

Guide to Disaster Recovery Capitals (ReCap)



Australian edition

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ReCap is a collaboration across Australia and Aotearoa New Zealand. We acknowledge the Traditional Owners of the lands on which we live and work, and pay our respects to the cultures, Country and Elders past and present of Aboriginal and Torres Strait Islander peoples across Australia. We also acknowledge Māori as tangata whenua of Aotearoa New Zealand. The ReCap project has been deeply enhanced by contributions of Indigenous team members and partners across both countries. We recognise the continuing connection to land, waters, culture and community of Indigenous peoples and the role this plays in disaster recovery.

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Contact:

Please direct any enquiries or comments regarding this resource to Phoebe Quinn: (03) 8344 3097, phoebeq@unimelb.edu.au or info-beyondbushfires@unimelb.edu.au.

Further project information:

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



Further work from the teams leading the ReCap project:

beyondbushfires.org.au
disasters.massey.ac.nz

Illustrations by Oslo Davis, a Melbourne-based illustrator and artist who makes art for publications and projects worldwide. oslodavis.com

Artwork on page seven and icons by Frances Belle Parker, a Yaegl woman and artist from Maclean NSW. dyindadesigns.com.au

Diagram on page three by Emily Campbell, with icons by Frances Belle Parker.

Design and layout by Alana Pirrone, a Design and Data Visualisation Consultant. Alana is the Design and Communications Coordinator for Child and Community Wellbeing Unit at The University of Melbourne. She specialises in data visualisation for knowledge translation. alanapirrone.com.au



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About this resource

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

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

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

How is it structured?

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

The recovery capitals are deeply interrelated, so you will find information relevant to each capital throughout the document, and some recurring themes.

Icons after each statement of 'what we know' illustrate some of the links between the capitals.

The statements of '**what we know**' summarise academic evidence, but they do not represent all evidence and knowledge on each capital. These statements are accompanied by prompts to **consider** in supporting recovery.

Applying the resource to practice

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

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

There are existing resources that may assist you to decide what to do in response to the insights and considerations raised in this resource, such as the Australian Institute for Disaster Resilience [Community Recovery Handbook](#).

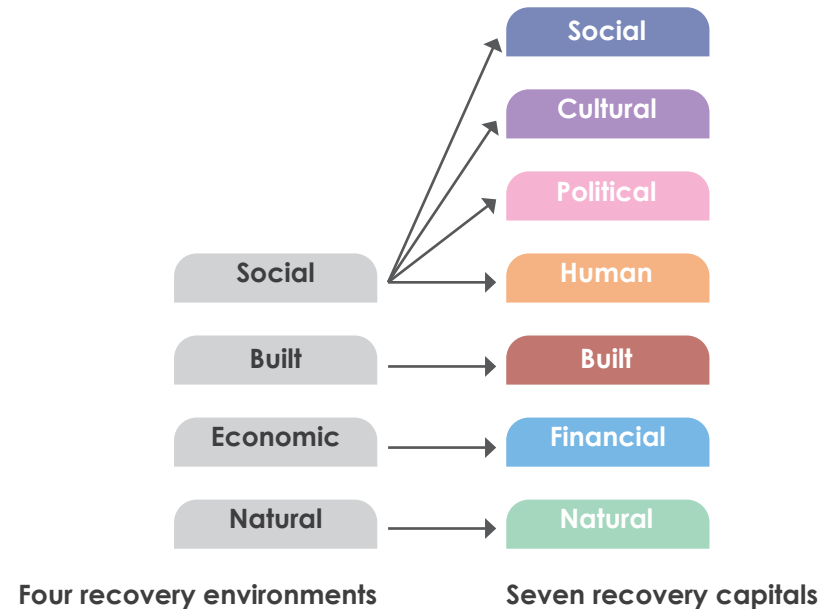
More ReCap resources and suggestions for using the guide can be found at recoverycapitals.org.au.



ReCap and the four recovery environments

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

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



The ReCap Framework

Community capitals framework

ReCap uses an adapted version of the Community Capitals Framework which was originally outlined in the context of community development¹. It consists of seven capitals – natural, social, financial, cultural, built, political, and human. Definitions of each of the seven community capitals have been developed based on literature and consultation with project end-users to create the Recovery Capitals Framework for disaster contexts, as presented in this resource.

Recovery capitals

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

Capitals are traditionally defined as resources that can be used to generate more or new resources. However, it is important to define how these capitals can support recovery² because it is not always the case that more capitals bring more benefits.

Within the Recovery Capitals Framework, capitals are defined as resources that can be maintained, increased and drawn upon to support wellbeing.

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

What is recovery?

Put simply, people and communities are recovered when they are leading a life they value living, even if it is different to life before the disaster event (as described in the [AIDR Community Recovery Handbook](#)). Within ReCap, this is understood as a complex, non-linear, multi-layered process that occurs as people and communities work to resolve the impacts of a disaster. Recovery is intertwined with disaster prevention, preparedness and response, and can provide an opportunity to improve upon pre-disaster circumstances and increase resilience.

Interconnectedness

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

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

This artwork by Frances Belle Parker highlights the particular importance of this holistic understanding for Indigenous peoples. It shows the seven recovery capitals as deeply interrelated.

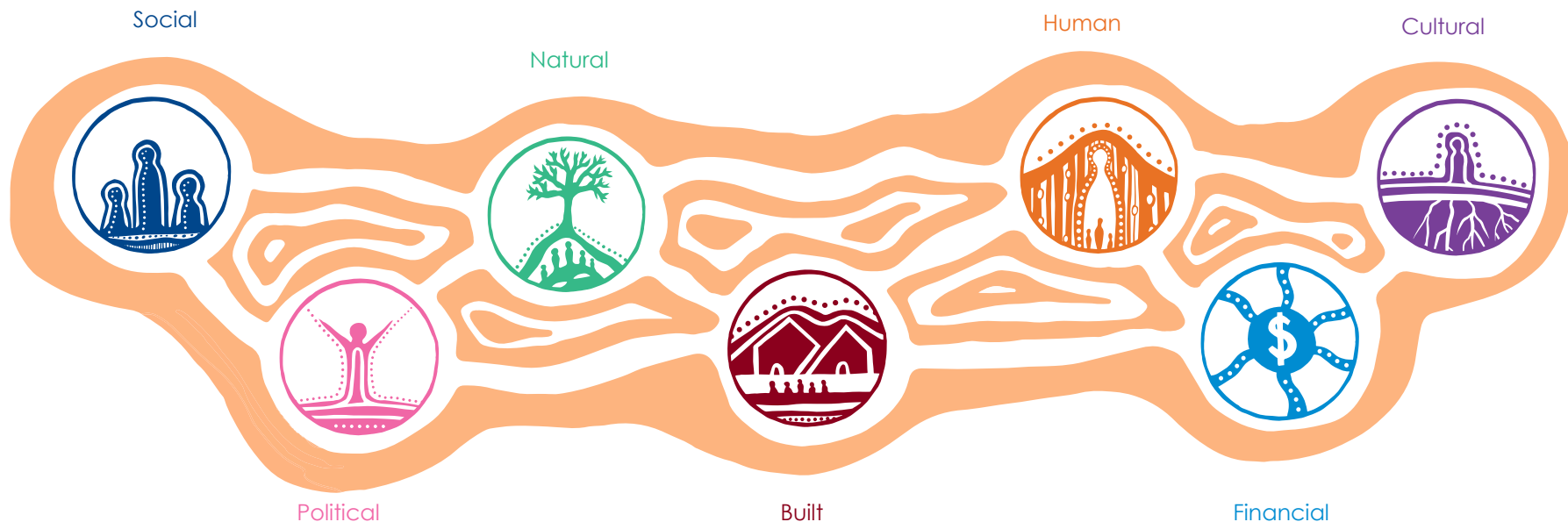
Indigenous peoples & recovery experiences

The experiences of Indigenous people have largely been overlooked in the field of disaster recovery in Australia. We are grateful to Williamson, Weir, Cavanagh and Markham for their valuable insights on this issue^{3,4} which have been included in this guide.

Few resources exist to guide recovery workers and organisations in supporting Indigenous peoples affected by disasters. The 'Recovery Capitals and Indigenous Peoples' resource aims to provide a useful starting point, and can be found at www.recoverycapitals.org.au.

A note on terminology

Much of the knowledge included in this resource regarding Indigenous peoples relates specifically to Aboriginal peoples, and in these cases the term 'Aboriginal' has been used when describing what we know. However, as this resource is intended to be applicable in all contexts within Australia, the term 'Indigenous' has been used when outlining what to consider, so as to be inclusive of Torres Strait Islander peoples.



Equity and diversity

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

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

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

Different recovery contexts

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

Multiple dimensions and levels

The Recovery Capitals Framework draws from a socioecological model⁵ to explore multiple levels and dimensions of recovery, and the interactions between them.

People, households, communities

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

We note that these distinctions between individuals and communities are based on a non-Indigenous perspective, and may not align with collectivist worldviews.

Place: Local, regional and macro scales

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

It is important to recognise that people impacted by disaster may live across a wide geographic area, and to consider those that may be left out of local or place-based approaches to community recovery.

Time: prevention, preparedness, response, recovery

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

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



Natural | key considerations

'Natural capital' refers to natural resources and beauty, and the overall health of ecosystems. This includes air, land, soil, water, minerals, energy, weather, geographic location, flora, fauna and biodiversity^{1,4}.



Connection

What we know

Many disasters damage the natural environment, causing grief for many people⁷. Others, such as pandemics, can impact mental health by restricting connection with nature^{8,9}. However, the regeneration of nature can provide solace, and connection to the natural environment has been associated with better post-disaster mental health, and wellbeing⁷⁻¹⁰. For Aboriginal peoples these experiences can be particularly profound due to the deep connections between land, culture, history, colonisation and identity^{3,4}.



