institutions in our social landscape. They are sites of hospitality, they are strongly anchored to place, they are used to feeding and accommodating large numbers of people at extremely short notice, and they are familiar with responding to death, trauma and sorrow. Marae also serve to foster and maintain networks of relationships between communities. Unlike some institutions that are concentrated in major centres, marae are also distributed across the country (see Carter and Kenney 2019). Indeed, they 'are often the only publicly orientated facilities in small communities' (Jones quoted in Macfie 2023). Government funding of marae, then, makes eminent sense as 'an investment in our collective civil defence infrastructure' (Godfery 2023).

While the vulnerability concept is taken into consideration, the concept is often used to *explain* why certain people are more affected than the others, instead of identifying people and communities predisposed to greater risk and keeping them from future disasters. The above example of the recent Te Tari Taiwhenua report also highlights the extent to which adequate understanding of, and planning for, vulnerabilities is contingent on consultation with affected communities. Here, too, Māori provide us with a model to follow, whakawhānaungatanga may prove crucial in preparing for disasters of the future (Cram 2021).

Bringing the concept of vulnerability into focus

Other important points to consider include vulnerability's notoriously elastic conceptualisation. Fordham et al. (2013) explain that 'the term *vulnerability* has different meanings to varying agencies and organizations, and can be conceptualized in several ways' (p. 4, italics theirs). For example, Lindell (2013) summarises different conceptualisations of vulnerability and identifies three major premises of vulnerability in disaster research: place-based vulnerability (location), built environment-based (spatial and built structure) vulnerability and social vulnerability. The term vulnerability may not necessarily imply social vulnerability in disciplines outside sociology and human geography. Given the fact that disaster research in Aotearoa had been dominated by geographers, engineers, planners and other 'hard scientists' and policymakers, vulnerability is not necessarily, even normally, viewed through the lens of social (in)justices. Sociologists, human geographers and other critical scholars argue that placed-based and built environment-specific vulnerabilities are not randomly distributed but are created through social processes (i.e. people's settlement patterns are largely determined by the social systems and thus their social and economic statuses, this includes the number of people living within a household and the quality of the building structure itself). As media commentator and Senior Lecturer in Constitutional Law at Victoria University of Wellington Te Herenga Waka Morgan Godfery (2023) noted of Cyclone Gabrielle's impacts, Napier's poorest suburbs were hardest hit as they are also the city's lowest lying ones (its wealthiest are hilltop), and Māori are disproportionately represented in the poorest demographics.

Thus, in order to understand, properly address and reduce vulnerability, it is critical for disaster researchers, practitioners and policymakers to first understand how the social

systems generate certain forms of vulnerabilities and hinder our efforts to reduce these vulnerabilities to the current pandemic and future disasters. In Aotearoa, there is perhaps no greater example of this than that noted above, the settler-colonial process has robbed Māori of all but a tiny fraction of their lands, what lands they do retain are often marginal, official authorities are still largely indifferent to Mātauranga Māori, and so, for Māori, managed retreat from vulnerable areas is much more fraught than for other groups. More, the intimate and umbilical connections between Māori and whenua make the prospect of abandoning it for retreat more fraught still, particularly in the wake of a century and a half of ongoing dispossession that has robbed Māori of all but approximately 5% of their ancestral lands (Wynyard 2019). For many Māori, retreat is not an option as there are, quite literally, no lands left to retreat to.

Vulnerability assessment through the lens of hazard management

In Aotearoa, disaster research often subsumes vulnerability analysis to an aspect of hazard/risk management. As briefly stated above, issues related to vulnerability such as place vulnerability have been mainly addressed through the lens of hazard management rather than social justice (e.g. Paton and Johnston 2001; Uekusa et al. 2022b). Taking scientific and reactive approaches, natural hazard management has been the dominant approach to assess vulnerability and manage disaster risks, yet disasters result from social arrangements. Vulnerability is not necessarily created by *unpredictable* natural hazards; these hazards are real but they are conditioned by social and historical processes such as social oppression and marginalisation.

Sociologists in disaster research have traditionally understood that those who are of lower SES and socially disadvantaged in general tend to live in disaster-prone areas. However, what has become less predictable is that middle-class and less socially disadvantaged people now live in vulnerable lands. Recent population growth has demanded more intense housing development and intensification of agriculture to be extended into the areas of traditionally high-risk such as the Eastern part of Ōtautahi, which indeed became the red zone after the earthquakes and subsequent liquefaction in 2010 and 2011. Since early 1990, scientists had already warned of the risk of liquefaction in these areas (see, e.g. Christensen 2002), but a managed retreat or displacement was not considered until the tragic events made the area uninhabitable (and too expensive to restore). The same goes for the recently flooded agricultural areas in the Hawke's Bay. Floodplains are very fertile for an obvious reason: the area has historically repeatedly flooded (Peart et al. 2023, p. 67).

