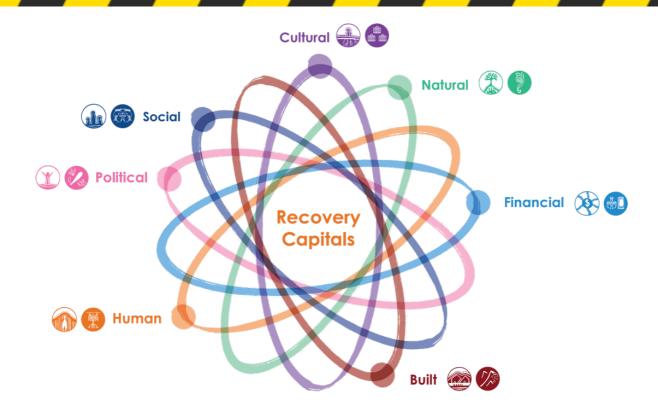


RECOVERY CAPITALS (RECAP): NAVIGATING THE COMPLEXITIES OF DISASTER RECOVERY

A collaborative, evidence-based and holistic approach

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Bushfire and Natural Hazards CRC

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The talented artists and graphic designers who have contributed to the ReCap resources and the images in this report are: Alana Pirrone, Oslo Davis, Frances Belle Parker, Ariki Arts - Taupuruariki Whakataka Brightwell, and Emily Campbell.

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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.

EXECUTIVE SUMMARY

Disaster recovery is a complex process, requiring support from a range of people and organisations after an event. For the past decade, the four recovery environments (built, social, economic and natural) have been used to recognise this complexity and frame recovery efforts. However, recovery efforts often remain siloed, with inadequate attention paid to the interconnectedness between environments and the particular nuances across the social environment. There is a need for accessible, engaging and evidence-based resources to provide guidance for how to apply key recovery principles in practice.

The Recovery Capitals (ReCap) project aimed to promote wellbeing after disasters by examining the disaster recovery evidence base and producing a set of resources to help guide recovery efforts. It was a collaboration between the University of Melbourne, Massey University (Aotearoa New Zealand), Australian Red Cross, and other researchers, government and non-government agencies and organisations from across Australia and Aotearoa New Zealand.

The ReCap project began with an examination of the evidence base for recovery risk and protective factors using a Community Capitals Framework (Emery, Fey and Flora, 2006). It focused on how seven forms of capital - natural, built, political, cultural, human, social, financial – can influence wellbeing after disasters, and how they can influence each other. Through discussions between researchers and end-users, this was then adapted to develop the Recovery Capitals Framework (RCF). The RCF highlights the interconnectedness between recovery capitals, multiple dimensions regarding people, place and time and values of diversity and equity. Key messages were distilled down from the initial evidence-mapping to simplify findings and determine practically oriented considerations that we presented in a set of resources. These spanned a range of formats to cater to different users' needs and included contributions from artists and graphic designers across Australia and Aotearoa New Zealand to produce visually engaging material.

The ReCap resources serve a range of purposes and are designed to guide disaster recovery efforts across different community contexts. The resources can be used to build capacity rapidly after an event, as well as in pre-event recovery planning to enhance resilience prior to disasters. They can be used in a wide range of disaster contexts, and by the wide range of people engaged in disaster recovery including policy makers, 'on-the-ground' staff and volunteers, including those whose core work is unrelated to disasters (e.g., teachers, healthcare workers and community organisations). The ReCap resources have also been tailored to the sociocultural contexts of the two countries, particularly with regard to representing the cultural perspectives and experiences of Indigenous peoples in appropriate ways.

The Australian edition of Guide to Disaster Recovery Capitals (ReCap Guide) was piloted from July 2020, with a high degree of engagement in the piloting process from end-users and incorporation into recovery operations throughout key organisations in the Australian sector. The Aotearoa New Zealand version built on the Australian version and had Aotearoa New Zealand specific evidence added. In November 2020 it was shared informally with Māori stakeholders to

evaluate the effectiveness of the messages, artwork and tone. Feedback elicited was then combined with findings collected from the dissemination of the Australian pilot Guide to improve the document's readability. Following a more formalised consultation process with the wider stakeholder group in Aotearoa New Zealand, the current iteration is being finalised and will be disseminated appropriately.

The updated set of ReCap resources were released in May 2021. They are available via www.recoverycapitals.org.au. Dissemination is underway within Australia and will begin in Aotearoa New Zealand in mid-2021. Current and planned applications of the resources include: guiding local government initiatives; featuring on the Victorian Government's Digital Recovery Guidelines Solution platform; informing national government resources and workshops; use in training within governments and not-for-profits; informing new research projects; and being embedded into a range of Australian Red Cross activities including the development and monitoring of recovery programs, needs assessment, updating resources and presentations including to the International Federation Red Cross and Red Crescent Societies. In Aotearoa New Zealand, the National Emergency Management Agency, New Zealand Red Cross and various civil defence and emergency management agencies and workers are eager to draw on the Aotearoa New Zealand guide to utilise in training and guidance contexts.

These uses to date span a range of disaster types including bushfires, floods, and the COVID-19 pandemic. This demonstrates the significant potential of these resources to support evidence-based, holistic and inclusive future recovery efforts throughout Australia and Aotearoa New Zealand.

Project contributors are committed to continuing to develop this body of work through ongoing collaboration between researchers and end-users, including through a new Beyond Disasters Advisory Committee which will be convened by the University of Melbourne team from late 2021. This includes efforts to build disaster resilience evidence and convert it into useful tools to guide policy and practice, and to continue to focus on gaps relating to the recovery experiences of certain groups.

Another key aspect to this project was the exploration of residential mobility following disasters, which was led by the Aotearoa New Zealand team. This work built on an earlier document produced for this project on residential mobility and wellbeing. The new iteration used a case study approach to explore relevant literature on experiences of residential mobility in Aotearoa New Zealand and Australia. It described the complexity of how and why people relocated, the contextual influences that drive mobility in response and recovery and community recovery and wellbeing. The residential mobility work informed the development of the ReCap resources, in particular the focus on equity and inclusion.



END-USER PROJECT IMPACT STATEMENT

Andrew Coghlan, Australian Red Cross

The ReCap project has been an important research project with significant practical application for the Australian and Aotearoa New Zealand disaster management sector and communities. The use of the recovery capitals to conceptualise community capacities and impacts represents a significant progression in the way that we can plan for our work with disaster affected communities.

The work that has been undertaken in the ReCap project allows for a more nuanced understanding of the interrelated and compounding impacts of disasters. This in turn both highlights the complexities communities face after disaster but also offers a practical way of exploring these impacts in different communities.

Some examples of the way that the ReCap research and resources have been applied to date within our organisation include:

- Revised internal training for recovery workforce based on the recovery capitals
- Revision of operational reporting to incorporate the recovery capitals as a framework for data collection.
- Informing on the ground operational needs assessments and is currently informing into the revision of Red Cross disaster needs assessment frameworks and operational processes.
- Informing new and revised Red Cross resources, including Red Cross guidance for pandemic recovery

We anticipate that we will be able to share the learnings that have come from these resources with our colleagues through the International Federation of Red Cross Red Crescent.

Throughout the course of the project, the ReCap research team in both Australia and Aotearoa New Zealand have been exceptional to work with. The end-users have appreciated their flexible and collaborative approaches and their willingness to consider the practical application of the research at all points of the project.



PRODUCT USER TESTIMONIALS

Bronwen Sparkes, Disaster Recovery Branch, Emergency Management Australia Group, Department of Home Affairs

The Guide to Post-Disaster Recovery Capitals (ReCap) provides valuable insights into what one should consider for recovery planning in a post-disaster context. It lays out a sensible and practical evidence-based framework, which describes how interrelated and interconnected the seven community capitals are. Working on national recovery policy, my team has been drawing on the Guide to inform the development of resources for recovery professionals to undertake recovery needs assessments with community at various stages of the recovery process.