Consider

- ▶ **Involve residents and groups in the co-development of local practices to restore, protect and connect with the environment and the land.**
- ▶ **Recovery approaches should be respectful of the history, culture, strengths and circumstances of affected Indigenous communities, including deep connectedness to the land. This involves enabling communities to lead their own recovery; developing respectful, trusting relationships and collaborations; and considering the significance of land, trauma, healing and resilience.**



Natural | key considerations

Climate change

What we know

There is growing evidence of the physical, psychological, and spiritual health impacts from the threat of climate change (including 'ecoanxiety' and 'solastalgia')^{11,12}. Further investigation of the interplay with disaster recovery is needed, given the importance of a sense of safety, hope and self- and community-efficacy in recovery¹³.



Consider

- ▶ **How might increasing anxiety about climate change influence people's recovery and mental health?**
- ▶ **How might people engage in climate action, adaptation and planning for future events as part of the recovery process?**

Risk and barriers

What we know

Certain features of the natural environment can increase exposure to risk, e.g. proximity to bushland or floodplains¹⁴⁻¹⁶. The natural environment can also pose barriers to recovery, e.g. lack of services in remote locations¹⁷; insurance difficulties in high-risk areas¹⁸; lack of financial resources for recovery if local industries such as tourism are highly dependent on the natural environment¹⁹.



Consider

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



Natural | key considerations

Restoration

What we know

Restoration of and reconnection with the natural environment can be a source of solace⁷⁻⁹. It can also provide other benefits including financial boost to local economies¹⁹.

For instance, conservation or rehabilitation activities may create new jobs that attract outside workers¹⁹.



Consider

- ▶ **How might local activity in industries such as tourism and agriculture be fostered? Explore opportunities to make these livelihoods more resilient and sustainable through recovery.**
- ▶ **Consult with local Traditional Owners and other communities to create diverse opportunities to protect, restore and connect with nature. Attention should be paid to appropriate engagement with places of particular significance to Indigenous peoples.**

Remaining and relocating

What we know

Connection to the natural environment is an important part of people's sense of place, and as such people may be more likely to remain in the community after a disaster event^{10,20}.

Decisions about relocation may be further complicated for Aboriginal peoples whose rights, interest and connection to Country remain specific to the disaster-affected area⁴, and who may experience negative effects of relocating including an inability to maintain proper relations with Country^{21,22}.



Consider

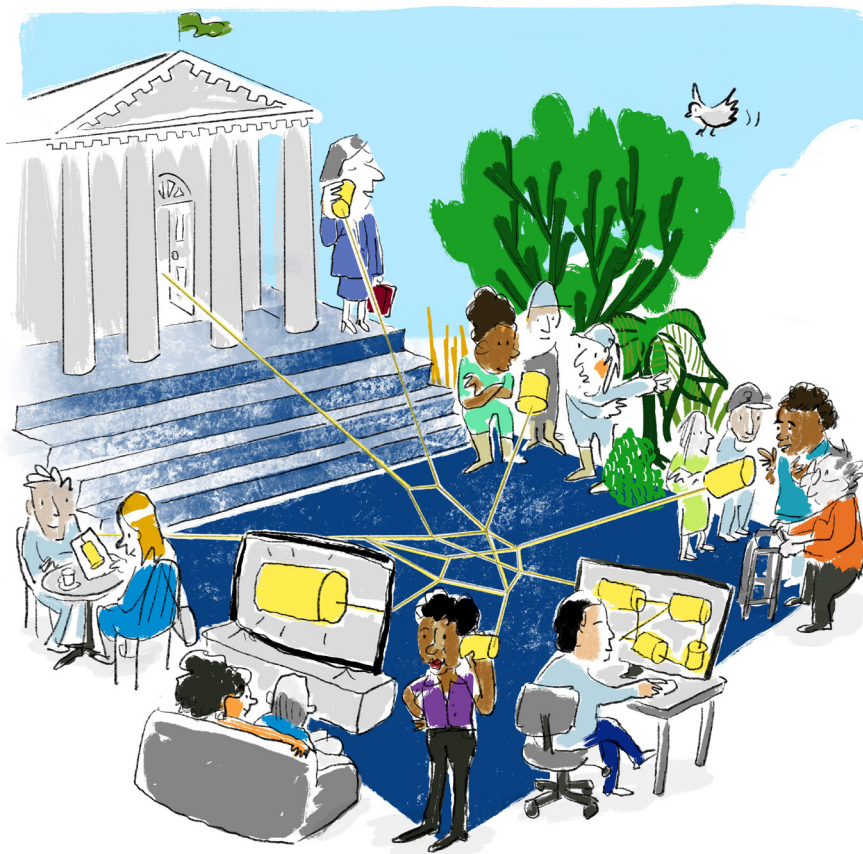
- ▶ **Restore local features (such as walks and parks) and initiate diverse and accessible opportunities to enable people to engage with the spiritual and cultural significance of nature in their lives.**
- ▶ **Prioritise supports for Indigenous peoples to remain on Country.**





Social | key considerations

'**Social capital**' refers to the connections, reciprocity and trust among people and groups. There are three types of social capital: **bonding** (strong ties between similar people, e.g. family and friends), **bridging** (looser ties between a broader range of people, often cutting across race, gender and class) and **linking** (ties connecting people with those in power, such as decision-makers)²³.



Relationships and support

What we know

Social ties matter in people's recovery – they are generally helpful, but it is complex. Family, friends and neighbours are important sources of support³⁴⁻⁴⁰, and providing support to loved ones can also support resilience^{34,41}.

People with more social relationships generally have better mental health in recovery⁴². Wellbeing may be compromised if friends and family are depressed⁴², have high property loss⁴² or leave the area following a disaster^{20,42}. Where disasters cause loss of life, the mental health impacts extend beyond the family to friends and community members, with particularly deep impacts where there are multiple deaths within a community⁴³.

Consider

- ▶ Acknowledge the support people are providing to each other.
- ▶ Provide community information sessions about post-trauma support strategies to help people take care of themselves and others.
- ▶ If appropriate, create spaces for memorials and anniversary events in which people can reflect on community members they have lost.





Social | key considerations

Community cohesion and participation

What we know

Recovery is strongly influenced by the degree of connection and participation within and between affected communities^{24,25}.

Community cohesion can facilitate cooperation, enabling communities to respond to the needs of different community members^{19,26}. Disasters can trigger shifts in community dynamics^{19,20}, with initial increases in community cohesion giving way to disagreements and tensions²⁷. Pre- and post-disaster interventions can enhance social structures within communities to support resilience and recovery²⁶, if they are culturally supportive and empowering.

Following Black Saturday, people who belonged to community organisations and groups generally had better mental health and wellbeing years after, although being involved in many groups had negative effects for some^{28,29}. Where many people belonged to community groups and organisations, benefits to mental health and wellbeing were felt throughout those local communities²⁸.

Community groups can play an important role in recovery decision-making and collective action²⁴. Having many close social bonds within a group, as is the case within many migrant and Indigenous communities^{4,30,31}, is generally a strength likely to foster resilience and recovery^{19,32}, unless there is a lack of bridging and linking capital^{24,33}.



Consider

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



Communication

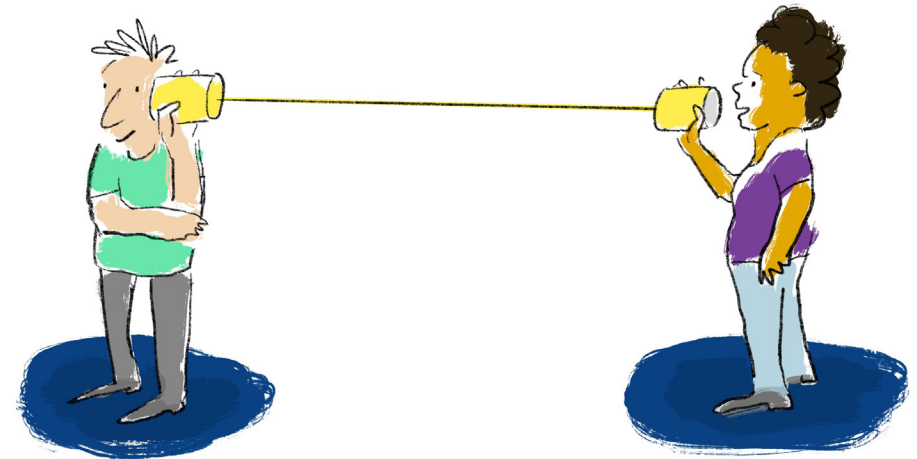
What we know

Social connections build trust and enable the flow of information, which is critical during recovery as it facilitates decision-making and access to resources^{24,29,34,44-46}. This includes connections between family, friends, neighbours, service providers, media and government. Information delivered through strong relationships and effective methods can further strengthen social capital^{26,34}, whereas weak social ties can lead to a cycle in which poor communication leads to mistrust and blame, further damaging social connections⁴⁵.



Consider

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





Social | key considerations



Inequities

What we know

Social capital is a double-edged sword – it can be a powerful engine of recovery and social progress, but it can hinder recovery and exacerbate inequities^{24,33}. For marginalised groups, trusting relationships with peers, services and advocates can be crucial⁴⁶. However, social capital can benefit those within a well-connected group at the expense of those on the outside^{24,33}. Dominant groups often mobilise to protect their own interests, which can inhibit broader recovery, shift burdens onto the less connected and entrench stigma and disadvantage^{24,46-51}.

There is evidence from the USA that poverty increases more after disasters if there is a growth in organisations that bond people who are alike together and may constrict resources to the 'in-group' (e.g. religious organisations)^{33,52}. By contrast, increases in advocacy organisations – which foster bridging and linking social capital across a broader range of people and institutions – appear to reduce poverty rates⁵².

There is also evidence suggesting that the sense of community generated by involvement in community organisations is not only linked to relationships within the organisation, but also to the outward focus and influence of the organisation⁵³.