Affluent families live on top of fragile cliffs (such as Redcliffs in Ōtautahi and Parnell in Tāmaki Makaurau) for better views are therefore more vulnerable to earthquakes and cliff erosion; beach communities (such as South New Brighton, Southshore and Sumner in Ōtautahi) face challenges from more cyclones, sinking coastlines and sea-level rise; newly subdivided and developed residential areas (such as Outram near Dunedin) for middle class families are prone to floods, and so on. Recent events such as Cyclone Gabrielle have also highlighted this shifting picture of vulnerability, as once-desirable and expensive coastal communities, such as Muriwai, Piha and Karekare on the west coast of Tāmaki Makaurau come under increasing threat from climate-change-related weather events (see Schulz 2023). As there is a less clear pattern of social class and

location vulnerability due to intense residential development, it is unsurprising that pre-disaster social conditions can be considered less important factors. However, this does not mean that we can ignore them; rather, we need to reinvestigate and reconceptualise vulnerability for what it is, a contextual and dynamic concept.

Vulnerability as a dynamic concept

A decade of Ōtautahi experiences is another example which shows the dynamism of vulnerability (see Uekusa et al. 2022a for more details: also Cloke et al. 2023). The wave of adversities in Ōtautahi – the 2010–2011 Canterbury Earthquake Sequence; the 2017 wildland-urban interface wildfires in the Port Hills; the 2019 terrorist attacks at local mosques that killed 51 people; river flooding in 2014, 2017 and 2021; the unfolding mental health crisis; the perilous future faced by many coastal residents in the region due to sinking coastlines and sea-level rise; increasing ground and fresh water pollution; the COVID-19 pandemic; and the climate crisis more generally – has shown the complexity of social vulnerability and resilience. As mentioned above, mental health issues have been on the rise in Ōtautahi after a few years of the Canterbury Earthquake Sequence (Stuff 2016). Interestingly, the mental health problem rate went down and did not go over the pre-disaster level until a few years after the earthquakes, and this can be a clear indicator that residents were remarkably resilient for a certain period of time but had reached a tipping-point due to the significant delays with the recovery and the wave of traumatic events and adversities they experienced (Uekusa and Cretney 2022; Uekusa and Cretney 2022). People might have coped well with the 2010–2011 Canterbury Earthquake Sequence, but they might have become vulnerable to compounded social issues including widening income inequality, increased racism, the housing crisis, limited employment opportunities, economic decline, labour shortages, inflation in a post-pandemic era, working-age population exodus, and other forms of 'everyday disasters' (see Matthewman 2015 for the 'everyday disaster' concept; see also Lambert 2016).

It is important to note that vulnerability may not only be created by unexpected hazards and situational social attributes. Indeed, there is a risk that we – as researchers, policymakers and practitioners – contribute to vulnerability through framing disaster survivors as passive victims, further victimising and disempowering them. Despite our intention to help and empower disaster survivors and people at risk of future events, sometimes we overlook their resilience and even unintentionally impact upon it. There is a common argument among CDS scholars that some current disaster relief policies, practices and efforts have caused unintended harm. It has been well-documented that people impacted by disasters are often labelled as 'victims, dependents or vulnerable people' by emergency aid workers and volunteers. This may have the unintended consequence of disempowering and victimising otherwise resilient people (Chamlee-Wright and Storr 2011, p. 267).

What vulnerability is specific to Aotearoa?

What are the vulnerabilities specific to Aotearoa that we should be concerned about? Aotearoa hazardscapes (see, e.g. Pawson 2011; Meduna 2022 for details) show the current natural hazard risks that New Zealanders face. Due to its geographic location

(i.e. laying on/around the fault lines) and excessive land-modification throughout the country (i.e. as we have seen in Hawke's Bay and Tairāwhiti through Cyclone Gabrielle, intense extraction and exploitation of natural resources – intense deforestation and intensification of agriculture – have resulted in the significant loss of catchment and increased the flood risks), many parts of this country face a variety of natural hazard risks. Floods are a particular concern as 100-year floods such as the 2004 Manawatū Flood, the 2021 Canterbury Flood, the 2022 Nelson Flood and the 2023 Auckland Flood can now happen more often than scientists expected due to a combination of critical factors such as climate change, catchment area land-modification, development in high flood risk areas, and so on. Indeed, recent flood events such as Cyclone Gabrielle and Cyclone Hale have highlighted the dangers associated with forestry slash. 'Slash' refers to the detritus left after logging operations. Branches and debris not required as timber is left to rot on the ground and in large rainfall events is prone to being washed down into rivers and streams where it can form dams and divert the flow of water. Forestry slash can also damage and destroy bridges and other critical infrastructure (see Edwards 2023; McConnell 2023). Unsurprisingly perhaps, this issue has been felt most acutely in areas with high populations of Māori (see Perry 2023). Aotearoa geographers and others in disaster research have done an excellent job mapping natural hazard risks and place-based vulnerabilities; however, creating vulnerability indicator maps without incorporating proper concepts of social injustice and human-induced hazards would be incomplete.