Vaughn Brandenburg & Fyowna Norlon, Emergency Management Victoria

The ReCap resources present a succinct link between evidence and key recovery considerations, that offers a useful framing to deliver strengths-based recovery support. Emergency Management Victoria sees the seven recovery capitals as an important extension of the traditional four recovery environments, in regards to how this work could be considered from a recovery policy, coordination, planning and engagement perspective. The expansion of the 'social' environment in particular enables a more fulsome examination of the needs and considerations in this space. Further, the emphasis on the interconnectedness of the capitals reflects continued improvements within the sector to deliver more holistic recovery supports for people and communities affected by disaster. As a key resource for the recovery sector, the ReCap Guide, the Indigenous Peoples and Recovery Capitals support document and the link to the ReCap website will be promoted by EMV through available platforms. It has been exciting and rewarding to be a part of the development of this work.

Anne Leadbeater OAM, Leadbeater Group

Planning for and living through disasters is immensely complex, with recovery impacting every aspect of people's lives. The ReCap project provides a unique way to engage with this complexity and to understand how the different 'capitals' that exist within communities can be mobilised to support recovery and resilience. The Community Capitals Framework offers important insights into the interrelated nature of recovery that have been developed through rigorous research, collaboration and co-design.

ReCap will guide recovery practitioners beyond the traditional domains of built, natural, economic and social recovery to a new understanding of capacity and resilience. It has the potential to reframe our thinking about recovery planning and implementation, providing a new paradigm for policy-makers, practitioners, and communities.



Kirsten Jenkins, Maroondah City Council

Maroondah Council officers were so thrilled to be able to work with University of Melbourne and Australian Red Cross to pilot the Recap Framework, when developing the Maroondah Covid-19 Recovery Plan. Using the recovery capitals enabled a holistic overview of the recovery priorities and broadened our thinking over the traditional 'four environments for recovery". The Guide to Disaster Recovery Capitals (ReCap) was a great resource for guiding our thinking for recovery planning and was useful for both our inexperienced and more experienced recovery staff.

Danny Rey-Conde, Aotearoa New Zealand National Emergency Management Agency
In short, I think it's a fantastic read, incredibly insightful, useful and most importantly digestible.

Margaret Moreton, Leva Consulting

This is such a great resource - a disaster planning tool that focusses on the long-term goal of a good community recovery. Just what we all want - evidence based, well structured, practical in focus, easy to read.



INTRODUCTION

Disaster recovery is a complex process, requiring support from a wide range of people and organisations after an event. Major disasters require a surge workforce, and many people find themselves supporting recovery for the first time. Recovery support services play a crucial role in long term health and wellbeing, and research from past disasters can guide good decision-making and recovery actions. However, research findings are often not readily accessible to people supporting recovery. There is a need for accessible, engaging and evidence-based resources to provide guidance for how to apply key recovery principles in practice.

Further, recovery efforts are often siloed, with inadequate attention paid to the interconnectedness between domains and the particular nuances in social aspects of recovery. This is despite developments in recent decades, with the use of the four recovery environments (built, social, economic, and natural) to recognise this complexity and frame recovery efforts. This presents a need for frameworks and resources that promote more holistic approaches to recovery.

ReCap aims to address these needs by examining the disaster recovery evidence base and producing a set of resources to help guide recovery efforts, thereby supporting the wellbeing of people and communities after disasters. The resources are designed to be relevant across a broad range of disasters¹. They encourage strengths-based, holistic and inclusive approaches to recovery.

A Community Capitals Framework was taken as the starting point to guide the development of these resources. This was then adapted into the Recovery Capitals Framework (RCF) after ongoing collaboration between researchers and end-users. The RCF was also used as the basis for mapping evidence and producing useful resources. ReCap drew on findings from research to identify how seven 'recovery capitals' – social, natural, cultural, financial, political, human and built – can influence post-disaster wellbeing directly, and how they can interact with each other.

A second linked component of this project was an exploration of literature on residential mobility after disasters, led by Massey University.

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¹ ReCap uses the Australian Institute of Disaster Resilience definition of a disaster as 'a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts'.

BACKGROUND

The ReCap project evolved from a project that had originally been led by Dr Phil Morley from University New England, Australia and Associate Professor Sarb Johal, Massey University, Aotearoa New Zealand beginning in July 2017. The rationale for this original tranche of the project was outlined in the 2018/2019 Annual ReCap Report:

Since the advent of the Hyogo Framework for Action (HFA) in 2005, nations have been prioritising investments in more targeted preparedness, relief and mitigation policies in an attempt to reduce the financial and human costs of disasters. Regardless of the effectiveness of the response during the event, the recovery process is complex, multidimensional and continues over an extended period of time. However, rarely is there a concerted long-term dimension for plans particularly from the perspective of enabling disaster impacted communities to direct the recovery goals and processes.

Reconstruction policies frequently focus on the restoration of the built environment with little attention to the restoration of social assets and community networks. However, disaster recovery is more than simply rebuilding infrastructure and assets or providing welfare and rehabilitation. Recovery is about providing opportunities to further social, cultural and economic systems as well as natural and built environments. To do this though, it must be recognised that people and communities have complex and interrelated needs which have to be understood, respected and addressed. It is important that people, communities, organisations and government agencies play complementary roles in this process and understand the interrelations between the social, cultural, human, political and the natural, financial and built environment. The manner in which recovery activities are planned and undertaken is critical and can require appropriate enablers to be present to optimise the effectiveness of any recovery intervention. Conversely some activities fail to reach their potential due to the presence of various barriers. There is a need to be able to assess and understand the enablers and barriers present within a recovering community so as to ensure that the appropriate actions are taken at the right time.

Further, there is a significant deficit in knowledge and understanding of the demographic issues influencing temporary displacements, relocation and migration, and resettlement after disasters. Post disaster movement occurs after every major disaster. Many disaster-prone places are bound to reproduce their long-established settlement patterns, but the demographic characteristics of residents often change. Studies in Indonesia after the 2004 Tsunami and post Hurricane Katrina in the USA, show significant differences in the make-up of the community and fundamental changes of demography, families, marriages, birth, social psychology and social conventions creating a transformation of these communities. Understanding more about how these changes occur and how they matter will provide valuable insight into guiding long term recovery processes that are culturally responsive and inclusive, and improve the resilience of communities.

(Gibbs et al., 2020)

Outcomes from the original project were a report on barriers and enablers of long-term recovery for those impacted by natural hazards and a document on residential mobility. The report on barriers and recovery by Morley et al. (2020) explores the long-term recovery processes for communities. The residential mobility work briefly covered global and New Zealand based reasons for people's movements, including ideas around internal migration, affect and reaction, individual differences, and community characteristics and cohesion.

When both of the original leads shifted to other positions and relinquished responsibility for the project, it was re-started in September 2018. The new leads included Professor Lisa Gibbs, University of Melbourne, Australia and Professor David Johnston and Dr Denise Blake, Massey University, Aotearoa New Zealand. Australian Red Cross continued as lead end-user of the project. The full team of academics and end-users then renamed the project - Recovery Capitals (ReCap).

Under this new leadership, the project was taken in new directions while remaining aligned with the original broad project aims, as outlined within the 'Research Approach' section of this report.

UTILISATION FUNDING

After identifying a range of resource needs to support disaster recovery efforts, an additional \$222,000 in utilisation funding was approved in 2020 to produce the ReCap resources. This report also includes the activities and deliverables associated with this funding. Support letters from end-users confirmed that these funds would be matched by \$1,160,700 in-kind contributions.

The resources are being incorporated into the operations of the ReCap end-user organisations as regular tools to guide recovery planning and will continue to be shared through their networks and operations to support communities affected by current and future disasters in Australia and Aotearoa New Zealand.



RESEARCH APPROACH

ReCap aimed to support the wellbeing of people and communities after disasters by examining the disaster recovery evidence base and producing a set of resources to help guide recovery efforts. There were two distinct but related components to the Recovery Capitals (ReCap) project: 1) Recovery Guidance - Production of evidence-based resources to guide recovery and 2) Residential Mobility - an exploration of literature on residential mobility after disasters. Insights from these two components informed each other as the project progressed.

1. RECOVERY GUIDANCE

This part of the ReCap project began with an examination of the disaster recovery evidence base using a Community Capitals Framework (CCF), originally outlined in the context of community development (Emery, Fey and Flora, 2006). Capitals are traditionally defined as resources that can be used to generate more or new resources. We focused on how seven forms of capital natural, built, political, cultural, human, social, financial – can influence wellbeing after disasters, and how they can influence each other.