Consider

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



Social | key considerations

Decisions: remain, relocate, return

What we know

Social networks and connection to a community can influence people's decisions about relocating or living locally after a disaster. Neighbourhoods with high levels of social capital tend to repopulate more quickly after disasters^{24,54}. Following Black Saturday, strong sense of community was a reason people chose to stay locally, while for others damaged sense of community arising from disagreements and changes to the local area led to decisions to relocate^{20,39}. After Hurricane Katrina, survivors relied on information about the plans of their neighbours, friends and store owners when deciding whether to return to New Orleans or relocate^{24,44}.

Decisions about relocation may be further complicated for Aboriginal peoples with connections to Country in the disaster-affected area^{4,21}. In addition to the ramifications for social, cultural and political life, these decisions are influenced by the distinctive nature of the formally recognised rights and interests held by Aboriginal peoples – such as native title, which cannot be bought or sold – as compared to non-Indigenous land ownership⁴.

People with disabilities may also have less choice regarding relocation due to lack of accessible housing options⁵⁵.



Consider

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

Experiences: remain, relocate, return

What we know

Relocating or living locally after a disaster is likely to alter recovery experiences, but the implications for long-term wellbeing are complex and variable. Benefits of staying locally include opportunities for community connection and discussion of shared experiences, although this can be undermined if friends and neighbours choose to leave^{20,42,56}. Those who relocate may feel guilt over this and be less socially connected in their new homes, but may benefit from stepping away from the post-disaster disruption²⁰. Their mental health may be protected if they have new neighbours who have also relocated from the same area²⁹.

Negative effects of evacuations and relocation for Aboriginal peoples include an inability to maintain proper relations with Country, disconnection from Country and family, and loss of resources, all of which occurs in the historical context of dispossession and forced relocation under settler colonialism^{21,22}.

At a community level, repopulation of disaster-affected locations is often an indicator of recovery⁵⁴, yet relocation may become necessary if there is a high risk of future disasters⁵⁷.



Consider

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



Social | key considerations

External support

What we know

Communities affected by disasters often receive support from wider society, including resources, guidance and emotional support^{26,34,24}. When this support is responsive to local needs, it generally plays a positive role in recovery^{58,59}. Communities with greater ability to draw on these external connections tend to fare better^{19,24,60,61}.



Consider

- ▶ **Identify communities that are least likely to be able to draw on connections to government and broader society and support them to advocate for their needs. Make sure this is driven by priorities identified from within communities.**

Animal-human bonds

What we know

Animals play an important role in the social and emotional lives of many people, including as companion animals seen as valued family members⁶³. These bonds are especially important in times of adversity, yet animals are often overlooked in disaster planning and response^{64,65}. Loss of companion animals can cause acute distress and also leave people without an important source of support, increasing post-disaster mental health risks⁶⁶.



Consider

- ▶ **Recognise animal-human bonds in disaster planning and recovery. Reflect on the diverse bonds that are important to different people.**
- ▶ **Ensure there are appropriate services and care for animals.**

Physical distancing

What we know

Given the importance of social connectedness in disaster recovery, physical distancing measures in response to pandemics pose challenges to recovery, especially for communities affected by multiple disasters⁶². Further evidence is needed on interventions that can maintain and build social connections in these contexts⁶².

Consider

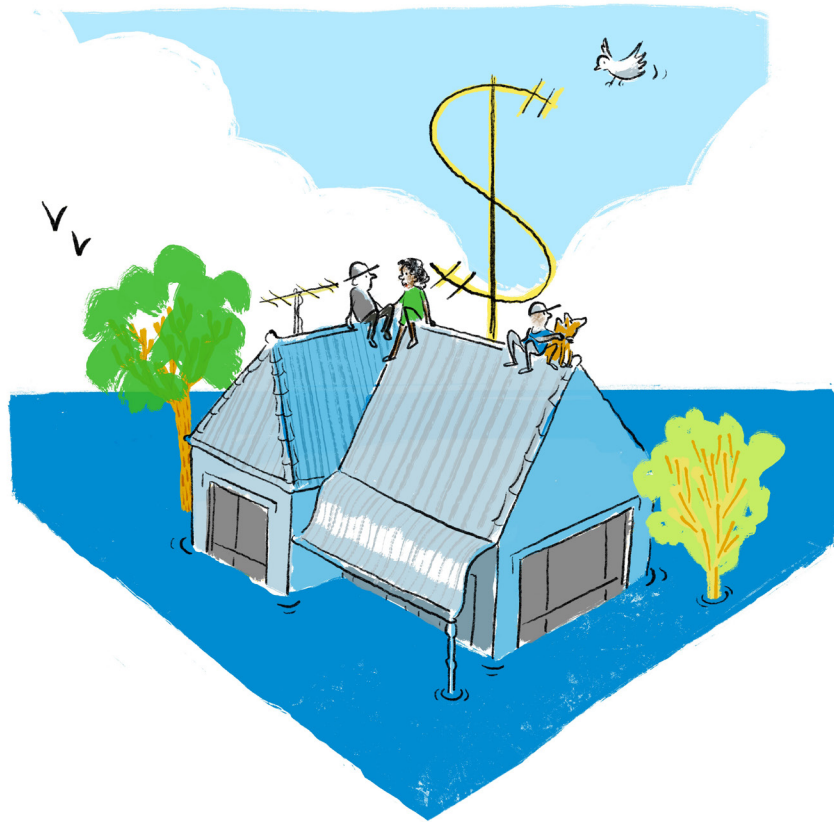
- ▶ **How can social capital be built and maintained, particularly for those most at risk of isolation, in the context of a pandemic?**





Financial | key considerations

'Financial capital' refers to the availability of and access to resources including savings, income, assets, investments, credit, insurance, grants, donations, loans, consumption and distribution of goods and services, employment and economic activity^{6,67}.



Financial strain and assistance

What we know

Financial strain after disasters may contribute to reduced wellbeing and mental health⁶⁸⁻⁷⁰ and increased risk for women to experience violence^{71,72}. It can also create disputes over funding allocation leading to community conflict²⁰.

Financial assistance from governments, charities and insurance is often helpful and necessary for people and communities to recover, yet it is not always accessible, timely and adequate^{26,59}. For example, application processes often fail to accommodate for people with disabilities, who may have urgent support needs⁵⁵. Funding opportunities often come with timing and reporting requirements for accountability purposes, yet these are often difficult for community groups to meet, which can impede community-led recovery efforts⁵⁹.

Consider

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





Financial | key considerations

Equitable funding

What we know

Distribution of funds following disasters can be inequitable^{4,75}, and perceived inequities can contribute to a negative social environment^{19,20}. People most likely to lose income include part-time and casual workers and women^{75,76}.



Consider

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

Inequities worsening

What we know

What people, communities and nations had before a disaster tends to shape what they can access afterwards^{19,50,73-75}. Income gaps often widen after disasters⁷⁵.



Consider

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





Financial | key considerations

Insurance and investments

What we know

Financial investments prior to disasters, such as insurance, can play a key role in the recovery of households, businesses and communities^{77,78}. However, access to these investments is inequitable^{79,80}, and non-insurance or underinsurance are major problems that can hinder recovery⁸¹.



Consider

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



Businesses

What we know

Businesses can be heavily impacted by disasters^{82,83}, particularly when multiple events cascade⁸⁴. This can lead to financial strain, loss of employment and training opportunities, relocation and reduced community cohesion^{83,85}. Business impact and recovery is linked to the size, capacities and sector of the business^{82,83,86,87}.



Consider

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

External ties

What we know

Significant financial resources for recovery come from outside affected communities, flowing through social and political ties²⁴. This means that financial capital at the regional or national level influences the amount of money that can flow to people and communities to support recovery.



Consider

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



Cultural | key considerations

'**Cultural capital**' refers to the way people understand and know the world, and how they act within it. It includes ethnicity, habits, language, stories, traditions, spirituality, heritage, symbols, mannerisms, preferences, attitudes, orientations, identities, norms, values, and the process and end products of cultural and artistic pursuits.^{1,6,19}

Cultural cohesion

What we know

Cultural elements that enable some communities to fare relatively well in recovery include: cultural cohesion, common narratives of shared history, sense of collective identity, shared meaning-making and cultural strategies^{30,32}. In particular, the shared histories and close ties that characterise many migrant and Indigenous communities have the potential to support resilience^{4,30,31}. However, external forces during recovery may degrade this cultural capital or inhibit its use in recovery^{4,19,31}.



Consider

- **What are the core cultural features of the affected communities? Involve community members in reflecting on this to guide recovery priorities.**



Cultural | key considerations

Inclusivity

What we know

Peoples' thoughts and actions are influenced by their culture, including those of recovery workers⁸⁸. Cultural norms and attitudes towards marginalised groups (e.g. LGBTQIA+ people^{89,90}, sex workers⁴⁶, Aboriginal peoples⁴ and people with disability⁹¹) can have negative impacts on experiences of disaster and recovery through stigma, discrimination and lack of appropriate support. These experiences can be compounded for people who belong to multiple marginalised groups⁹².



Consider

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

Gender

What we know

Gender norms influence experiences of disaster and recovery in many ways. This includes influencing decisions made during emergencies (e.g. different social expectations of women and men)⁹³⁻⁹⁵, how people behave afterwards and whether this is accepted (including violence and aggression)^{71,72}, and whether people seek support⁷².



Consider

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



Cultural | key considerations

Indigenous knowledges

What we know

The knowledge, values and cultural practices of Indigenous peoples around the world can be highly valuable in disaster preparedness, response and recovery^{21,31,58}. However, this value is often not fully recognised, appreciated or drawn upon in mainstream emergency management⁴, in part because it might not align with top-down, national or state-wide approaches^{31,58}.

In Australia, there is growing interest in the value of cultural burning and traditional ecological knowledge in bushfire risk reduction. Yet Aboriginal voices have largely been ignored in broader discussions of resilience and recovery, despite the depth of knowledge within Aboriginal communities about strength, resilience and living with Country^{4,21}.