Social factors are as, or more, important to consider in visualising vulnerabilities in indicator maps. Again, deterministic approaches are not preferred, and unnecessary labelling of overgeneralised vulnerability should be avoided. As sociologists of disaster argue, there are no such things as 'natural disasters' as disasters including the recent Cyclone Gabrielle are traditionally defined as the consequence of extreme events that overwhelms the capacity of human systems, like a city and surrounding region, to cope using their own resources (Enarson 2007). 'Disasters' faced by socially disadvantaged communities on a daily basis simply exacerbate their pre-existing vulnerabilities in the wake of extreme natural and human-induced hazard events. Thus, when we discuss risks and disasters, the capacity of our human system to withstand and cope with any types of hazards matters. For some individuals with better coping capacity, a natural hazard event can just be a natural hazard, not a disaster. For the socially oppressed, they live through 'disasters' on a daily basis. Matthewman (2015) calls them 'everyday disasters' – poverty and social disadvantages resulting from racism, sexism, economic inequalities and other forms of social oppression. Indeed, Uekusa and Matthewman's study (2017) found that, for some of the socially vulnerable groups such as immigrants and refugees in the 2010–2011 Canterbury Earthquake Sequence and the 2011 Great East Japan Earthquake and Tsunami, 'natural' disasters were more manageable than their pre-disaster everyday challenges attributable to structural violence. They argue that some study participants showed remarkable resilience because they are vulnerable and had earned 'strength' to survive through everyday difficulties such as civil war, poverty, domestic violence, racism and other forms of structural as well as symbolic violence (Uekusa and Matthewman 2017). Can these notions somehow be incorporated into the reconceptualisation of social vulnerability and as vulnerability indicators? Answering this question and further theorising social vulnerability

is challenging but a priority in Aotearoa disaster research in the face of ever-increasing climate crisis-related disaster risks.

Conclusion

When it comes to vulnerability, Aotearoa is facing challenges. Yet the 'beautiful stories' and 'remarkable resilience' that is typically portrayed in media in response to the series of adversities in Ōtautahi and elsewhere have distracted our focus from fundamental social vulnerability issues, entrenched further neoliberalisation of resilience and also responsibilised communities and residents (Tierney 2015; Chandler and Reid 2016). The country has experienced the fastest rate of widening income inequality between the rich and poor in the world since 1986 when neoliberal policies were introduced. The recent COVID-19 pandemic exposed and exacerbated myriad social inequalities associated with four decades of neoliberal orthodoxy. Forty years of largely uncontested neoliberalism have eroded any lingering post-war collectivism, public services have been diminished and in some cases privatised, self-sufficiency rooted in individualism has come to be expected, and so on. Due to such cultural, ideological and social shifts (attributable not only to neoliberalism but also liberal democracy), reducing vulnerability, or even properly addressing vulnerability, has become extremely challenging, but this does not mean that we should shrink from the task. We require more critical, inclusive and flexible conceptualisations of disaster vulnerability, more concrete identification of vulnerabilities specific to Aotearoa through a CDS lens, and more openness to the solutions available to us (such as from Te Ao Māori). Properly understanding and assessing vulnerability to disasters involves analysing them through the lens of social justice. Solving such vulnerabilities therefore necessitates structural transformation, such as the redistribution of resources.

Notes

1. By ostensibly, we mean that Aotearoa is not actually egalitarian as it is a settler-colonial society.
2. We use the term 'ideologies' to refer to two things: (1) a partial picture of social reality that presents as the whole, and (2) a set of ideas that masks or justifies inequalities.
3. As one of the most authoritative bodies in the disaster space, the UNISDR's definitions come close to orthodoxy. It defines resilience as: 'The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions' (UNISDR 2009, p. 24). It defines vulnerability as: 'The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard' (UNISDR 2009, p. 24). While both definitions have their merits, they assume that threats to wellbeing exclusively emanate from external sources (hazards), and that such effects are temporally limited. This obfuscates ongoing threats produced within the social order such as institutional racism and related forms of structural violence. In this article, we use the term 'vulnerability' in a broader sense to include (enduring) harms produced by social relations. The task of Critical Disaster Studies scholars is to determine how and why some groups are rendered far more vulnerable than others (and how such harms may be countered). In so doing, we should also reject the pathologising labelling that often attends to those deemed vulnerable, which ignores both the agency of disaster victims (who do not just passively await external assistance) and the broader human condition, which is 'to be vulnerable, socially embedded, and dependent.