For the past decade, the four recovery environments (built, social, economic, and natural) have been used to recognise the complexity of disaster recovery and frame support efforts. However, recovery efforts often remain siloed, with inadequate attention paid to the interconnectedness between environments and the particular nuances across the social environment. The CCF was identified by ReCap contributors as useful way of extending beyond this 'four environments' framework to promote holistic recovery approaches, as it emphasises the complexity and interconnectedness of the capitals and includes attention to political, human and cultural resources. The notion of 'capitals' also highlights the strengths that people and communities have, and how these can be drawn upon to support resilience and recovery.

Based on these findings we then developed a set of resources to guide disaster recovery efforts in different community contexts. The resources can be used to build capacity rapidly after an event, as well as in pre-event recovery planning to enhance resilience prior to disasters. They can be used in a wide range of disaster contexts, and by the wide range of people engaged in disaster recovery including policy makers, 'on-the-ground' staff and volunteers, including those whose core work is unrelated to disasters (e.g., teachers, healthcare workers and community organisations).

As outlined below, the stages undertaken to produce the ReCap resources and the residential mobility articles did not proceed in a linear manner – instead, the process was iterative and overlapping. The process was informed by continual discussion between researchers and end-users, facilitated through bimonthly meetings and annual project workshops. For a more comprehensive account of this processes, see Quinn et al. (Under review).



Identifying resource needs

Throughout the ongoing and iterative collaborations between the project team and the end-users, three broad needs relating to resources to support disaster recovery efforts were identified:

- 1. A need for evidence-based guidance on how to apply key recovery principles and frameworks in practice
- 2. A need for accessible and engaging resources that can be easily used in post-disaster settings
- 3. A need for updated conceptual framings of recovery within resources. The prominent 'four recovery environments' framework (natural, social, built and economic) was valued for many reasons, yet end-users also identified several areas for improvement. Specifically, end-users expressed interest in: more nuance and attention to the social environment; more holistic approaches to recovery; and more emphasis on how community assets (relationships, skills and resources) can be drawn upon and developed to support recovery.

Developing the Recovery Capitals Framework (RCF)

We took a Community Capitals Framework (CCF) as the starting point for addressing the needs identified by end-users (Emery, Fey and Flora, 2006). Yet there was clear scope for adaptations to this framework, based on the rich insights generated by discussions between ReCap contributors during the process of mapping evidence and developing the resources. For example, contributors identified a need to explicitly orient the capitals approach towards supporting wellbeing and equity in disaster contexts. These adaptations resulted in the formulation of the Recovery Capitals Framework (RCF), outlined in Table 1 below, and detailed further by Quinn et al. (Under review).

Recovery Capitals Framework (RCF)		
Community Capitals Framework	ReCap uses an adapted version of the Community Capitals Framework which was originally outlined in the context of community development (Emery, Fey and Flora, 2006). It consists of seven capitals – natural, social, financial, cultural, built, political, and human.	
Recovery capitals	The ReCap project uses the concept of 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 may support recovery (García Cartagena, 2019), because it is not always the case that 'more is better'. The ReCap project sees the value of capitals as lying primarily in their usefulness for supporting wellbeing. Therefore, within the RCF, capitals are defined as resources that can be used to generate more or new resources for the purpose of supporting wellbeing.	
	Capitals are dynamic: they can increase, decrease and transform over time (Emery and Flora, 2006; Pigg et al., 2013).	



	By paying attention to recovery capitals, each person or community can assess their existing strengths and resources, 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 (Australian Institute of Disaster Resilience, 2018).
Definitions of the seven recovery capitals	Definitions of each of the seven recovery capitals have been developed based on the literature and consultation with project endusers. These extended definitions are provided by Quinn et al. (Under review). Abbreviated versions are provided in the Guide to Recovery Capitals (available online and in PDF), and have been collated in Appendix A.
Interconnectedness	The RCF 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 may be particularly incongruent with Indigenous and other worldviews.
	ReCap emphasises the deep connections between the seven recovery capitals and recognises that some things cannot be neatly categorised as part of one capital or another. Instead of being treated in separate silos, the capitals should be understood as interacting elements to be addressed together. Accordingly, the ReCap Guide focuses on how the capitals all influence each other.
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 (Mileti, 1999; Blaikie et al., 2014; Lukasiewicz, 2020).
	ReCap recognises that differences in disaster vulnerability are created and perpetuated by systems of inequity within societies (Thomas et al., 2013). 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. It also challenges the social power relations that perpetuate inequalities.
	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.
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.

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 RCF draws from a socioecological model (Bronfenbrenner, 1998) 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) (Titz, Cannon and Krüger, 2018). 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 & 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 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 (Emery and Flora, 2006; Pigg et al., 2013). 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 (Cronstedt, 2002; Jaques, 2007). 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.

Indigenous peoples and recovery experiences

<u>Australia</u>

The experiences of Indigenous people have largely been overlooked in the field of disaster recovery in Australia, including in academic literature. We are grateful to Williamson, Weir, Cavanagh and Markham for their valuable insights on this issue (Williamson, Markham and Weir, 2020; Williamson, Weir and Cavanagh, 2020), which have been included in the ReCap Guide.

Few resources exist to guide recovery workers and organisations in

supporting Indigenous peoples affected by disasters. The 'Indigenous Peoples and Recovery Capitals' page resource aims to provide a useful starting point.

Aotearoa New Zealand

Aotearoa New Zealand has a range of Māori scholars and practitioners in disaster risk reduction and recovery research and practice in Aotearoa New Zealand. As such, this work recognises and acknowledges their significant and insightful contribution to champion social justice and equity for tangata whenua. There is, for example an extensive body of research was conducted following the Canterbury and Kaikoūra earthquakes in collaboration with the local rūnanga Ngāi Tahu (Kenney and Phibbs, 2014, 2015; Kenney et al., 2015; Phibbs, Kenney and Solomon, 2015; Carter and Kenney, 2018; Kenney, 2019) and communities that were impacted (Lambert et al., 2012; Simon J Lambert, 2014; Simon J. Lambert, 2014; Rawson, 2016).

Additional research has explored Māori cultural experiences and knowledge of natural hazards (King, Goff and Skipper, 2007; King and Goff, 2010; King et al., 2018) and responses to disaster events (Hudson and Hughes, 2007; Gabrielsen et al., 2017; Blake, 2020; King et al., 2020, 2020; McLachlan and Waitoki, 2020; Yumagulova et al., 2021).

With a growing body of research, there is an extensive evidence base with which to understand adaptive Māori response and recovery processes, and cultural resiliency, which ultimately benefits all of Aotearoa New Zealand and beyond.

TABLE 1. RECOVERY CAPITALS (RECAP) FRAMEWORK (RCF), ADAPTED FROM THE GUIDE TO DISASTER RECOVERY CAPITALS: AUSTRALIAN EDITION (QUINN ET AL., 2021).

Evidence mapping

Having established the RCF, we then mapped evidence from the literature against this framework. A literature review of 'Barriers and enablers in the long term recovery of communities affected by natural hazards' had been undertaken under the original project leadership, and was published in 2020 (Morley, Barclay and Parsons, 2020). However, it was necessary to conduct a process of evidence mapping specifically against the RCF, focusing on the role of each capital in influencing post-disaster wellbeing, and on how the different capitals can influence each other.

There is of course an enormous amount of literature of relevance to disaster recovery, so a comprehensive review was beyond the scope of this project. Instead, we focused on relevant findings from projects that collaborators had been involved in or were familiar with. This included the Beyond Bushfires study and related research conducted by the University of Melbourne, Resilient Wellington and related research conducted by Massey University, from the Bushfire and Natural Hazards CRC's Australian Disaster Resilience Index and the Optimising post-disaster recovery interventions in Australia project led by Mehmet Ulubasoglu (Deakin University) and social scientist Prof Daniel Aldrich (Northeastern University). Together, these sources represent the core contemporary recovery research projects in Australia and Aotearoa New Zealand to date, as well as a selection of key evidence from other countries including the USA and Japan.