Consider

- ▶ **Establish authentic relationships of partnership with Indigenous peoples as valued and equal recovery decision-makers. Also establish formal mechanisms for engagement, if appropriate.**
- ▶ **How can recovery be enhanced by listening to Indigenous peoples' experiences and deep knowledge of resilience, healing and how to live with Country?**

Attitudes towards loss

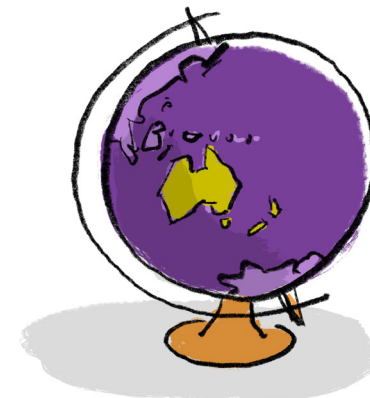
What we know

Cultural norms and attitudes towards disasters, loss and support shape people's experiences of recovery. This includes how people express their experiences, and how others respond^{31,38}. People may experience grief over the loss of community members⁴³, animals^{65,96} and the natural environment^{4,7} – for example, Aboriginal peoples may experience the loss of a particular tree as a family loss⁴.



Consider

- ▶ **It is important to recognise a variety of relationships and losses. What supports can be provided to help people to cope with losses that are meaningful for them?**
- ▶ **If appropriate, create spaces for memorials and anniversary events in which people can acknowledge and reflect on their losses.**





Cultural | key considerations

Connection to nature

What we know

Cultural and spiritual meanings are often attached to nature, such that changes to the natural environment following disasters have implications for mental health and wellbeing^{7,10}. For Aboriginal peoples, these experiences can be particularly profound due to the deep connections between land, culture, history, colonisation and identity^{3,4}.



Consider

- ▶ **Restore local features that enable people to connect to the natural environment (such as walks and parks), and initiate diverse opportunities to enable people to engage with the spiritual and cultural significance of nature in their lives.**
- ▶ **Recovery approaches should be respectful of the history, culture, strengths and circumstances of affected Indigenous communities, including deep connectedness to the land. This involves enabling each community to lead their own recovery; developing respectful, trusting relationships and collaborations; and considering the significance of connection to Country, trauma, healing and resilience.**

Creative pursuits

What we know

For many people, engagement in artistic, creative and cultural pursuits is an important part of healing, self-expression and growth after disasters^{97,98}. Creative pursuits can provide opportunities for personal reflection, social connection and the sharing of experiences⁹⁷. They can also be a means of revitalising a sense of place and community, as occurred through community-initiated art installations in empty urban spaces after the 2011 Christchurch earthquakes⁹⁹.



Consider

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



Political | key considerations

'Political capital' refers to the power to influence decision-making in relation to resource access and distribution, and the ability to engage external entities to achieve local goals^{1,6,19}. It includes agency, voice, justice, equity, inclusion, legislation, regulation, governance, leadership and policy. It applies within and between groups and exists both formally and informally.



Power and voice

What we know

Power is not distributed equally within and between communities during recovery^{19,60,61}. Decisions are often made for and by those with the most voice and agency, which can have negative impacts on marginalised groups^{4,46,72,80,100}.



Consider

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



Political | key considerations

Community-led recovery

What we know

Community participation, agency and knowledge – including that of Indigenous peoples – are highly valuable in disaster resilience and recovery^{19,26,31,101}. Recovery outcomes are best when community capacity and local decision-making is complemented and supported (rather than overpowered) by external groups or agencies^{58,59,102}.



Consider

- ▶ To what extent are recovery strategies being guided by local decision-makers and adapted to local contexts?
- ▶ To ensure external pressures do not override local interests, work closely with local government, businesses, services, Indigenous organisations and community groups.

- ▶ Support community initiatives and build local capacity where possible, but be open to bringing in external resources such as administrative assistance in applying for funds.
- ▶ What processes and structures are needed to support community participation in decision-making? Consider factors that may inhibit participation by some groups (e.g. need for childcare, transport, flexible meeting times, and accessibility for people with disability).
- ▶ Resist pressure to make quick decisions on behalf of communities – give communities time to re-gather and build their capacity to lead recovery.
- ▶ Ensure that people and groups who are not typically involved in local decision making are given opportunities to contribute to community recovery and to be decision-makers in their own recovery

Indigenous peoples

What we know

The voices of Aboriginal peoples have largely been ignored following disasters in Australia, resulting in recovery strategies that do not consider the historical, political and cultural contexts that shape Aboriginal peoples' experiences – including ongoing colonisation and discrimination. Yet Aboriginal communities are also characterised by resilience, shared identities and close social bonds.

There is developing knowledge of the ways in which recovery of Aboriginal peoples and the broader community may be enhanced by these strengths⁴.



Consider

- ▶ How have Indigenous peoples been impacted by this disaster? Consider residents, distinct communities and legal rights and interest in the land as First Peoples. Consider also the deep connections between land, culture, history, colonisation and identity.
- ▶ Develop and maintain strong working relationships with local Indigenous organisations. Be guided by these organisations and Elders to centre Indigenous peoples' voices in developing recovery strategies that minimise the risks of exacerbating existing trauma and vulnerability. Strategies should recognise and build on the strength and resilience of Indigenous communities.



Political | key considerations

External support

What we know

Communities affected by disasters often receive support from broader society, including resources, guidance and emotional support^{26,34,40}. When this support is responsive to local needs it generally plays a positive role in recovery^{58,59}. Communities with greater ability to draw on external connections tend to fare better^{19,24,60,61}.



Consider

- ▶ **Identify and support the communities that are least likely to be able to draw on connections to government and broader society and advocate for their needs.**
- ▶ **Collaborate with community members to explore connections they may have that could be helpful in bringing additional resources into the community.**
- ▶ **Establish a multi-year framework for recovery from major disasters to support short- and long-term recovery.**

Policies and regulations

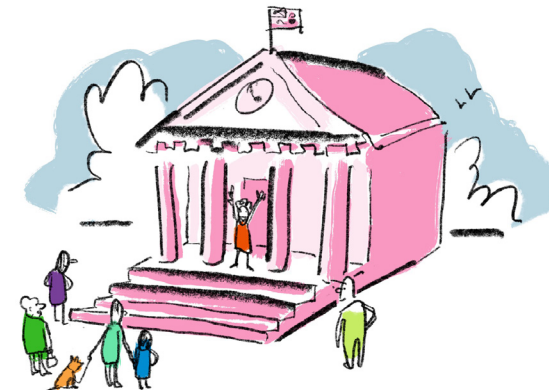
What we know

Policies and regulations, and their implementation, can shape disaster risk and recovery^{46,75,108,109}. In turn, disasters can influence the regulatory environment, and while these changes may increase resilience^{18,108,110,111}, they may also create problems in recovery. For example, stricter building codes introduced after Black Saturday raised the cost of rebuilding, resulting in shortfalls in insurance payouts and higher ongoing premiums^{79,81} which led to community backlash¹¹².



Consider

- ▶ **Stay up to date with changes in policies and regulations affecting recovery processes.**





Political | key considerations

Influencing knowledge

What we know

Political agendas, public attention and power dynamics can influence what knowledge is produced and accepted after disasters. This in turn can influence policy reform and changes to practice^{4,103,104}. The way research and formal enquiries are set up shapes which voices are heard, and what is recommended^{4,105-107}.



Consider

- ▶ **Political and social backlash are common in the post-disaster context. Tread carefully with your words and actions and keep focused on your main goal.**
- ▶ **Be aware that depictions in mainstream media do not always represent an accurate picture, particularly in regards to cultural knowledge and understanding. Draw on your own communication channels to confirm situational information.**

Leadership

What we know

Strong and adaptable leaders can help to access external resources, encourage innovation, support community mental health and foster cooperation within and between communities^{19,28,113}. Training and supporting leaders before and after disasters may build these attributes, with benefits to the community as well as the wellbeing of those in leadership roles^{28,59,114-116}.



Consider

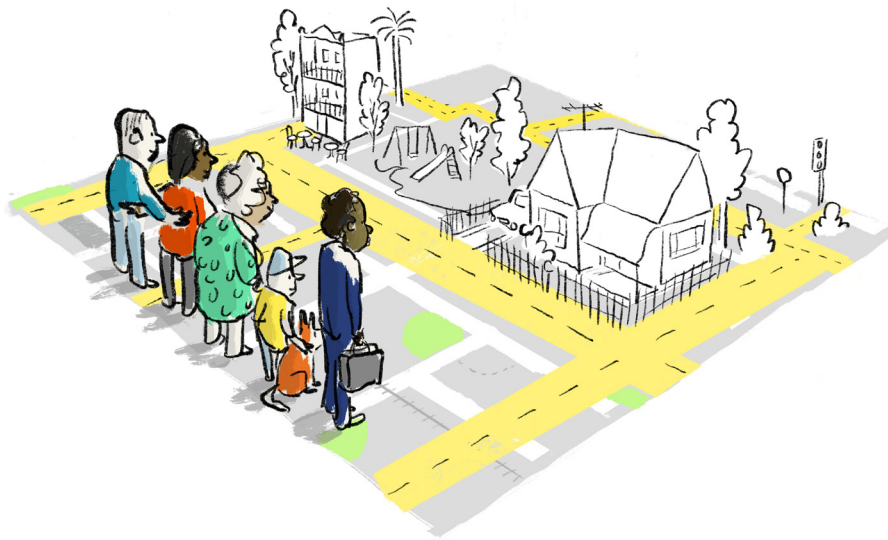
- ▶ **Provide leadership training and support, both pre-event and post-event.**
- ▶ **Link local leaders to people with previous experience leading community disaster recovery, for mentoring and support.**





Built | key considerations

'Built capital' refers to the design, building and maintenance of physical infrastructure, including its functional and aesthetic value. This includes critical facilities and services, housing, vehicles, equipment, information technology, communications, water and energy infrastructure¹.