We all must rely upon various social and physical infrastructures to survive' (Karki et al. 2023, p. 632).

4. By 'resources and resourcefulness', we do not mean only economic resources but also, drawing on Pierre Bourdieu's capital theory, various forms of resources including social, cultural and symbolic forms.
5. Similarly, Hūhana Lyndon (Ngāti Wai, Ngāti Hine, Te Waiariki, Ngāti Whātua, Ngāpuhi nui tōnu) stated, 'We might have to retreat, but retreat where? You can't just rate us off the whenua. You can't red zone us because there's nowhere to go. This is an equity issue. A lot of whānau have lost everything but they don't have insurance, so the conversation about insurance is irrelevant to them. It's the same with our homeless whānau. If you didn't have a home to lose, then what is there for the government to compensate? The government is prepared to compensate West Canterbury Finance over a billion dollars, but how do you compensate a landless people? What we are asking for as ngā hapū me ngā iwi o Te Tai Tokerau is simply fair and equitable access to the resources to support our kāinga and marae to prepare and respond in times of crisis' (quoted in Hura 2023; and see Eruera in Stewart 2023).

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References

Alexander DE. 2013. Resilience and disaster risk reduction: an etymological journey. Natural Hazards and Earth Systems Sciences. 13:2707–2716. doi:10.5194/nhess-13-2707-2013.

Awatere S, King DN, Reid J, et al. 2021. He huringa āhuarangi, he huringa ao: a changing climate, a changing world. Auckland: Manaaki Whenua – Landcare Research/Ngā Pae o te Māramatanga. https://www.landcareresearch.co.nz/assets/researchpubs/He-huringa-ahuarangi-he-huringa-ao-a-changing-climate-a-changing-world.pdf

Brooke J, Jackson D. 2020. Older people and COVID-19: isolation, rick and ageism. Journal of Clinical Nursing. 29(13):2044–2046. doi:10.1111/jocn.15274.

Carlton S, Nissen S, Wong JHK, Johnston D. 2021. 'A shovel or a shopping cart': lessons from ten years of disaster response by a student-led volunteer group. Natural Hazards. 111:33–50. doi:10.1007/s11069-021-05043-7.

Carlton S, Vallance S. 2017. The commons of the tragedy: temporary use and social capital in Christchurch's earthquake-damaged central city. Social Forces. 96(2):831–850. doi:10.1093/sf/sox064.

Carter L, Kenney C. 2019. A tale of two communities: B-race-ing disaster responses in the media following the Canterbury and Kaikōura earthquakes. International Journal of Disaster Risk Reduction. 28:731–738. doi:10.1016/j.ijdrr.2018.01.037.

Chamlee-Wright E, Storr VH. 2011. Social capital as collective narratives and post-disaster community recovery. The Sociological Review. 59(2):266–282. doi:10.1111/j.1467-954X.2011.02008.x.

Chandler D, Reid J. 2016. The neoliberal subject: resilience, adaptation and vulnerability. London: Rowman & Littlefield International Ltd.