TABLE 18 TO THE TOTAL TO THE

Publications from these sources were examined, with relevant findings extracted and mapped against the RCF. Findings were considered relevant to this project if they related to how a capital could influence post-disaster wellbeing directly and/or indirectly (by interacting with one or more of the other capitals). These links with wellbeing and with other capitals were mapped systematically for each finding. Findings were then grouped into themes within each capital category, which were then distilled into clearly articulated messages to be used in the ReCap resources (with sources referenced). Based on these findings, a series of prompts were also crafted for those involved in recovery to consider in their efforts.

Using the RCF, we also identified key gaps in the literature and specifically searched for evidence relating to important topics, including the recovery experiences of Indigenous peoples. In some cases, new collaborators were invited to be involved to help address evidence gaps.

We strove to ensure that the evidence was mapped and summarised in a way that:

- gave adequate attention to each of the different forms of capital;
- focused on the influence of the capitals on wellbeing and/or on other capitals (i.e., the interconnectedness between the capitals);
- accurately conveyed complex research findings while keeping messages clear and succinct.

A similar comprehensive literature review of evidence was conducted in order to produce the main residential mobility article (Blake et al. (Under review)). Relevant literature on residential mobility, such as temporary and permanent displacement, relocation and return in Aotearoa New Zealand and Australia was incorporated into the evidence mapping for this 'Recovery Guidance' component of the ReCap project, as well as forming the basis for the case study approach taken in the 'Residential Mobility' component. From this review, it became clear that a gap exists in the field of research.

During the production of the ReCap resources, we faced a tension in our efforts to produce evidence-based resources that aligned with the values of diversity and equity within the RCF. This arose from the fact that such values are not necessarily reflected in the evidence base itself, which neglects the perspectives and experiences of many marginalised groups of people while focusing on and privileging certain voices only. We took a range of approaches in response to this challenge, including:

- targeted searches for evidence relating to certain groups whose experiences have received less attention within the literature;
- careful consideration of equity and diversity in the crafting of messages;

 enhanced attention to diversity and equity within the ReCap Recovery Stories (see below), which are illustrative of experiences rather than being strongly based in published evidence.

In response to feedback from piloting the ReCap resources, we searched for and summarised additional evidence to respond to gaps identified by practitioners (e.g., relating to businesses, the creative arts, people with disability, and pandemics).

Resource development

As described in the Bushfire and Natural Hazards CRC Hazard Note 'How to Enhance Community Recovery After Disasters':

The approach to resource development has been highly collaborative. In a Recovery Capitals workshop in August 2019, endusers discussed the content and format of useful resources from the perspective of recovery workers. Discussions from this workshop informed a plan for a series of complementary tangible and online resources to share evidence-based findings.

End-users stated they are most likely to use resources that start with simple core messages, backed up by additional evidence and then more detailed guidance.

In keeping with the Recovery Capitals Framework, it was agreed that resources would be designed to accommodate diverse groups, community contexts and multiple hazards. End-user support and commitments of in-kind contributions to Recovery Capitals resource piloting and development have since supported additional funding for resources beyond the scope of the original project agreement.

(Quinn, Gibbs, Blake, Campbell, Johnston and Coghlan, 2021)

The first resource we produced was a synthesis <u>Guide to Disaster Recovery Capitals (ReCap Guide)</u>. As this progressed, however, the team recognised some incompatibilities in representing some of the evidence across both Australia and Aotearoa New Zealand, particularly regarding the sociocultural differences between the two nations – such as the different language used in how people care for and relate to the land (Country and kaitiakitanga). To avoid generalising the information and authentically represent the specificities of each country the guide was reworked for a primarily Australian audience and led by the Australian researchers on the project and an Aotearoa New Zealand version was dually reworked by the Aotearoa New Zealand researchers. In parallel, the remaining resources were produced. The full set of these resources is outlined below.

Piloting the Australian Guide to Disaster Recovery Capitals

When the Black Summer bushfires swept across Australia followed by the onset of the COVID-19 pandemic in early-2020, the project was still over a year from completion. Additional funding had been secured for the production, piloting

and dissemination of a set of resources, but we were intending to wait until the end of 2020 to pilot the main resource – the ReCap Guide. However, practitioners suggested that due to the scale of recovery efforts it would be valuable to release the pilot ReCap Guide as early as possible (which we did in July 2020).

This also turned out to be an important opportunity to increase the ReCap Guide's applicability to COVID-19 given the lack of focus on pandemics in the evidence-based research we had initially included (the first round of evidence mapping finished in March 2020 at which point the severity of the pandemic was just evolving). For example, one Victorian local council drew significantly upon the pilot ReCap guide in their COVID-19 recovery plan. They provided valuable observations about the ways in which the pilot guide made assumptions that did not apply to pandemics (e.g. when discussing grief over environmental destruction) and shared the additional recovery considerations that had emerged from COVID-19 in their local community (e.g. mental health impacts of isolation from the natural environment), which we were able to support with newly published literature in the finalised Guide (released in May 2021).

There is still more work that needs to be done in future to incorporate the perspectives of groups that may have particular recovery needs including those from migrant and refugee backgrounds, people with disability, and children and young people.

The uptake and dissemination of the ReCap Guide during the piloting process is detailed in the 'Utilisation and Impact' section of this report. It includes uses in recovery from bushfires, floods, the COVID-19 pandemic, and a range of crosscutting applications to disaster recovery approaches generally, demonstrating the relevance of the guide across many hazard types.

Collaboration

End-user engagement

Collaboration between end-users and researchers was central to every aspect of this project. Communications centred on meetings between all contributors every two months, and annual project workshops.

A high degree of end-user engagement was demonstrated through participation of over 40 contributors in the August 2019 ReCap workshop in Melbourne. This enabled the development of a plan to produce a set of tangible and online resources to share the research findings. Shortly afterwards, letters of support and commitments of in-kind contributions from end-users were instrumental in securing additional funding for the development and piloting of ReCap resources beyond the scope of the original project agreement.

End-users played a critical role in the piloting of the ReCap Guide, providing valuable feedback, disseminating the resource throughout their networks, and testing the application of the resource within their work. This included efforts to support the recovery of Victorian communities affected by the 2019/202 Black Summer bushfires, flood-affected communities in New South Wales, and in COVID-19 pandemic recovery planning across Australia and Aotearoa New



Zealand. Further details on uptake during piloting can be found in the 'Utilisation and Impact' section of this report.

Trans-Tasman connections

As outlined in the 2019/2020 Annual ReCap Report:

Massey University team members visited Australia in August 2019 to participate in the workshop, and University of Melbourne team members visited Aotearoa New Zealand in February 2020 as guests of Massey University to engage with disaster commemoration and training activities, learn more about the Aotearoa New Zealand disaster and cultural context to inform the development of ReCap resources, and connect with local end-users. These visits have enhanced the links with key agencies within and across the two countries. In addition, the different perspectives brought by the teams from the two countries have enabled knowledge sharing, robust critical discussions and deeper understandings of similarities and differences, all of which have informed ReCap outputs.

(Gibbs et al., 2020)

Since February 2020, the COVID-19 pandemic has restricted opportunities for further in person meetings between colleagues from Australia and Aotearoa New Zealand. However, close collaboration has continued by video, phone and email. The Australian research team have learnt a great deal through this collaboration especially regarding the involvement of Māori within the disaster sector in Aotearoa New Zealand, and through discussions with Māori researchers in the ReCap team. This has deeply influenced efforts to enhance the engagement with and attention to First Nations peoples within the Australian resources.

Likewise, the Aotearoa New Zealand research team have found the collaboration with our Australian colleagues to be a hugely rewarding process that has brought many learnings. The regular communication and genuine comradery that we developed was crucial in building respectful relationships that allowed us to have frank discussions about the direction of the project. This was additionally important for sharing information and made it possible to incorporate feedback from piloting the Australia version of the ReCap Guide into the version tailored to Aotearoa New Zealand.

Ultimately, this enabled the team to produce important resources that are useful and engaging for practitioners dealing with and/or planning for recovery.

2. RESIDENTIAL MOBILITY

Central to the outputs from the Aotearoa New Zealand research collaborators was an exploration of residential mobility following various natural hazards disasters, such as earthquakes. Massey University led work that aimed to understand the various conceptualisations of residential mobility in disaster research and the key drivers for people's movements and return after a disaster.

The Residential Mobility component of the project informed the development of the ReCap resources (Recovery Guidance component), in particular the focus on equity and inclusion.