Community infrastructure

What we know

Physical infrastructure can be crucial to preparedness, response and recovery (including telecommunications and transport)^{58,124,125}. Public gathering spaces are important to the social and economic function of local communities. Disasters can undermine this through physical damage or, in case of pandemics, closure of facilities, with negative impacts on wellbeing^{42,69,117}, sense of community²⁰, financial security^{38,69} and business viability^{19,38}.



Consider

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



Rebuilding appropriately

What we know

Rebuilding is an important part of recovery from disasters that damage property, allowing those affected by disasters to re-establish routines, sense of place and identity^{26,34,39}. Rebuilding can also foster community resilience and enable economic activity, which in turn provides resources for further recovery¹⁹.

However, decisions and uncertainties about rebuilding shared spaces can be major stressors after disasters⁶⁹, and disagreements about rebuilding can damage the social environment²⁰. A range of strategies can enhance these processes, including effective community consultation and allowing time for reflection before making less urgent decisions¹⁰².

Inaccessible housing is a barrier to recovery for people with disabilities⁵⁵. Poorly designed housing and accommodation arrangements can disrupt social connectedness and lead to isolation⁵⁴. By contrast, new or temporary accommodation arrangements can foster social connectedness if they enable people from the same area to live near each other⁵⁴.

Consider

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





Built | key considerations



Remaining and relocating

What we know

Choosing to live locally or relocate elsewhere is likely to alter the recovery experience, but not necessarily long-term personal wellbeing²⁰.

After Black Saturday, sense of community was enhanced for some by the shared processing of the disaster experience and rebuilding, and this supported wellbeing. For others, sense of community was lost through damage to property, disruption and disharmony, and they were more likely to leave. They had fewer opportunities to process the disaster, but benefited from being removed from the ongoing disruptions and challenges in a bushfire-affected community²⁰.

Decisions about relocation may be further complicated for Aboriginal peoples whose rights, interest and connection to Country remain specific to the disaster-affected area^{4,21}.

People with disabilities may also have less choice regarding relocation due to lack of accessible housing options⁵⁵.

Consider

- ▶ Provide information to people facing decisions about remaining or relocating about the sorts of stressors and benefits they are likely to face in each scenario.
- ▶ Recovery support packages (and case support worker approaches) should be tailored to match the stressors that people are likely to face based on whether they are staying locally or relocating.
- ▶ Prioritise supports for Indigenous peoples to remain on Country.
- ▶ Explore support services and building adjustments for people with disabilities facing limited accessible housing options.





Built | key considerations

Risk and resilience

What we know

The location, density and design of buildings influence risk from hazards such as floods, fires, earthquakes and pandemics^{14,15,118}, including health risks¹¹⁹ and financial impacts^{78,82}. The design of housing, emergency shelters and other buildings is often not inclusive of people with disabilities^{55,120}. Planning and building regulations can reduce these risks¹⁸, but this can also create problems in recovery by raising the cost of rebuilding, resulting in shortfalls in insurance payouts and higher ongoing premiums^{79,81}.



Consider

- ▶ **What risks might communities face in the future? Consider resilience to future emergencies when making rebuilding decisions.**
- ▶ **Prioritise accessibility and inclusion in rebuilding, involving people with disabilities in risk reduction and recovery decision-making.**

Homelessness

What we know

People experiencing homelessness face increased risk from disasters and barriers to recovery, and disasters can result in short and long term homelessness¹²¹. Despite this, people experiencing homelessness are often not considered in recovery policy and practice^{122,123}.



Consider

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





Human | key considerations

'Human capital' refers to people's skills and capabilities, including the ability to access resources and knowledge⁶⁷. It includes education, physical and mental health, physical ability, knowledge from lived experience and leadership capabilities.



Supporting others

What we know

Adults and children use various coping strategies following disasters, and being able to help others can be particularly helpful to recovery^{34,41}. People provide practical and emotional support to others in many ways, drawing on a diverse set of capabilities. For example, following Hurricane Sandy, volunteers who had already been experiencing homelessness played a valuable role in supporting the disaster-affected community¹²⁷.



Consider

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



Human | key considerations

Skills and livelihoods

What we know

Employment sector and status influence how people are affected by disasters. People are more likely to face reduced income if their employment is part-time, low-paying, in particular fields⁷⁵, and if they are women⁷⁶. Those working in agriculture, accommodation and food services are generally hit hardest, while income can even increase in some sectors⁷⁵. Community level impacts also vary based the industries that make up the local economy⁸².



Consider

- ▶ **Who is most likely to lose work or income? How can this be mitigated? Consider supporting people to transfer their skills or retrain for roles in another sector.**
- ▶ **Recovery funding and economic initiatives should focus on those that are likely to lose income and on heavily impacted businesses and sectors.**

Recovery workforce

What we know

The recovery workforce must be assembled very quickly following a disaster. The increased demand means that staff and volunteers do not always have the knowledge and skills that they need, which can negatively impact the wellbeing of those in need of support¹²⁸.

The wellbeing of service providers themselves is also undermined when demands exceed what they are able to meet^{35,129,130}. Disaster recovery support roles can be fulfilling but they can also be challenging and stressful. Workers and volunteers may face increased mental health risks, particularly if they have also been personally impacted by disaster and if training and support are inadequate¹³¹⁻¹³³. Planning and coordination by organisations and governments are crucial in meeting these workforce demands, and in all aspects of recovery^{58,107}.



Consider

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



Human | key considerations

Local capabilities

What we know

Knowledge and capacity within disaster-affected communities influence recovery experiences. Experience of previous disasters or adversity can build this knowledge and recovery capacity, although lessons can also be misapplied if they do not consider the unique characteristics and circumstances of the event at hand^{127,134–139}. Multiple disasters that occur in quick succession may have amplified impacts¹⁴⁰ and undermine community recovery capacity.



Consider

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

Vulnerability

What we know

Certain demographic factors are linked with vulnerability to disasters, including: age, gender, race, cultural and linguistic background, health, disability, education, household composition and housing status^{50,74,135,141}. These factors intersect in complex ways for people who belong to multiple groups positioned as 'vulnerable'⁹².

Vulnerability is largely caused by social and financial disadvantage, and policies, messaging and practices that overlook some people's circumstances, capabilities and needs^{4,50,80}.



Consider

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





Human | key considerations

Leadership

What we know

Strong and adaptable leaders can help to access external resources, encourage innovation, support mental health and foster cooperation within and between communities^{19,28,113}. Training and supporting leaders before and after disasters may build these attributes, with benefits to communities as well as the wellbeing of those in leadership roles^{28,59,114-116}.



Consider

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



Education

What we know

Disasters can be disruptive to education, with long term impacts on school attendance and academic performance^{142,143}. School communities play an important role in supporting children and families after disasters, but educators and staff are likely to require support to cope with these additional demands^{144,145}.



Consider

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

Capitals icons – artist descriptions

These descriptions from Yaegl artist Frances Belle Parker explain how she has interpreted the seven recovery capitals in creating the icons used in this guide, with input from Euahlayi man Bhiemie Williamson.

The icons also feature in the 'Indigenous Peoples and Recovery Capitals' resource, available at www.recoverycapitals.org.au



Natural Capital Icon

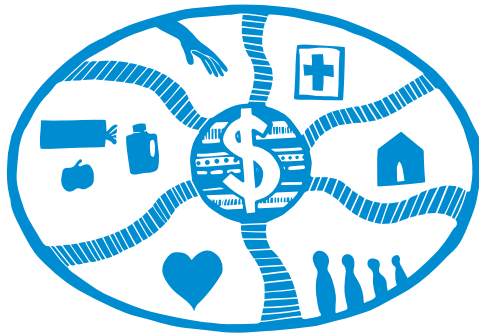
Connection with Country is pivotal for all Indigenous people. We have an underlying knowledge in regards to caring for Country. The symbolism used in this icon depicts a tree at the top of a hill, the knowledge and stories held by nature is one which Indigenous people have acknowledged and respected for years. Underneath the tree, protected by the roots are the people and these people are the caretakers, the knowledge holders, the storytellers. The markings represent our Indigenous stories and Songlines, and the generations of our Indigenous people who have a deep spiritual connection and a responsibility to care for the land and its resources.



Social Capital Icon

Social and Emotional Wellbeing is portrayed in the Social Capital Icon. To ensure we are looking after our social and emotional wellbeing we need to connect from within. The image features three figures which depict connecting with others. The dots show the individual journey for each as well as a shared journey. The linear markings show the bond within Indigenous communities and a sense of resilience enabling us to get through anything.

Capitals icons – artist descriptions



Financial Capital Icon

Diverse economies are symbolised through the Financial Capital icon. The icon features a dollar sign at the centre which shows an outreach for all other elements which may be affected during disaster relief. The other elements represent those that may be required during times of need such as access to health, shelter, family assistance, relationships, food and outreach. The linear markings depict the pathways provided for equal access to services. During times of disaster relief, people pitch in to help, making sure no one goes without.



Cultural Capital Icon

The Cultural Capital Icon represents the connection between nature and people, as Indigenous people our stories are embedded in the landscape. Just as tree roots grow deeply, we as the First Nations people, our roots and sense of belonging as a person are also embedded into the lands of our ancestors. We feel pain when we lose a piece of our culture such as a scarred tree, or a place, animal or plant from our creation stories. The tree and the figure are connected, not just on the surface but also below.

Capitals icons – artist descriptions



Political Capital Icon

Self-determination is the symbolism for political capital. Indigenous people have continued to grow and gain strength through our own self-determination and leadership. This is despite the historical and ongoing oppression of our people. We will continue to strengthen our self-determination and thrive in who we are, advocating for the many whose voices aren't heard, fighting for justice and inclusion. The icon shows a figure standing up, taking a leadership position. The linear marks represent the adversities we have had to overcome throughout the years. The dots represent the journey we are on as Indigenous people, finding and taking hold of our own self-determination.