Charters C. 2023 Apr 10. Māori should be front and centre of climate change and weather disaster responses. Stuff. https://www.stuff.co.nz/opinion/131716871/mori-should-be-front-and-centre-of-climate-change-and-weather-disaster-responses.
Christensen S. 2002. Christchurch liquefaction study – Stage II ECan report No. U02/22. Environment Canterbury. http://archived.ccc.govt.nz/Reports/2002/Liquefaction/LiquefactionStudy.pdf.
Cloke P, Conradson D, Pawson E, Perkins H. 2023. The post-earthquake city: disaster and recovery in Christchurch, New Zealand. Milton: Routledge.
Cram F. 2021. Mahi aroha: Māori work in times of trouble and disaster as an expression of a love for the people. Kōtuitui: New Zealand Journal of Social Sciences Online. 16(2):356–370. doi:10.1080/1177083X.2021.1879181.
Cretney R. 2014. Resilience for whom? Emerging critical geographies of socio-ecological resilience. Geography Compass. 8(9):627–640. doi:10.1111/gec3.12154.
Cutter S, Boruff BJ, Shirley WL. 2003. Social vulnerability to environmental hazards. Social Science Quarterly. 84(2):242–261. doi:10.1111/1540-6237.8402002.
Duan L, Shao X, Wang Y, Huang Y, Miao J, Yang X, Zhu G. 2020. An investigation of mental health status of children and adolescents in China during the outbreak of COVID-19. Journal of Affective Disorders. 275:112–118. doi:10.1016/j.jad.2020.06.029.
Du Fresne K. 2020 May 9. Maori roadblocks: Covid-19 unmasks the true separatist agenda. Spectator. https://www.spectator.com.au/2020/05/maori-roadblocks/.
Du Plessis-Allan H. 2021 Dec 12. Who calls the shots at northern checkpoints, iwi or police?. New Zealand Herald. https://www.nzherald.co.nz/nz/heather-du-plessis-allan-who-calls-the-shots-at-northern-checkpoints-iwi-or-police/KJIRSS4RYQB2QXMZA3EYLKVE2E/.
Edwards B. 2023 Feb 27. Political Roundup: the horrific damage caused by forestry slash and vested interests. New Zealand Herald. https://www.nzherald.co.nz/nz/political-roundup-the-horrific-damage-caused-by-forestry-slash-and-vested-interests/URXFR7CC35GJTFP7ZPXF2UTHLA/.
Enarson E. 2007. Identifying and addressing social vulnerabilities. In: Waugh WL, Tierney K, editors. Emergency management: principles and practice for local government. Washington: ICMA Press; p. 257–278.
Faafoi K. 2021. Ensuring Māori perspectives are integrated in our emergency management system. New Zealand Government. https://www.beehive.govt.nz/release/ensuring-m%C4%81ori-perspectives-are-integrated-our-emergency-management-system.
Fallon V. 2023 Feb 19. Cyclone Gabrielle: our extraordinary stories of resilience after a disaster. Stuff. https://www.stuff.co.nz/national/131257319/cyclone-gabrielle-our-extraordinary-stories-of-resilience-after-a-disaster.
Fordham M, Lovekamp WE, Thomas DSK, Phillips BD. 2013. Understanding social vulnerability. In: Thomas DSK, Phillips BD, Lovekamp WE, Fothergill A, editors. Social vulnerability to disasters. Boca Raton, FL: CRC Press; p. 1–29.
Gasteiger N, Vedhara K, Massey A, Jia R, Ayling K, Chalder T, Coupland C, Broadbent E. 2021. Depression, anxiety and stress during the COVID-19 pandemic: results from New Zealand cohort study on mental well-being. BMJ Open. 11:e045325.
Godfery M. 2023 Mar 9. Marae are an integral part of our civil defence infrastructure. Stuff. https://www.stuff.co.nz/opinion/131440655/morgan-godfery-marae-are-an-integral-part-of-our-civil-defence-infrastructure?cid = app-iPhone.
Hayward B. 2014. Rethinking resilience: reflections on the earthquakes in Christchurch, New Zealand, 2010 and 2011. Ecology and Society. 18(4):37. doi:10.5751/ES-05947-180437.
Hilhorst D, Bankoff G. 2004. Introduction: mapping vulnerability. In: Bankoff G, Frerks G, Hilhorst D, editors. Mapping vulnerability: disasters, development & people. London, UK: Earthscan; p. 1–24.
Ho J. 2020. Anti-Asian racism, Black Lives Matter, and COVID-19. Japan Forum. 33(1):148–159. doi:10.1080/09555803.2020.1821749.
Hura NA. 2023 Mar 10. On the ground in Whangārei: 'It doesn't matter about tribal boundaries. It's all about the aroha and manaaki'. The Spinoff. https://thespinoff.co.nz/atea/10-03-2023/on-