The key output of the Residential Mobility component involved the production of an academic article based on a comprehensive literature review of research across Aotearoa New Zealand and Australia. This review sought to ascertain how various forms of residential mobility (temporary and permanent displacement, relocation and return) affected people and communities. The research asked: why people move; how residential movements affect people and communities; what hinders movements and return; and what can be learnt from this in order to increase the wellbeing and resiliency of recovering communities. With a dearth of literature addressing these questions within Aotearoa New Zealand and Australia, the team decided to apply a case study approach to examine more specific disaster events and the meanings and experiences of residential mobility associated with those events.

The Aotearoa New Zealand case study focused on 2010-2011 Canterbury earthquakes, which precipitated the country's largest ever temporary and permanent residential movement, and gave rise to most of the literature on residential mobility in Aotearoa New Zealand. The existing literature did not address internal movements within Ōtautahi (Christchurch city) or short-term relocation after the earthquakes, nor did it include research on residential mobility during the recovery phase. There was, however, literature on inequality and social movement from an Indigenous perspective, literature on insurance and mobility, and research into land zoning and migrant movements. A small number of articles also explored psychological effects associated with residential mobility.

The Australian case study investigated residential mobility following the 2008/2009 Black Saturday bushfires in Victoria, and residential mobility following the 2011 flash floods in Grantham, Queensland. Research across these events explored emotional drivers, such as ontological security and guilt about deserting existing neighbourhoods or not supporting community recovery efforts. Findings from the fires identified that movement was more likely if homes were destroyed, and post disaster stressors impacted those who stayed in place. Research following the Queensland floods sought to understand resettlement and the role of government land-swap schemes and issues around community stress and engagement. Sense of place and attachment were identified as being important to relocation and recovery efforts. It was also argued that renters, rather than owners were more likely to intend to leave after the floods (Blake, Adams-Hutcheson, et al., Under review).

Another piece of work associated with residential movements specifically explores experiences of safety and emotion as drivers for evacuation and return for apartment dwellers in Te Whanganui-a-Tara (Wellington), the capital city of Aotearoa New Zealand following the 2016 Kaikōura earthquake. Analysing free response answers from a survey of 803 people surveyed one year after the Kaikōura earthquake, Blake et al. (Under review) found that ontological insecurity was a key diver. This was triggered by the severity of the shaking, how

the shaking was experienced, damage to buildings, types of warnings, ongoing aftershocks and social facilitation or the actions of others. A further article (Blake, Becker, Hodgetts and Elwood, Under review) draws on the same event to investigate residential movements for renters and homeowners in Wellington, Aotearoa New Zealand. Interviewing 18 people approximately two years after the 2016 earthquake revealed that dealing with apartment body corporations, landlords, storage room for emergency kits, other emergency items, and evacuation plans mattered to people's ongoing ability to prepare or have knowledge of structural safety of buildings.

The final research article produced by the Aotearoa New Zealand team as part of their outputs is a case study of the evacuation behaviours and responses of the people of Mataura in the Southland region of Aotearoa New Zealand, following the Mataura River flooding in February 2020 (Blake, Thompson, et al., Under review). This case study traces the events that unfolded, as experienced and articulated in six video blogs recorded by the Mataura Community Development Coordinator shortly after the event. The video blogs were transcribed verbatim and written up in a case study form. This work narrates how the flood event unfolded and what happened while evacuating the township; it highlights how community connection facilitates safety response processes to ultimately improve community recovery. This case study approach offers frontline insights into the mechanisms and functions of communities during adverse events.

In total, the work on residential mobility covered four academic articles that have been submitted to peer-review journals. With a dearth of literature about residential mobility in disaster contexts for both Aotearoa New Zealand and Australian, we recognise the need for more, and ongoing research, into residential mobility to address the knowledge gaps and offer better insights and evidence-based advice for best practice during future natural hazard and human-induced disaster events. These four publications generate increased knowledge about residential mobility and contribute to knowledge about recovery pathways for impacted communities to better support people and communities to recover well.



RESOURCES

GUIDE TO DISASTER RECOVERY CAPITALS (RECAP GUIDE)

Australian edition

The primary output of the ReCap project is the Guide to Disaster Recovery Capitals (ReCap Guide).

The Guide is available at: https://www.phoenixaustralia.org/disaster-hub/resources/recovery-capitals/.

About the ReCap Guide

Adapted from the Guide to Disaster Recovery Capitals (2021)

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 guide to practice

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

Given the complexity and diversity of disaster contexts, the guide does not include specific instructions or universal messages for recovery. Instead, it uses evidence from previous disasters to illustrate possibilities 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.



It can be viewed as a PDF, or through interactive webpages. Hard copies are also available upon request. The Guide features two sets of artworks, including adapted versions of Figure B which was developed in response to the need for resources with specific attention to First Nations people within Australia (see 'Indigenous Peoples and Recovery Capitals' below).

Aotegrog New Zealand edition

Māori and recovery experiences

While compiling the content for the guide, as discussed above, the Aotearoa New Zealand Indigenous team members quickly realised early in the project that there would be ongoing compromises required to produce a 'fit for purpose' universal Australian-Aotearoa recovery resource. This was due in part to the unique and specific national approaches to honouring and engaging with our tangata whenua — our Indigenous people. It was also due to Aotearoa New Zealand's treaty commitment and the language (te reo Māori) we draw from to honour and acknowledge Māori ways of knowing. For instance, while there are many similarities for Indigenous peoples across both nations such as connection to land, the expression of this relationship is different. We appreciated that our Australian counterparts were reflexive and willing to dialogue and learn from our experiences. They have respectfully supported us in our processes of collaboration and community engagement.

To date we have produced an Aotearoa New Zealand edition of the ReCap Guide that includes Māori disaster research and knowledge as well as purposely designed Māori artwork that draws on mātauranga (Māori knowledge) to conceptually represent the seven different capitals (see Appendix B). For Māori each of the seven capitals is intricately interconnected to each other and other cosmological realms, so applying a categorisation lens to the capitals was a strong point of tension, as has been recognised in other sections of this report. This was a highly complex, and often embodied, process that required delicate manipulation so as to carefully and fully represent each element.

For example, with the natural capital (see Figure A) we needed to highlight the deep and long-standing connection between Māori and the whenua (land), with papatuanuku (earth) being our tīpuna (ancestor). As people of the land, any natural hazard that impacts on the natural environment will be deeply wounding and distressing for Māori beyond that of material, psychological or emotional effects (Kenney, 2019; King et al., 2007; McLaughlan & Waitoki, 2020). Further, as kaitiaki (caretakers) of the land, natural hazard events intrinsically impact on Māori experiences of wellbeing and flourishment.





FIGURE A. PAPATŪĀNUKU (THE EARTH MOTHER). HER HAIR SIGNIFYING THE FORESTS, VEGETATIONS, WATER WAYS AND LAKES. SHE IS EMBRACING HER CHILDREN, THE ATUA WHO LOOK AFTER THE ELEMENTS AND RESOURCES OF OUR ENVIRONMENT.

Another example was the need to capture the essence and layers of 'political' wellbeing that were representative Aotearoa New Zealand's colonial history and relationships. Any trauma from a disaster is compounded through the inequitable social systems that have long-standing pejorative effects on Māori tinorangatiratanga (authority). The Aotearoa New Zealand team, alongside their Australian collaborators, worked tirelessly to advocate for equitable, culturally responsive and community driven recovery practices.

On completion of the Aotearoa New Zealand ReCap Guide feedback process, investigations into the best form of translation will occur to additionally honour te reo Māori (Māori language). This will ensure we uphold the strength of the mātauranga (Māori knowledge) that has been included in the resource, we honour our commitment to te reo revitalisation and maintain respectful relationships with Māori, as tangata whenua of Aotearoa New Zealand.

INDIGENOUS PEOPLES AND RECOVERY CAPITALS – AN AUSTRALIAN RESOURCE

A resource focusing on First Nations peoples and disaster recovery (within Australia) was produced, as a complementary resource to the Australian ReCap

Guide (which also contains some specific information from emerging literature regarding the disaster and recovery experiences of Indigenous peoples). 'Indigenous Peoples and Recovery Capitals' is a high-level 2-page document incorporating artwork from Yaegl artist Frances Bell Parker representing a First Nations interpretation of each of the seven capitals (see Figure B). These icons are also featured in the updated Australian edition of the ReCap Guide, along with the artist's descriptions (see Appendix C).