Built Capital Icon

As Archie Roach says 'The spirit's in the land'. As Indigenous peoples, we are resilient, adapting to our environment, built or natural.

This icon shows shapes that represent the built environment; under these shapes are figures of people within the community. It is these people who help establish that sense of belonging – we say a home is made up by the people in it and not the building itself. The linear marks at the bottom offer a broad concept in regards to other built infrastructure, e.g. water, roads. The dots represent our journey as Indigenous people, navigating our way through the processes involved.

Capitals icons – artist descriptions



Human Capital Icon

Our underlying Indigenous knowledge and connections with each other make up a large portion of our identity and is one of our greatest strengths. The large figure represents the Elder who is the knowledge holder. The three smaller figures represent the passing on of that knowledge to future generations. The linear markings represent the bloodlines of the people. Our bloodlines are symbolic of our connection to place. There is a focus on the strengths of Indigenous people, our resilience, our way of healing and our practice and knowledge of caring for country.

References

1. Emery M, Fey S, Flora C. Using community capitals to develop assets for positive community change. *CD Practice*. 2006;13:1–19.
2. García Cartagena M. Community resilience, capitals, and power relations: stories from the Waimakariri District about the aftermath of the 2010–2011 Canterbury Earthquakes in New Zealand: a thesis presented in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Resource and Environmental Planning. Massey University, Manawatu, New Zealand; 2019.
3. Williamson B, Weir J, Cavanagh V. Strength from perpetual grief: how Aboriginal people experience the bushfire crisis. *The Conversation*. 2020;
4. Williamson B, Markham F, Weir J. Aboriginal peoples and the response to the 2019–2020 bushfires, Working Paper No. 134/2020. Centre for Aboriginal Economic Policy Research, Australian National University, Canberra; 2020.
5. Bronfenbrenner U. The ecology of developmental processes. In: Damon W, Lerner RM, editors. *Handbook of Child Psychology: Vol 1: Theoretical Models of Human Development*. New York: Wiley; 1998. p. 993–1028.
6. Jacobs C. Measuring success in communities: The community capitals framework. 2011;
7. Block K, Molyneaux R, Gibbs L, Alkemade N, Baker E, MacDougall C, et al. The role of the natural environment in disaster recovery: "We live here because we love the bush". *Health & Place*. 2019 May 1;57:61–9.
8. Zabini F, Albanese L, Becheri FR, Gavazzi G, Giganti F, Giovanelli F, et al. Comparative study of the restorative effects of forest and urban videos during COVID-19 lockdown: Intrinsic and benchmark values. *International Journal of Environmental Research and Public Health*. 2020;17(21):8011.
9. Pouso S, Borja Á, Fleming LE, Gómez-Baggethun E, White MP, Uyarra MC. Contact with blue-green spaces during the COVID-19 pandemic lockdown beneficial for mental health. *Science of The Total Environment*. 2021;756:143984.
10. Boon HJ. Disaster resilience in a flood-impacted rural Australian town. *Natural Hazards*. 2014 Mar;71(1):683–701.
11. Berry HL, Bowen K, Kjellstrom T. Climate change and mental health: a causal pathways framework. *International journal of public health*. 2010;55(2):123–32.
12. Hayes K, Blashki G, Wiseman J, Burke S, Reifels L. Climate change and mental health: Risks, impacts and priority actions. *International journal of mental health systems*. 2018;12(1):28.
13. Hobfoll SE, Watson P, Bell CC, Bryant RA, Brymer MJ, Friedman MJ, et al. Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry*. 2007;70(4):283–315.
14. Syphard AD, Keeley JE, Massada AB, Brennan TJ, Radeloff VC. Housing arrangement and location determine the likelihood of housing loss due to wildfire. *PLoS ONE*. 2012 Mar 28;7(3).
15. Crompton RP, McAneney KJ, Chen K, Pielke RA, Haynes K. Influence of location, population, and climate on building damage and fatalities due to Australian bushfire: 1925–2009. *Weather, Climate, and Society*. 2010 Oct;2(4):300–10.
16. Wenger C. Building walls around flood problems: The place of levees in Australian flood management. Vol. 19, *Australian Journal of Water Resources*. 2015. p. 3–30.
17. Sorensen T, Epps R. An overview of economy and society. *Prospects and Policies for Rural Australia*, Longman Cheshire, Melbourne. 1993;7–32.
18. van den Honert RC, McAneney J. The 2011 Brisbane Floods: Causes, Impacts and Implications. *Water*. 2011 Dec 9;3(4):1149–73.
19. Himes-Cornell A, Ormond C, Hoelting K, Ban NC, Zachary Koehn J, Allison EH, et al. Factors Affecting Disaster Preparedness, Response, and Recovery Using the Community Capitals Framework. *Coastal Management*. 2018 Sep 3;46(5):335–58.
20. Gibbs L, Gallagher HC, Block K, Snowdon E, Bryant R, Harms L, et al. Post-bushfire relocation decision-making and personal wellbeing: A case study from Victoria, Australia. In: Adenrele Awotona, editor. *Planning for Community-based Disaster Resilience Worldwide: Learning from Case Studies in Six Continents*. London and New York: Routledge; 2016. p. 333–56.
21. Thomassin A, Neale T, Weir JK. The natural hazard sector's engagement with Indigenous peoples: a critical review of CANZUS countries. *Geographical research*. 2019;57(2):164–77.
22. Zander KK, Petheram L, Garnett ST. Stay or leave? Potential climate change adaptation strategies among Aboriginal people in coastal communities in northern Australia. *Natural Hazards*. 2013;67(2):591–609.
23. Szreter S, Woolcock M. Health by association? Social capital, social theory, and the political economy of public health. *International Journal of Epidemiology*. 2004;33(4):650–67.
24. Aldrich DP. *Building resilience: Social capital in post-disaster recovery*. Chicago: University of Chicago Press; 2012. 232 p.
25. Townshend I, Awosoga O, Kulig J, Fan H. Social cohesion and resilience across communities that have experienced a disaster. *Natural Hazards*. 2015;76(2):913–38.
26. Van Kessel, G., Gibbs, L., & MacDougall C. Strategies to enhance resilience post-natural disaster: a qualitative study of experiences with Australian floods and fires. *Journal of Public Health*. 2014;37(2):328–36.
27. Kaniasty K. Predicting social psychological well-being following trauma: The role of postdisaster social support. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2012;4(1):22–33.
28. Gallagher C, Block K, Gibbs L, Forbes D, Lusher D, Molyneaux R, et al. The effect of group involvement on post-disaster mental health: A longitudinal multilevel analysis. *Social Science & Medicine*. 2019;220:167–75.

29. Iwasaki K, Sawada Y, Aldrich DP. Social capital as a shield against anxiety among displaced residents from Fukushima. *Natural Hazards*. 2017 Oct 23;89(1):405–21.
30. VanLandingham MJ. *Weathering Katrina: Culture and Recovery among Vietnamese Americans*. Russell Sage Foundation; 2017.
31. Kenney CM, Phibbs SR, Paton D, Reid J, Johnston DM. Community-led disaster risk management: A Māori response to ōtautahi (christchurch) earthquakes. *Australasian Journal of Disaster and Trauma Studies*. 2015;19(Special Issue):9–20.
32. Moreton MRJ. *A study of four natural disasters in Australia: how the human response to fire, flood and cyclone contributes to community resilience and recovery*. 2016;
33. Aldrich DP, Page-Tan C, Fraser T. A Janus-faced resource: Social capital and resilience trade-offs. In: Trump BD, Florin M-V, Linkov I, editors. *IRGC resource guide on resilience (vol 2): Domains of resilience for complex interconnected systems*. Lausanne, CH: EPFL International Risk Governance Center; 2018.
34. van Kessel G, MacDougall C, Gibbs L. The Process of Rebuilding Human Resilience in the Face of the Experience of a Natural Disaster: A Multisystem Model. *IJEMHHR*. 2015;17(4):678–87.
35. Johal S, Mounsey Z, Tuohy R, Johnston D. Coping with Disaster: General Practitioners' Perspectives on the Impact of the Canterbury Earthquakes. *PLoS Currents*. 2014;(APR):1–9.
36. Camilleri P, Healy C, Macdonald E, Nicholls S, Sykes J, Winkworth G, et al. Recovery from bushfires: The experience of the 2003 Canberra bushfires three years after. *Australasian Journal of Paramedicine*. 2010;8(1):15.
37. Sadri AM, Ukkusuri S V, Lee S, Clawson R, Aldrich D, Nelson MS, et al. The role of social capital, personal networks, and emergency responders in post-disaster recovery and resilience: a study of rural communities in Indiana. *Natural hazards*. 2018;90(3):1377–406.
38. Urmson K, Johnston D, Kemp S. Asking for help and receiving support after a disaster. *Australasian Journal of Disaster and Trauma Studies*. 2016;20(1):3–14.
39. Gibbs L, Block K, Harms L, MacDougall C, Snowdon E, Ireton G, et al. Children and young people's wellbeing post-disaster: Safety and stability are critical. *International Journal of Disaster Risk Reduction*. 2015;14:195–201.
40. Harms L, Gibbs L, Ireton G, MacDougall C, Brady K, Kosta L, et al. Stressors and Supports in Postdisaster Recovery: Experiences After the Black Saturday Bushfires. *Australian Social Work*. 2021;1–16.
41. Mooney M, Tarrant R, Paton D, Johal S, Johnston D. Getting through: Children's effective coping and adaptation in the context of the Canterbury, New Zealand, earthquakes of 2010–2012. *Australasian Journal of Disaster and Trauma Studies*. 2017;21(1):19–30.
42. Bryant R, Gallagher H, Waters E, Gibbs L, Pattison P, MacDougall C, et al. Mental Health and Social Networks After Disaster. *American Journal of Psychiatry*. 2017 Mar;174(3):277–85.
43. Harms L, Gallagher H, Gibbs L, Bryant R, Lusher D, Richardson J, et al. Conceptualising post-disaster recovery: Incorporating Grief Experiences. *British Journal of Social Work*. 2015;45(suppl 1):i170-i187).
44. Chamlee-Wright E, Rothschild DM. Disastrous uncertainty: how government disaster policy undermines community rebound. *Mercatus Policy Series Mercatus Center, George Mason University*. 2007;(9).
45. Ahangama N, Prasanna R, Blake D. The influence of relational and cognitive capital on knowledge networks: Disaster drill experiences in Ratnapura, Sri Lanka. *Resilience: International Policies, Practices and Discourses*. 2019 Jun 18;
46. Fraser C, Blake D. *Valuing Voices: Sex workers' experiences following the Canterbury earthquakes*. Disaster Research Science Report; 2020/01. Wellington (NZ); 2020.
47. Aldrich DP, Crook K. Strong civil society as a double-edged sword: Siting trailers in post-Katrina New Orleans. *Political Research Quarterly*. 2008;61(3):379–89.
48. Williamson T. Beyond social capital: Social justice in recovery and resilience. *Risk, Hazards & Crisis in Public Policy*. 2013;4(1):28–31.
49. Yang J, Yang Y, Liu X, Tian J, Zhu X, Miao D. Self-efficacy, social support, and coping strategies of adolescent earthquake survivors in China. *Social Behavior and Personality*. 2010;38(9):1219–28.
50. Thomas DSK, Phillips BD, Lovekamp WE, Fothergill A. *Social vulnerability to disasters*. CRC Press; 2013.
51. Dominey-Howes D, Gorman-Murray A, McKinnon S. Emergency management response and recovery plans in relation to sexual and gender minorities in New South Wales, Australia. *International journal of disaster risk reduction*. 2016;16:1–11.
52. Smiley KT, Howell J, Elliott JR. Disasters, local organizations, and poverty in the USA, 1998 to 2015. *Population and Environment*. 2018;40(2):115–35.
53. Hughey J, Speer PW, Peterson NA. Sense of community in community organizations: Structure and evidence of validity. *Journal of community psychology*. 1999;27(1):97–113.
54. Aldrich DP. The power of people: Social capital's role in recovery from the 1995 Kobe earthquake. *Natural Hazards*. 2011 Mar 18;56(3):595–611.
55. Stough LM, Sharp AN, Resch JA, Decker C, Wilker N. Barriers to the long-term recovery of individuals with disabilities following a disaster. *Disasters*. 2016;40(3):387–410.
56. Tuohy R, Stephens C, Johnston D. Older adults' disaster preparedness in the context of the September 2010–December 2012 Canterbury earthquake sequence. *International Journal of Disaster Risk Reduction*. 2014 Sep 1;9:194–203.
57. Haney TJ. Paradise Found? The Emergence of Social Capital, Place Attachment, and Civic Engagement after Disaster. Vol. 36, *International Journal of Mass Emergencies and Disasters*. 2018.