the-ground-in-whangarei-it-doesnt-matter-about-tribal-boundaries-its-all-about-the-aroha-and-manaaki.
Hurihanganui TA. 2020 May 1. MP's questioning of legal iwi checkpoints 'really is racism'. RNZ. https://www.rnz.co.nz/news/te-manu-korihi/415617/mps-questioning-of-legal-iwi-checkpoints-really-is-racism.
Karki J, Matthewman S, Jesse HG. 2023. *Paranirvar mānis* (dependent people)? Rethinking humanitarian dependency syndrome: a Bourdieusian perspective. Disasters. 47(3):630–650. doi:10.1111/disa.12572.
Lambert S. 2016. Post-disaster Indigenous mental health support: Tangata whenua networks after the 2010-2012 Ōtautahi/Chiristchurch earthquakes. MAI Review. 5(1):76–91. doi:10.20507/MAIJournal.2016.5.1.6.
Lambert S. 2022. Critical indigenous disaster studies: doomed to resilience? In: Uekusa S, Matthewman S, Glavovic B, editors. A decade of disaster experiences in Ōtautahi Christchurch: Critical Disaster Studies perspectives. Palgrave: Singapore; p. 107–124.
Leahy B. 2023 Mar 18. Kiwis flood those affected by Christchurch attack with flowers, money and hugs. New Zealand Herald. https://www.nzherald.co.nz/nz/kiwis-flood-those-affected-by-christchurch-attack-with-flowers-money-and-hugs/UQ3SNVDPWF3IWWMJ26ADYY3JBQ/.
Lewis O. 2020. Police investigating 'ignorant, arrogant' coronavirus email. Stuff. https://www.stuff.co.nz/national/119225943/police-investigating-racist-coronavirus-email-say-xenophobia-will-not-be-tolerated.
Li SH, Beames JR, Newby JM, Maston K, Christensen H, Werner-Seidler A. 2021. The impact of COVID-19 on the lives and mental health of Australian adolescents. European Child & Adolescent Psychiatry. 31:1465–1477. doi:10.1007/s00787-021-01790-x.
Lindell MK. 2013. Disaster studies. Current Sociology. 61(5-6):797–825. doi:10.1177/0011392113484456.
Liu LS, Jia X, Zhu A, Ran GJ, Siegert R, French N, Johnston D. 2022. Stigmatising and racializing COVID-19: Asian people's experience in New Zealand. Journal of Racial and Ethnic Health Disparities. 10:2704–2717. doi:10.1007/s40615-022-01448-7.
Los'e J. 2023 Feb 2. Dave Letele wants a warehouse to store donated furniture for flood victims. New Zealand Herald. https://www.nzherald.co.nz/kahu/dave-letele-wants-a-warehouse-to-store-donated-furniture-for-flood-victims/ZL64V4CC2VAMXBKAULBIMOXBNI/.
Macfie R. 2023 Mar 3. Ports in the storm: how marae stepped up in the face of disaster. New Zealand Herald. https://www.nzherald.co.nz/nz/ports-in-the-storm-how-marae-stood-strong-in-the-face-of-cyclone-gabrielle/7GMHBKHJ45A73DG5DF3OOYCYJM/.
MacKinnon D, Derickson KD. 2012. From resilience to resourcefulness: a critique of resilience policy and activism. Progress in Human Geography. 37(2):253–270. doi:10.1177/0309132512454775.
Manyena SB. 2006. The concept of resilience revisited. Disasters. 30:433–450. doi:10.1111/j.0361-3666.2006.00331.x.
Matthewman S. 2015. Disasters, risks and revelation: making sense of our times. Hampshire, UK: Palgrave Macmillan.
Matthewman S, Uekusa S. 2021. Theorizing disaster communitas. Theory and Society. 50(6):965–984. doi:10.1007/s11186-021-09442-4.
McConnel G. 2023 Feb 23. Government orders inquiry into forestry slash after Cyclone Gabrielle. Stuff. https://www.stuff.co.nz/national/politics/131315345/government-orders-inquiry-into-forestry-slash-after-cyclone-gabrielle.
Meduna V. 2022. A map of the future. New Zealand Geographic Online. https://www.nzgeo.com/stories/a-map-of-the-future/.
Meggett K. 2022. How New Zealand's covid-19 strategy failed Māori people. The BMJ. 376:o180. doi:10.1136/bmj.o180.
Meng H, Xu Y, Dai J, Zhang Y, Liu B, Yang H. 2020. The psychological effect of COVID-19 on the elderly in China. Psychiatry Research. 289:112983. doi:10.1016/j.psychres.2020.112983.