The resource is intended as a starting point to developing understanding of some key considerations in supporting Indigenous peoples impacted by disasters, in recognition of the lack of existing relevant resources to guide recovery workers and organisations in Australia. This is based on emerging literature and consultations, as the evidence base relating to the disaster experiences of Indigenous peoples in Australia is far less developed than in Aotearoa.

The design and content of the resource has been informed by consultations regarding ReCap that have been conducted with a range of organisations including the Australian Indigenous Health Infonet and Bushfire Recovery Victoria's Aboriginal Culture and Healing Group. The resource also draws upon the work that the University of Melbourne ReCap team have been conducting with Bhiamie Williamson (ANU) and his colleagues including Charlee Law (ANU) and Jessica Weir (University of Western Sydney) to begin to address gaps in the literature relating to Indigenous peoples and disaster recovery, and explore possible adaptations of the RCF that may be meaningful to Indigenous peoples.

The resource is available at: https://www.phoenixaustralia.org/disaster-hub/resources/recovery-capitals/.



FIGURE B. ARTWORK DEPICTING THE INTERCONNECTEDNESS BETWEEN THE SEVEN RECOVERY CAPITALS, BY FRANCES BELLE PARKER.

'APPLYING RECAP' ACTIVITIES

A series of activities have been created to assist users to apply the evidence and considerations from the ReCap Guide in their own roles and contexts. A Word document containing these activities can be downloaded at: https://www.phoenixaustralia.org/disaster-hub/resources/recovery-capitals/applying-recap/.

RECOVERY STORIES

The ReCap resources include a series of stories of recovery told by those who have experienced disasters personally and professionally. These stories are

presented through a range of mediums including video, audio, photos, text and links to existing online content. At the time of writing, three recovery stories from Australia are publicly available, with several others from both Australia and Aotearoa New Zealand in production. These recovery stories serve two purposes. The first is to 'bring to life' some of the concepts and experiences mentioned within the ReCap Guide in an engaging manner, helping audiences connect with how the different recovery capitals can interact within the recovery journeys for a person or community. Secondly, they presented an opportunity to feature experiences and perspectives that are less well covered in the evidence base (including those of Indigenous peoples and migrants). The recovery stories presented a more flexible avenue through which the values of equity and diversity within the RCF could be expressed.

The recovery stories are available at https://www.phoenixaustralia.org/disaster-hub/resources/recovery-capitals/recovery-stories/.

POWERPOINT SLIDES

A set of PowerPoint slides has been made available. Similarly to the activities, these are designed to assist in the application of the ReCap Guide and resources in practice. The slides can be drawn upon in workshops or presentations, and can be added to or adapted to suit a range of purposes. They include general information about the ReCap project, the RCF, the ReCap Guide and how it can be applied, as well as key considerations from the Guide. The slides will continue to be adapted and added to based on input from end-users.

The slides can be downloaded at: https://www.phoenixaustralia.org/disaster-hub/resources/recovery-capitals/applying-recap/.

PODCASTS

A series of podcasts on disaster recovery is being produced as a partnership between Red Cross, the ABC, and University of Melbourne. This also links with ReCap and work being conducted by the University of Melbourne for Bushfire Recovery Victoria. They will be publicly available through the ABC and immediately embedded in Red Cross and BRV services. Due to administrative delays, the podcasts are not yet available. However, they are now in production and are scheduled for release in August (with dissemination led by the ABC).

POSTCARDS

A postcard has been designed which lists the ReCap resources and includes a link and QR code directing people to the website. Copies of postcards are being printed and will be made available upon request to those seeking to use and promote the resources.

A PDF version of the postcard is available at: https://www.phoenixaustralia.org/disaster-hub/resources/recovery-capitals/printed-resources/.

ONLINE ACCESS TO THE SET OF RESOURCES

The full set of resources is available via www.recoverycapitals.org.au (see screenshot in Fig. C). They are hosted within the Phoenix Australia Disaster Mental Health Hub.

ReCap Guide



A snapshot of evidence-based findings and key considerations for recovery workers. Available in hard copy, PDF and online.

Recovery Stories



Stories of recovery told through a range of mediums by those who have experienced disasters personally and professionally.

Podcasts



A series of podcasts on disaster recovery, created in partnership between ReCap, Red Cross, the ABC and University of Melbourne.

Available from August 2021.

Printed Resources



Request copies of our printed materials.

Applying ReCap



Resources to help in applying the ReCap content in different contexts, and communicating – including activities and presentation slides.

Background materials



Reports, academic publications and other background materials from the ReCap project

Indigenous Peoples and Recovery Capitals (Australia)



Aotearoa New Zealand ReCap Guide



FIGURE C. OVERVIEW OF RECAP RESOURCES AT WWW.RECOVERYCAPITALS.ORG.AU, MAY 2021.

KEY MILESTONES

The key milestones for this project since commencement of the new academic leads in 2018, are outlined in Table 1. Additional major achievements have included the development of additional resources of relevance to the Indigenous peoples of each country: the tailored version of the ReCap Guide in Aotearoa, and the *Indigenous Peoples and Recovery Capitals* resource in Australia.

The ReCap core team and end-users are committed to supporting the application of the resources beyond the completion of the project, so dissemination activities will continue beyond 2021 and beyond.

Milestone	Date	Status
Annual workshop	30 Sep 2018	Completed
Initial evidence mapping using Beyond Bushfires data	31 Dec 2018	Completed
Detailed evidence mapping including NZ & Aldrich research	31 Mar 2019	Completed
Targeted analyses to address evidence gaps (UOM – financial capital/Massey – cultural capital)	30 Jun 2019	Completed
Targeted analyses to address evidence gaps (UOM – political capital/Massey – residential mobility)	30 Sep 2019	Completed
Annual workshop – present synthesis of evidence and draft framework	31 Oct 2019	Completed
End-user consultations on draft ReCap framework– Australia and NZ	31 Mar 2020	Completed
Preparation of content & design for resources [Utilisation]	30 Jun 2020	Completed
Community consultations on draft ReCap framework – Australia and NZ	30 Jun 2020	Completed
Production of resources [Utilisation]	30 Sep 2020	Completed
Test application of ReCap Framework in disaster-affected communities in Australia & NZ	30 Sep 2020	Completed
Piloting of resources [Utilisation]	31 Dec 2020	Completed
Further analyses to address any gaps in ReCap Framework	31 Dec 2020	Completed
Refinement of resources [Utilisation]	31 Mar 2021	Completed
Finalisation of ReCap Framework to suit different hazards, contexts and population groups	31 Mar 2021	Completed
Implementation of knowledge translation plan to disseminate findings and resources for different end-users and stakeholders	30 Jun 2021	Completed & ongoing
Dissemination of resources [Utilisation]	30 Jun 2021	Completed & ongoing
Submission of academic papers	30 Jun 2021	Completed



UTILISATION AND IMPACT

GUIDE TO DISASTER RECOVERY CAPITALS (AUSTRALIAN EDITION)

Output description

This resource is described in the 'Resources' section of this report.