-
58. Aldrich DP. Challenges to Coordination: Understanding Intergovernmental Friction During Disasters. *International Journal of Disaster Risk Science*. 2019 Sep;10(3):306–16.
 59. Dibley G, Mitchell L, Ireton G, Gordon R. Government's role in supporting community-led approaches to recovery. 2019.
 60. Aldrich DP. It's who you know: Factors driving recovery from Japan's 11 March 2011 disaster. *Public Administration*. 2016 Jun;94(2):399–413.
 61. Aldrich DP. *Black wave: how networks and governance shaped Japan's 3/11 disasters*. University of Chicago Press; 2019.
 62. Usher K, Ranmuthugala G, Maple M, Durkin J, Douglas L, Coffey Y, et al. The 2019–2020 bushfires and COVID-19: The ongoing impact on the mental health of people living in rural and farming communities. 2021;
 63. Zottarelli LK. Broken bond: An exploration of human factors associated with companion animal loss during Hurricane Katrina. *Sociological Forum*. 2010;25(1):110–22.
 64. Thompson K. Save me, save my dog: Increasing natural disaster preparedness and survival by addressing human-animal relationships. *Australian Journal of Communication*. 2013;40(1):123–36.
 65. Thompson K, Every D, Rainbird S, Cornell V, Smith B, Trigg J. No pet or their person left behind: Increasing the disaster resilience of vulnerable groups through animal attachment, activities and networks. *Animals*. 2014;4(2):214–40.
 66. Hunt M, Al-Awadi H, Johnson M. Psychological sequelae of pet loss following Hurricane Katrina. *Anthrozoös*. 2008;21(2):109–21.
 67. Stofferahn CW. Community capitals and disaster recovery: Northwood ND recovers from an EF 4 tornado. *Community Development*. 2012;43(5):581–98.
 68. Forbes D, Alkemade N, Waters E, Gibbs L, Gallagher HC, Pattison P, et al. Anger and major life stressors as predictors of psychological outcomes following the Victorian Black Saturday bushfires. *Australian and New Zealand Journal of Psychiatry*. 2015;DOI: 10.11.
 69. Morgan J, Begg A, Beaven S, Schluter P, Jamieson K, Johal S, et al. Monitoring wellbeing during recovery from the 2010–2011 Canterbury earthquakes: The CERA wellbeing survey. *International Journal of Disaster Risk Reduction*. 2015 Dec 1;14:96–103.
 70. King A, Middleton D, Brown C, Johnston D, Johal S. Insurance: Its role in recovery from the 2010–2011 Canterbury Earthquake sequence. *Earthquake Spectra*. 2014 Feb;30(1):475–91.
 71. Molyneaux R, Gibbs L, Bryant R, Humphreys C, Hegarty K, Kellett C, et al. Interpersonal violence and mental health outcomes following disaster. *BJPsych Open*. 2020;6(1).
 72. Parkinson D. Investigating the Increase in Domestic Violence Post Disaster: An Australian Case Study. *Journal of Interpersonal Violence*. 2019 Jun 1;34(11):2333–62.
 73. Tierney K. *The social roots of risk: Producing disasters, promoting resilience*. Stanford University Press; 2014.
 74. Morrow BH. Identifying and mapping community vulnerability. *Disasters*. 1999;23(1):1–18.
 75. Ulubaşoğlu M. Natural disasters increase inequality. Recovery funding may make things worse. *The Conversation*. 2020 Feb 27;
 76. Richardson D, Dennis R. Gender experiences during the COVID-19 lockdown. *The Australia Institute*. 2020;
 77. de Vet E, Eriksen C, Booth K, French S. An unmitigated disaster: shifting from response and recovery to mitigation for an insurable future. *International Journal of Disaster Risk Science*. 2019;10(2):179–92.
 78. Kousky C. The Role of Natural Disaster Insurance in Recovery and Risk Reduction. *Annu Rev Resour Econ*. 2019 Oct 4;11(1):399–418.
 79. Banks M, Bowman D. *Juggling risks: insurance in households struggling with financial insecurity*. Brotherhood of St Laurence; 2017.
 80. Blake D, Marlowe J, Johnston D. Get prepared: Discourse for the privileged? *International Journal of Disaster Risk Reduction*. 2017 Oct 1;25:283–8.
 81. Victorian Bushfires Royal Commission. *The 2009 Victorian Bushfires Royal Commission Final Report Summary*. Vol. PP No. 332. Government Printer for the State of Victoria; 2009.
 82. Ulubaşoğlu MA, Rahman MH, Önder YK, Chen Y, Rajabifard A. Floods, Bushfires and Sectoral Economic Output in Australia, 1978–2014. *Economic Record*. 2019 Mar 15;95(308):58–80.
 83. Tierney KJ. *Businesses and disasters: Vulnerability, impacts, and recovery*. In: *Handbook of disaster research*. Springer; 2007. p. 275–96.
 84. Whittaker J, Handmer J, Mercer D. Vulnerability to bushfires in rural Australia: A case study from East Gippsland, Victoria. *Journal of Rural Studies*. 2012;28(2):161–73.
 85. Xiao Y, Wu K, Finn D, Chandrasekhar D. Community businesses as social units in post-disaster recovery. *Journal of Planning Education and Research*. 2018;0739456X18804328.
 86. Brown C, Stevenson J, Giovinazzi S, Seville E, Vargo J. Factors influencing impacts on and recovery trends of organisations: evidence from the 2010/2011 Canterbury earthquakes. *International Journal of Disaster Risk Reduction*. 2015;14:56–72.
 87. Seville E, Stevenson JR, Brown CO, Giovinazzi S, Vargo J. *Disruption and resilience: How organisations coped with the Canterbury earthquakes*. GNS Science; 2014.
 88. Goodman RD, West Olatunji CA. Applying critical consciousness: Culturally competent disaster response outcomes. *Journal of Counseling & Development*. 2009;87(4):458–65.
 89. Larkin B. Pride and prejudice: LGBTIQ community responses to disaster events worldwide. *Australian Journal of Emergency Management, The*. 2019;34(4):60.
 90. Dominey-Howes D, Gorman-Murray A, McKinnon S. Queering disasters: On the need to account for LGBTI experiences in natural disaster contexts. *Gender, Place & Culture*. 2014;21(7):905–18.
 91. Ton K, Gaillard J, Adamson C, Akgungor C, Ho H. Expanding the Capabilities of People with Disabilities in Disaster Risk Reduction. *International Journal of Disaster Risk Reduction*. 2018 Nov 1;34.
 92. Tierney K. *Disasters: A sociological approach*. John Wiley & Sons; 2019.
 93. Whittaker J, Eriksen C, Haynes K. Gendered responses to the 2009 Black Saturday bushfires in Victoria, Australia. *Geographical Research*. 2016;54(2):203–15.
 94. Eriksen C. Gendered Risk Engagement: Challenging the Embedded Vulnerability, Social Norms and Power Relations in Conventional Australian Bushfire Education. *Geographical Research*. 2014;52(1):23–33.