Monbiot G. 2016 Apr 15. Neoliberalism – the ideology at the root of all of our problems. The Guardian. https://www.theguardian.com/books/2016/apr/15/neoliberalism-ideology-problem-george-monbiot.
Monbiot G. 2020 Mar 31. The horror films got it wrong. This virus has turned us into caring neighbours. The Guardian. http://www.theguardian.com/commentisfree/2020/mar/31/virus-neighbours-covid-19.
Morton J. 2023 Feb 23. Q&A: Cyclone Gabrielle's biggest climate lessons for NZ. New Zealand Herald. https://www.nzherald.co.nz/nz/qa-cyclone-gabrielles-biggest-climate-lessons-for-nz/7JHOAXYNQZF2FI25T6PA7S7VOI/.
Mussen D. 2011 Nov 19. Disaster lessons not learned. Stuff. https://www.stuff.co.nz/the-press/news/5996495/Disaster-lessons-not-learned.
Nadkarni A. 2020 Apr 2. New World to work with Student Volunteer Army as shopping aids for elderly, vulnerable customers. Stuff. https://www.stuff.co.nz/business/120752635/new-world-to-work-with-student-volunteer-army-as-shopping-aids-for-eldery-vulnerable-customers.
Neilson M. 2021 Oct 15. The 90% Project: How an iwi-led Covid-19 vaccination programme has achieved some of the country's highest rates. New Zealand Herald. https://www.nzherald.co.nz/nz/the-90-project-how-an-iwi-led-covid-19-vaccination-programme-has-achieved-some-of-the-countrys-highest-rates/MD3KWVZXINQOUNA6R7YV6Z2IGA/.
New Zealand First Party. 2021 Nov 22. New iwi roadblock law: Deliberate legislative separatism. Scoop. https://www.scoop.co.nz/stories/PO2111/S00204/new-iwi-roadblock-law-deliberate-legislative-separatism.htm.
Nielsen. 2021. Te Laikiri me te Whakatoihara i Aotearoa i te Urutā COVID-19: He Aro Ki Ngā Hapori Haina, Āhia Hoki. Racism and xenophobia experiences in Aotearoa New Zealand during COVID-19: a focus on Chinese and Asian communities. Wellington, New Zealand: New Zealand Human Rights Commission.
Oliver-Smith A. 2022. Critical disaster studies: the evolution of a paradigm. In: Uekusa S, Matthewman S, Glavovic B, editors. A decade of disaster experiences in Ōtautahi Christchurch: critical disaster studies perspectives. Palgrave: Singapore; p. 27–53.
Olsson L, Jerneck A, Thoren H, Persson J, O'Byrne D. 2015. Why resilience is unappealing to social science: theoretical and empirical investigations of the scientific use of resilience. Science Advances. 1(4):1–12. doi:10.1126/sciadv.1400217.
Oosterhoff B, Palmer CA, Wilson J, Shook N. 2020. Adolescents' motivations to engage in social distancing during the COVID-19 pandemic: associations with mental and social health. Journal of Adolescent Health. 67(2):179–185. doi:10.1016/j.jadohealth.2020.05.004.
Paton D, Johnston D. 2001. Disasters and communities: vulnerability, resilience and preparedness. Disaster Prevention and Management. 10(7):270–277. doi:10.1108/EUM0000000005930.
Pawson E. 2011. Environmental hazard and natural disasters. New Zealand Geographer. 67:143–147. doi:10.1111/j.1745-7939.2011.01207.x.
Peart R, Boston J, Maher S, Konlechner T. 2023. Principles and funding for managed retreat, Working paper 1. Auckland: Environmental Defence Society. https://eds.org.nz/wp-content/uploads/2022/11/Climate-Adaptation-Working-Paper-1_FINAL.pdf
Perry J. 2023 Feb 23. Slash inquiry ordered after Cyclone Gabrielle disaster. Te Ao Māori News. https://www.teaomaori.news/slash-inquiry-ordered-after-cyclone-gabrielle-disaster.
Phibbs S, Kenney C, Solomon M. 2022. Māori community response and recovery following the Canterbury Earthquake Sequence. In: Uekusa S, Matthewman S, Glavovic B, editors. A decade of disaster experiences in Ōtautahi Christchurch: critical disaster studies perspectives. Palgrave: Singapore; p. 187–210.
Pickering-Martin E. 2020. Rumours, racism, and privilege. E-Tangata. https://e-tangata.co.nz/comment-and-analysis/rumours-racism-and-privilege/.
Pickering-Martin E. 2021. Here we go again: Covid and racism. E-Tangata. https://e-tangata.co.nz/comment-and-analysis/here-we-go-again-covid-and-racism/.
Portes A. 1998. Social capital: its origins and applications in modern sociology. Annual Review of Sociology. 29(2):1–24. doi:10.1146/annurev.soc.24.1.1.