Extent of use (pilot ReCap Guide)

The pilot Guide to Disaster Recovery Capitals (ReCap Guide) and RCF has been shared with a broad range of people and organisations by ReCap end-users and others interested in the ReCap approach, including:

- Identified as a key resource to feature on the Digital Recovery Guidelines Solution which is being developed by the Victorian Government (Emergency Management Victoria, Bushfire Recovery Victoria and the Department of Health);
- Used in training and recovery planning workshops, including a recovery fundamentals training day run by Anne Leadbeater in 2020 and a workshop run by the National Recovery and Resilience Agency in May 2021 (see Figure D);
- Used in the development of Maroondah City Council's COVID-19 Recovery Plan;
- Used by Australian Red Cross in a range of ways including: framing thematic analyses of monitoring data from their bushfire recovery program; a pandemic recovery planning <u>guidance note</u>; the Introduction to Recovery training for new staff and volunteers; briefing State and Territory managers; and the development of the recovery program in response to the NSW Floods in early 2021; and in exploratory technological approaches to analysing historical recovery operational data for predictive capacities to inform future operations;
- Featured in presentations from end-users for a range of events and audiences including: the International Federation Red Cross and Red Crescent Societies' Global Climate Summit; the Monash University Disaster Resilience Showcase; the Australian Local Government Conference; the Australian Institute of Landscape Architects; the ACFID International Conference;
- Used by the Disaster Resilience Research Group at University of Tasmania to structure their bushfire recovery research questions, methods and measures being conducted for State Government;
- Included on the <u>Australian Indigenous HealthInfoNet</u> as a resource of some relevance to Indigenous peoples affected by disaster;
- Used in the development of recovery guidance by the ANZEMC Community Outcomes Recovery Subcommittee;

- Provided to Senior Executives of Emergency Management Australia and the National Bushfire Recovery Agency;
- Incorporated into updated psychosocial response and recovery framework in Aotearoa New Zealand;
- Included as a resource on the Creative Recovery Network website;
- Featured in newsletters including the Australasian Women in Emergencies Network and an ANZEMC newsletter focusing on local government;
- Featured on www.preventionweb.net.

After the release of the pilot ReCap Guide, we were contacted by the creators of the new Phoenix Centre for Posttraumatic Mental Health National Disaster Mental Health Hub, who were interested in featuring the Guide within the Hub as a complement to their mental health focused resources. At that time, the ReCap Guide was being hosted on the Australian Red Cross website, however staffing constraints and a sustained COVID 19 pandemic response within Australian Red Cross meant that Red Cross were no longer able to support development of the website to maximise access to the ReCap resources. It was agreed that another host site was needed. The Disaster Mental Health Hub therefore committed to hosting the full set of ReCap resources, and have contributed considerable inkind resources to the development of a set of ReCap webpages. The ReCap Guide was featured in the launch event of the Disaster Mental Health Hub in February 2021.

Interest in the ReCap Guide from end-users was also clear in the positive, thoughtful and constructive feedback received during the piloting process, which significantly improved the quality of the updated ReCap Guide.

Utilisation potential (finalised ReCap Guide)

It is expected that with the release of the Guide to Disaster Recovery Capitals (Australian edition), the majority of the above uses of the pilot ReCap Guide will be replicated or continued.

Already, the updated ReCap Guide has been incorporated within recovery processes and platforms including:

- Being identified as a key resource to feature on the Digital Recovery Guidelines Solution which is being developed by the Victorian Government;
- Being included as a recovery resource on the Australian Institute for Disaster Resilience Knowledge Hub;

It has been confirmed with end-user organisations that they are able and encouraged to share online and hard copies of resources as they would their own materials, with occasional checks back to host site to ensure current versions are being used. Particular uses of the ReCap resources that have been identified through discussions with end-users and others who have expressed interest in applying the resources include:

- - Use of the ReCap resources and RCF in the development of a set of disaster recovery and resilience training courses such as microcertificates, led by the University of Melbourne;
 - Presentation to East Gippsland Shire Council to inform ongoing recovery efforts after the 2019/2020 bushfire season;
 - Use by the Disaster Resilience Research Group at University of Tasmania to structure longitudinal case study research in the Huon Valley for State Government;
 - Potential use by a local council in recovery planning with a culturally diverse public housing community in metropolitan Melbourne;
 - Considered for incorporation into needs assessment approaches;
 - Incorporation into Master of Social Work subjects at the University of Melbourne.

The utilisation potential is further elaborated in the 'Next Steps' section of this report.



FIGURE D. RECAP GUIDE BEING USED DURING A NATIONAL RECOVERY AND RESILIENCE AGENCY WORKSHOP, MAY 2021.



GUIDE TO DISASTER RECOVERY CAPITALS (AOTEAROA NEW ZEALAND EDITION)

Output description

This resource is described in the 'Resources' section of this report.

Extent of use (draft version)

As the Aotearoa New Zealand version of the ReCap Guide was founded on a collaborative Australia/New Zealand framing process, whereby we coalesced evidence from both nations to generate key messaging, we were able to draw on and implement a number of findings from the piloting process undertaken by our Australian collaborators. In addition to this dissemination and feedback process, we additionally reached to specific Māori emergency management personnel to provide evaluative feedback as the information in our edition includes specific Māori knowledge, research, experience and artwork. Unlike our Australian collaborators, our piloting process is not yet complete. This is due to us needing to follow tika (accurate) and pono (authentic) collaborative consultation that involves relationship building and appropriate engagement processes which are currently ongoing. To date, as with the pilot process above, the Aotearoa New Zealand version has been shared with:

- Various Māori emergency managers from Wellington, Napier and Tairāwhiti/Gisborne.
- Senior Māori personnel at Fire and Emergency New Zealand.
- Staff and key disaster management personnel at Massey University.
- Emergency Managers from Canterbury Civil Defence Emergency Management Group.
- Staff at Fire and Emergency New Zealand and the National Emergency Management Office.
- Social sector end-users.
- New Zealand Red Cross.

Additionally, this was drawn on by recovery managers during the 2021 Napier floods.

OTHER RECAP RESOURCES

The remaining ReCap resources were developed in early 2021, and dissemination has only recently begun. As such, we cannot report on utilisation and impact of these resources as yet.



CONCLUSION

The Recovery Capitals (ReCap) project has produced a set of resources and academic articles to help guide recovery efforts, with the aim of supporting wellbeing of people and communities after disasters. The development of the ReCap resources has been underpinned by the valuable contributions of all endusers and researchers involved in the collaboration. As a set of evidence-based, holistic, inclusive and strengths-based resources, they have significant potential to support recovery efforts in ways that address the needs identified by end-users. A contribution has also been made to the evidence base through academic articles co-developed by the Aotearoa New Zealand and Australian teams with input from lead end-user Australian Red Cross and more specific Aotearoa New Zealand based research.

Through the process of contributing to the project, ReCap end-users and researchers have developed a high degree of interest in the resources and commitment to disseminating and applying them in a range of ways, including in pre-event recovery planning as well as post-disaster settings.

NEXT STEPS

Ongoing utilisation and refinement

With the updated set of ReCap resources now available online, dissemination has begun, and the project team are committed to continuing this beyond the official completion date of the project.

A presentation on ReCap has been accepted for the AFAC Research Forum in August 2021 in Sydney. The following additional opportunities for sharing the ReCap resources have been identified through discussion with end-users and are being planned for 2021:

- A ReCap resources launch event, featuring the Australian and Aotearoa New Zealand editions of the ReCap Guide
- Provision of hard copies of the ReCap Guide upon request (subject to availability, end-users will also be supplied with the electronic print file if they wish to arrange a large print order)
- Continued distribution through the networks or ReCap contributors including through newsletters and partner websites.
- A ReCap poster presentation at the 2021 Annual Meeting for Te Hiranga Rū QuakeCoRE, a Centre of Research Excellence (CoRE) funded by the Aotearoa New Zealand Tertiary Education Commission (TEC).

These are in addition to the future utilisation opportunities outlined in the 'Utilisation and impact' section of this report.

Further, the set of ReCap resources will continue to be built upon. For example, additional 'Recovery stories' will be added to the series, and activities and slides will be developed to address emerging applications of the resources.

Two more ReCap meetings will be held to enable this continuation of effort and then all of the ReCap researchers and end-users have been invited to transition to a new **Beyond Disasters Advisory Committee** being convened by the University of Melbourne team from late 2021. Contributors to ReCap and a range of related projects will be invited to participate if they wish to be part of future collaborative efforts to build disaster resilience evidence and convert it into useful tools to guide policy and practice.

Further research

The process of mapping evidence against Recovery Capitals Framework (RCF) revealed important gaps in evidence relating to the recovery experiences of certain groups including refugees and migrants and people with disabilities, as well as Indigenous peoples (particularly within Australia). Further research is warranted along with the co-development of recovery resources with and for these groups of people. The experiences of 2020 also highlighted the urgent need for greater understanding of how to support overlapping phases of preparedness, response and recovery from multiple disaster events. This needs to be a focus of future applied research. Similarly, the process of conducting a literature review of research on residential mobility across Aotearoa New Zealand and Australia revealed a scarcity of research that covers temporary and permanent displacement, relocation and return after natural hazard and human-induced disasters. Further research is required.