95. Tyler M, Fairbrother P. Gender, households, and decision-making for wildfire safety. *Disasters*. 2018;42(4):697–718.
96. Smith Y, Golomb-Leavitt A. *The Loss of a Pet. Pet Loss, Grief, and Therapeutic Interventions: Practitioners Navigating the Human-Animal Bond*. 2019;
97. Harms L, Abotomey R, Rose D, Woodward Kron R, Bolt B, Waycott J, et al. Postdisaster posttraumatic growth: Positive transformations following the Black Saturday bushfires. *Australian Social Work*. 2018;71(4):417–29.
98. Bender B, Metzl ES, Selman T, Gloger D, Moreno N. Creative soups for the soul: Stories of community recovery in Talca, Chile, after the 2010 earthquake. 2015;
99. Barber R. *Making do: Tactical urbanism and creative placemaking in transitional Christchurch, New Zealand*. 2013;
100. Blake D. Social determinants of health for opioid substitution treatment and emergency management in Aotearoa New Zealand. *The Australian Community Psychologist*. 2018;29(1).
101. Collins S, Glavovic B, Johal S, Johnston D. Community engagement post-disaster: case studies of the 2006 Matata debris flow and 2010 Darfield earthquake, New Zealand. *New Zealand Journal of Psychology*. 2011;40:17–525.
102. O'Neill K. *Communities at the Heart of Recovery: Reflections on the Government-Community Partnership for Recovery After the 2009 Black Saturday Bushfires in Victoria, Australia*. In: *Natural Disaster Management in the Asia-Pacific*. Springer; 2015. p. 119–38.
103. Eburn M, Dovers S. Learning lessons from disasters: Alternatives to Royal Commissions and other quasi-judicial inquiries. *Australian Journal of Public Administration*. 2015;74(4):495–508.
104. Boin A, McConnell A, Hart P. *Governing after crisis: The politics of investigation, accountability and learning*. 2008.
105. Gibbs L, MacDougall C, Block K. Political reflexivity in post-bushfire research. *Qualitative Research Journal*. 2014;14(3).
106. Gibbs L, Block K, MacDougall C, Harms L, Baker E, Richardson J, et al. Ethical use and impact of participatory approaches to research in post-disaster environments: An Australian bushfire case study. *Biomed Research International*. 2018;
107. Beaven S, Wilson T, Johnston L, Johnston D, Smith R. Research engagement after disasters: research coordination before, during, and after the 2011–2012 Canterbury earthquake sequence, New Zealand. *Earthquake Spectra*. 2016;32(2):713–35.
108. Frazier TG, Walker MH, Kumari A, Thompson CM. Opportunities and constraints to hazard mitigation planning. *Applied Geography*. 2013;40:52–60.
109. McClure J, Wills C, Johnston D, Recker C. New Zealanders' judgments of earthquake risk before and after the Canterbury earthquakes: Do they relate to preparedness? *New Zealand Journal of Psychology*. 2011;40:7–11.
110. March A, Henry S. A better future from imagining the worst: Land use planning and training responses to natural disaster. *Australian Journal of Emergency Management, The*. 2007;22(3):17.
111. Mason MS, Haynes K. *Adaptation lessons from cyclone Tracy*. National Climate Change Adaptation Research Facility; 2010.
112. Kornakova M, March A, Gleeson B. Institutional adjustments and strategic planning action: The case of Victorian Wildfire Planning. *Planning Practice & Research*. 2018;33(2):120–36.
113. Ombler J, Washington S. *Seismic Shifts: The Canterbury earthquakes and public sector innovation. Future-Proofing the State*. 2014;277.
114. Comfort LK, Boin A, Demchak CC. *Designing resilience: Preparing for extreme events*. University of Pittsburgh Pre; 2010.
115. Waugh Jr WL, Streib G. Collaboration and leadership for effective emergency management. *Public administration review*. 2006;66:131–40.
116. Usdin L. Building resiliency and supporting distributive leadership post-disaster. *International Journal of Leadership in Public Services*. 2014;
117. Bryant RA, Gibbs L, Gallagher HC, Pattison P, Lusher D, MacDougall C, et al. Longitudinal Study of Changing Psychological Outcomes Following the Victorian Black Saturday Bushfires. *Australian and New Zealand Journal of Psychiatry*. 2017;DOI: 10.11.
118. Awada M, Becerik-Gerber B, Hoque S, O'Neill Z, Pedrielli G, Wen J, et al. Ten questions concerning occupant health in buildings during normal operations and extreme events including the COVID-19 pandemic. *Building and Environment*. 2021;188:107480.
119. Johnston D, Standing S, Ronan K, Lindell M, Wilson T, Cousins J, et al. The 2010/2011 Canterbury earthquakes: Context and cause of injury. *Natural Hazards*. 2014 Sep 27;73(2):627–37.
120. Twigg J, Kett M, Bottomley H, Tan LT, Nasreddin H. Disability and public shelter in emergencies. *Environmental Hazards*. 2011;10(3–4):248–61.
121. Every D, Richardson R. *Building the Disaster Resilience of the Homeless Community*. Report prepared by CQ University and the Red Cross in collaboration with VCOSS, NCCARF and ShelterSA for the National Emergency Management Project. 2017;
122. Every D, Thompson K. Disaster resilience: Can the homeless afford it? *Australian Journal of Emergency Management, The*. 2014;29(3):52–52.
123. Walters V, Gaillard JC. Disaster risk at the margins: Homelessness, vulnerability and hazards. *Habitat International*. 2014;44:211–9.
124. Boon H. Investigation rural community communication for flood and bushfire preparedness. *Australian Journal of Emergency Management, The*. 2014;29(4):17.
125. Thomas J, Barraket J, Wilson C, Cook K, Louie Y, Holcombe-James I, et al. *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2018*. 2018;
126. Aldrich DP, Sawada Y. The physical and social determinants of mortality in the 3.11 tsunami. *Social Science and Medicine*. 2015 Jan 1;124:66–75.
127. Settembrino MR. Hurricane Sandy's impact on the predisaster homeless and homeless shelter services in New Jersey. *Journal of emergency management (Weston, Mass)*. 2016;14(1):7–16.
128. Brady K. Disaster recovery: Are we doomed to repeat the same mistakes? *Australian Journal of Emergency Management, The*. 2018;33(3):10.
129. Blake D, Niland P, Johnston D. Health emergency management in Aotearoa New Zealand: Making sense of professional development. *Journal of Emergency Management*. 2019;17(5):359–69.
130. Johal S, Mounsey Z, Brannelly P, Johnston D. Nurse perspectives on the practical, emotional, and professional impacts of living and working in post-earthquake Canterbury, New Zealand. *Prehospital and disaster medicine*. 2016;31(1):10–6.

-
131. Wills J. Supporting the supporters in disaster recovery: Winston Churchill Fellowship [Internet]. New Zealand Red Cross; 2014 Sep. Available from: supportingthesupporters.org
 132. Brady K. Recovery workers who have also been personally affected by disasters: Exploring the perspective of people who have dual experiences of disaster recovery. Manuscript under review.
 133. Yumagulova L, Phibbs S, Kenney CM, Yellow Old Woman-Munro D, Christianson AC, McGee TK, et al. The role of disaster volunteering in Indigenous communities. *Environmental Hazards*. 2021;20(1):45–62.
 134. Nakasu T, Ono Y, Pothisiri W. Why did Rikuzentakata have a high death toll in the 2011 Great East Japan Earthquake and Tsunami disaster? Finding the devastating disaster's root causes. *International journal of disaster risk reduction*. 2018;27:21–36.
 135. Hansen A, Bi P, Saniotis A. Extreme heat and climate change: adaptation in culturally and linguistically diverse (CALD) communities. 2013;
 136. Drabek TE. *The human side of disaster*. CRC Press; 2016.
 137. McClure J, Henrich L, Johnston D, Doyle EEH. Are two earthquakes better than one? How earthquakes in two different regions affect risk judgments and preparation in three locations. *International Journal of Disaster Risk Reduction*. 2016 Jun 1;16:192–9.
 138. Marshall MI, Niehm LS, Sydnor SB, Schrank HL. Predicting small business demise after a natural disaster: an analysis of pre-existing conditions. *Natural Hazards*. 2015;79(1):331–54.
 139. Marlowe J, Lou L. The Canterbury Earthquakes and refugee communities. *Aotearoa New Zealand Social Work Review*. 2013;25(2).
 140. Zscheischler J, Westra S, Van Den Hurk BJ, Seneviratne SI, Ward PJ, Pitman A, et al. Future climate risk from compound events. *Nature Climate Change*. 2018;8(6):469–77.
 141. Becker JS, Coomer MA, Blake D, Garden E, Rampton A, Newman-Hall G, et al. Impact of the 2016 Kaikōura Earthquake on Wellington CBD Apartment Residents: Results of a Survey. Lower Hutt (NZ): GNS Science. 2018;
 142. Gibbs L, Nursey J, Carpenter L, Cowlshaw S, Roberts M, Cook J, et al. Post-disaster academic progress: long term impacts on secondary school students from bushfire exposure in Australia (Under review). *Child Development*.
 143. Strøm IF, Schultz J-H, Wentzel-Larsen T, Dyb G. School performance after experiencing trauma: a longitudinal study of school functioning in survivors of the Utøya shootings in 2011. *European Journal of Psychotraumatology*. 2016;7(31359-<http://dx.doi.org/10.3402/ejpt.v7.31359>).
 144. Gibbs L, Molyneaux R, Harms L, Gallanher HC, Block K, Richardson J, et al. *10 Years Beyond Bushfires Report 2020*. Melbourne, Australia: University of Melbourne; 2020.
 145. Mooney M, Tarrant R, Paton D, Johnston D, Johal S. The school community contributes to how children cope effectively with a disaster. *Pastoral Care in Education*. 2020;1–24.

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Indigenous Peoples & Recovery Capitals (Australia)



Recovery Stories



Podcasts



Aotearoa New Zealand
ReCap Guide



Background Materials



Applying ReCap



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