Radcliffe K. 2023 Feb 16. Castlepoint community bands together in aftermath of Cyclone Gabrielle. Stuff. https://www.stuff.co.nz/dominion-post/news/131247459/castlepoint-community-bands-together-in-aftermath-of-cyclone-gabrielle.
Rashbrook M. 2018. Inequality: a New Zealand crisis. BWB: Wellington.
Reny TT, Baretto MA. 2020. Xenophobia in the time of pandemic: othering, anti-Asian attitudes, and COVID-19. Politics, Groups and Identities. 10(2):209–232. doi:10.1080/21565503.2020.1769693.
RNZ. 2020. Iwi checkpoints credited for Te Whānau a Apanui's zero Covid-19 cases. Radio New Zealand. https://www.rnz.co.nz/news/te-manu-korihi/414986/iwi-checkpoints-credited-for-te-whanau-a-apanui-s-zero-covid-19-cases.
RNZ. 2022. Māori communities criticise lack of consultation in govt report on areas at risk of flooding. Radio New Zealand. https://www.rnz.co.nz/news/te-manu-korihi/477957/maori-communities-criticise-lack-of-consultation-in-govt-report-on-areas-at-risk-of-flooding.
Rolleston TA. 2021. Covid-19 heightens racism against Māori, Chinese – research. Radio New Zealand. https://www.rnz.co.nz/news/te-manu-korihi/436605/covid-19-heightens-racism-against-maori-chinese-research.
Schulz C. 2023. In Karekare, Muriwai and Piha, the roads are broken and people are at breaking point. The Spinoff. https://thespinoff.co.nz/society/07-03-2023/in-karekare-muriwai-and-piha-the-roads-are-broken-and-people-are-at-breaking-point.
Scotcher K. 2022. Dozens of communities at serious flood risk and unprepared – report. Radio New Zealand. https://www.rnz.co.nz/news/national/477861/dozens-of-communities-at-serious-flood-risk-and-unprepared-report.
Small Z. 2021 Dec 7. ACT leader David Seymour, National's Christopher Luxon oppose police-led iwi COVID-19 checkpoints. Newshub. https://www.newshub.co.nz/home/politics/2021/12/act-leader-david-seymour-national-s-christopher-luxon-oppose-police-led-iwi-covid-19-checkpoints.html.
Stewart E. 2023 May 1. 'Our tīpuna knew when to move' - the difficult conversations about managed retreat for Māori. RNZ. https://www.rnz.co.nz/news/in-depth/489011/our-tipuna-knew-when-to-move-the-difficult-conversations-about-managed-retreat-for-maori.
Steyn N, Binny RN, Hannah K, Hendy SC, James A, Kukutai T, Lustig A, McLeod M, Plank M, Ridings K, Sporle A. 2020. Estimated inequities in COVID-19 infection fatality rates by ethnicity for Aotearoa New Zealand. Preprint, Medrxiv. doi:10.1101/2020.04.20.20073437.
Stuff. 2016 Aug 15. Christchurch dilemmas: Christchurch's mental health crisis. Stuff. https://www.stuff.co.nz/national/health/83124349/christchurch-dilemmas-christchurchs-mental-health-crisis.
Te Tari Taiwhenua/Internal Affairs. 2022 Aug. Report: vulnerable communities exposed to flood hazard. https://www.dia.govt.nz/diawebsite.nsf/Files/Proactive-releases/$file/Vulnerable-Communities-Exposed-to-Flood-Hazard-August-2022.pdf.
Tierney K. 2014. The social roots of risk: producing disasters, promoting resilience. Stanford, CA: Stanford University Press.
Tierney K. 2015. Resilience and the neoliberal project: discourses, critiques, practices – and Katrina. American Behavioral Scientist. 59(10):1327–1342. doi:10.1177/0002764215591187.
Truebridge N. 2017 May 7. Community behind Lyttelton's post-earthquake comeback. Stuff. https://www.stuff.co.nz/the-press/news/92250188/community-behind-lytteltons-postearthquake-comeback.
Trueman N. 2020. Disrupting neoliberal narratives: millennial experiences of work in New Zealand [MA thesis]. Massey University.
Uekusa S. 2018. Rethinking resilience: Bourdieu's contribution to disaster research. Resilience: International Politics, Practices and Discourses. 6(3):181–195.
Uekusa S, Cretney R. 2022. Rethinking community resilience: critical reflections on the 10 years of the Ōtautahi Christchurch recovery and on-going disasters. In: Uekusa S, Matthewman S, Glavovic B, editors. A decade of disaster experiences in Ōtautahi Christchurch: Critical Disaster Studies perspectives. Palgrave: Singapore; p. 125–141.

Uekusa S, Matthewman S. 2017. Vulnerable and resilient? Immigrants and refugees in the 2010-2011 Canterbury and Tohoku disasters. International Journal of Disaster Risk Reduction. 22:355–361. doi:10.1016/j.ijdrr.2017.02.006.

Uekusa S, Matthewman S. 2022. The limits of resilience: a discussion from the perspectives of critical disaster studies. Australasian Journal of Disaster and Trauma Studies. 26(3):117–130.

Uekusa S, Matthewman S, Glavovic B, editors. 2022a. A decade of disaster experiences in Ōtautahi Christchurch: critical disaster studies perspectives. Singapore: Palgrave.

Uekusa S, Matthewman S, Lorenz DF. 2022b. Conceptualising disaster social capital: what it is, why it matters, and how it can be enhanced. Disasters. 46(1):56–79. doi:10.1111/disa.12470.

UNISDR. 2009. 2009 UNISDR terminology on disaster risk reduction. Geneva. https://www.preventionweb.net/files/7817_UNISDRTerminologyEnglish.pdf.

Wisner B, Blaikie P, Cannon T, Davis I. 2004. At risk: natural hazards, people's vulnerability and disasters. London: Routledge.

Wynn K. 2021 Sept 8. Coronavirus Covid-19 Delta lockdown: couple provide 1000 home cooked meals to isolated elderly. New Zealand Herald. https://www.nzherald.co.nz/kahu/coronavirus-covid-19-delta-lockdown-couple-provide-1000-home-cooked-meals-to-isolated-elderly/O5ZUVRBVQWUVVRR2IVZ4YPLM4I/.

Wynyard M. 2019. Not one more bloody acre: land restitution and the Treaty of Waitangi settlement process in Aotearoa New Zealand. Land. 8(11):162. doi:10.3390/land8110162.