PUBLICATIONS LIST

The ReCap project has developed a number of outputs related to primary and aligned research activities. In addition to the publications listed below, ReCap is informing the continuing work of the team in various ways (for example, the application of the ReCap framework in a study of COVID-19 pandemic experiences in Victoria), which is expected to give rise to future publications.

PEER-REVIEWED JOURNAL ARTICLES

- 1 Quinn P, Gibbs L, Blake D, Campbell E, Johnston D, Coghlan A. 'Recovery Capitals: A Collaborative Approach to Complexity and Simplicity in Post-Disaster Guidance'. (Under review)
- Blake, D., Adams-Hutcheson, G., Gibbs, L., Quinn, P. Post-disaster residential mobility: Considerations for Aotearoa New Zealand and Australia. (Under review)
- 3 **Blake, D.**, Thompson, J., Hodgetts, D., & **Johnston, D**. Mataura Flood 2020, Aotearoa New Zealand: A case study of evacuation and resilience through community spirit. International Journal of Disaster Risk Reduction. (Under review).
- 4 **Blake, D.**, Becker, J., Hodgetts, D., & Elwood, K. The impact of earthquakes on apartment owners and renters in Te Whanganui-a-Tara (Wellington) Aotearoa New Zealand. Science Direct. (Under review)
- 5 **Blake D**, Becker J, Hodgetts D, Hope A. The 2016 Kaikōura Earthquake: Experiences of safety, evacuation and return for apartment dwellers in Te Whanganui-a-Tara, Aotearoa New Zealand. International Perspectives in Psychology: Research, Practice, Consultation. (Under review)
- 6 Ripley, S., Kaiser, L.H., **Campbell, E.**, Shadwell, J., **Johnston, D.** M. and Neely, D. (2020). Engaging stakeholders in pre-event recovery planning: utilising a recovery capitals framework. The Australian Journal of Emergency Management 35: 25-31.

PRESENTATIONS

A series of presentations relating to the ReCap project have been delivered to date:

- Gibbs, L. 'Recovery Capitals'. AFAC research forum, 24th September 2019, Hobart.
- 2 **Gibbs, L.** 'Long-term recovery from the 2009 Black Saturday bushfires'. University of Canterbury, Christchurch, 20th February 2020.
- 3 **Gibbs, L.** 'Long-term impact of the 2009 bushfires on children'. Special open meeting of the Te Runaka ki Otautahi o Kai Tahu, 21st February, Christchurch.
- 4 **Gibbs, L.** 'Living beyond bushfires: an Australian case study'. Disaster Management and Public Health Summer School, University of Otago, 24th February 2020, Wellington.
- 5 **Gibbs, L and Quinn, P.** '2019/2020 Season Bushfires Same But Different?' Bushfire Recovery Victoria webinar, 16th July 2020.
- 6 **Gibbs L.** Using Recovery Capitals to navigate through complexity and diversity. Emergency Management Conference Sep 2020 invited
- 7 Gibbs L et al. The contribution of Recovery Capitals to long-term recovery. International Day for Disaster Risk Reduction Webinar. Bushfire and Natural Hazards CRC. Oct 2020 – invited
- 8 **Gibbs L, Williamson B, Quinn P**, Coghlan A, MacDougall C. How do we use what we know? The practice-evidence exchange in disaster recovery. Australian Public Health Conference. Oct 2020
- 9 Williamson B, **Quinn P**. Indigenous perspectives in disaster recovery and climate change adaptation. Australian Public Health Conference. Oct 2020.
- 10 Gibbs L, Community led recovery and resilience building. Minister's Special Advisory Council on Bushfire Recovery. Nov 2020.
- 11 Williamson B & **Quinn P**. Indigenous peoples and recovery capitals. Community of Practice for Red Cross recovery officers. Dec 2020.
- 12 Coghlan A, **Gibbs L**, Rosenbaum S, Humphreys L, Nursey J, Howard A. Improving mental health outcomes after disaster: Introducing the new Disaster Mental Health Hub. Feb 2021.
- 13 Quinn P, Gibbs L, Coghlan A, Blake D, Campbell E, Johnston D, Richardson J. Embracing complexity and simplicity in the development of recovery resources. AFAC Research Forum. August 2021.

OTHER

Gibbs L, Johnston D, Brady K, Quinn P, Blake D, Campbell E. Recovery Capitals (ReCap) Annual Report 2018/2019



- Quinn P, Gibbs L, Blake D, Campbell E, Johnston D, Ireton G. Guide to Post-Disaster Recovery Capitals (ReCap). Melbourne, Australia: Bushfire Natural Hazards Cooperative Research Centre; June 2020. Retrieved from https://www.redcross.org.au/recap
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- 8 MacDonald, C., Mooney, M., **Johnston**, **D.**, Becker, J., **Blake**, **D.**, Mitchell, J., Malinen, S., Näswall, K. (in press 2021). Supporting community recovery: COVID-19 and beyond. Disaster Research Science Report; 2021/02, Wellington (NZ): Massey University. xx p.
- 9 Quinn P, Gibbs L, Blake D, Campbell E, Johnston D, Ireton G. (2021) Guide to Disaster Recovery Capitals (ReCap). Melbourne, Australia: University of Melbourne.

TEAM MEMBERS

The core ReCap team, academic collaborators, end-users and stakeholder organisations are listed below.

CORE RECAP TEAM

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Australian Red Cross (lead end-user)

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Australian Red Cross

Leadbeater Group

Victoria State Emergency Service

Country Fire Authority

University of Melbourne Department of Social Work

Wellington Region Emergency Management Office

New Zealand Red Cross

Fire and Emergency New Zealand

Phoenix Australia

Social Recovery Reference Group

Australian Department of Home Affairs

Department of Primary Industries and Regions South Australia

Emergency Management Victoria

Resilient Melbourne

Creative Recovery Network

Regional Arts Victoria

Bushfire Recovery Victoria

Flourish Kia Puāwai

Canterbury Civil Defence Emergency Management Group

Maroondah City Council

Victorian Council of Social Service

Mataura Community Development Coordinator

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These brief definitions have been collated from the Guide to Recovery Capitals (Australian edition). Extended versions of these definitions are provided by Quinn et al. (Under review).

These definitions were collectively developed by ReCap contributors through synthesis of literature (Emery, Fey and Flora, 2006; Mayunga, 2007; Jacobs, 2011; Stofferahn, 2012; Himes-Cornell et al., 2018; García Cartagena, 2019; Plodinec, 2021) and practice experience.

Social Capital	'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).
Human Capital	'Human capital' refers to people's skills and capabilities, including the ability to access resources and knowledge. It includes education, physical and mental health, physical ability, knowledge from lived experience and leadership capabilities.
Political Capital	'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. 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.
Cultural Capital	'Cultural capital' refers to the way people understand and know the world, and how they act within it. It includes ethnicity, habits, language, stories, traditions, spirituality, heritage, symbols, mannerisms, preferences, attitudes, orientations, identities, norms and values, and the process and end products of cultural and artistic pursuits.
Natural Capital	'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. ²
Built Capital	'Built capital' refers to the design, building and maintenance of physical infrastructure, including its functional and aesthetic value. This includes critical facilities and services, housing, vehicles, equipment, information technology, communications, water and energy infrastructure.
Financial Capital	'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.

 $^{^2}$ In Aotearoa New Zealand, 'natural capital' relates to te taiao. In Australia, 'natural capital' relates to Country.

APPENDIX B: CAPITALS ICONS IN AOTEAROA RECAP GUIDE

TOHU/SYMBOL

KŌRERO/DESCRIPTION



Natural

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



Social

Represents hongi (social greeting for Māori) and the connection of two beings - life and spirit.



Financial

Represents early trade between Māori and Europeans.



Cultural

Represents three kete (baskets) as the origins of knowledge.



Politica

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



Built

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



Human

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



These descriptions from Yaegl artist Frances Belle Parker explain how she has interpreted the seven recovery capitals in creating the icons for the Australian ReCap resources, with input from Euahlayi man Bhiamie Williamson.

ICON

DESCRIPTION



Natural

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 story tellers. 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

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.



Financial

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

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.





Political

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

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.



Human

Our underlying Indigenous knowledge and connections with each other makes 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.