



Recovery Preparedness and Management

Director's Guideline for Civil Defence Emergency Management Groups [DGL 24/20]

Part A



Resilient New Zealand
Aotearoa Manahau

New Zealand Government

Recovery Preparedness and Management PART A
Director's Guideline for Civil Defence Emergency Management Groups [DGL 24/20]

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National Emergency Management Agency
PO Box 5010
Wellington 6145
New Zealand
Tel: +64 4 817 8555
Fax: +64 4 817 8554

Email: emergency.management@nema.govt.nz
Website: www.civildefence.govt.nz

Contents

Introduction	1
Section 2 Defining Recovery	2
2.1 What is recovery?	2
2.2 The characteristics of recovery.....	9
2.3 Recovery environments.....	11
Section 3 Communities at the centre of recovery	13
3.1 Communities at the centre of recovery	13
Section 4 Legislative Provisions	17
Section 5 Roles, Responsibilities and Functions	19
5.1 National Emergency Management Agency.....	19
5.2 Civil Defence Emergency Management Group (Joint Committee)	20
5.3 Coordinating Executive Group (CEG).....	23
5.4 Recovery Managers	25
5.5 National Recovery Manager / Director Civil Defence Emergency Management...26	
5.6 Group Recovery Manager	28
5.7 Local Recovery Manager	31
5.8 Civil Defence Emergency Management Group Office / Civil Defence Emergency Management staff	33
5.9 Local authorities	34
5.10 Local politicians (Mayors, Councillors and Regional Council Chairs).....	36
5.11 Agencies, non-government organisations or clusters	37
5.12 Community leaders and influencers	37
5.13 Individuals and whānau.....	38
5.14 Private Sector.....	39
Section 6 Recovery Framework	41
6.1 The National Recovery Framework	41
6.2 At the local level	46
6.3 At the CDEM Group level	47
6.4 At the National level	48
6.5 Recovery environment sector groups	50
6.5.1 Recovery environment sector group key roles	52
6.5.2 Recovery environment sector group examples	53
6.5.3 Recovery environment sector group flexibility and scalability	55
6.5.4 Continuity of coordination arrangements between response and recovery	57
Section 7 Recovery Environments	58
7.1 Intrinsic links and interconnections	58
7.2 Cumulative and cascading consequences.....	59
7.3 Social environment.....	60
7.4 Built environment	66
7.5 Economic environment.....	72

7.6 Natural environment	76
7.7 Other environments	81
Appendix A Referenced Resources	83

Introduction

Part A of the Recovery Preparedness and Management Director's Guideline outlines what Recovery Managers and those involved in recovery need to understand before an emergency. Section 2 defines recovery within the New Zealand context, describes the characteristics of recovery and explains the intent of recovery environments. Section 3 describes how and why communities are at the centre of recovery and explains why community involvement is a crucial part of recovery. The legislative framework for recovery with an overview of relevant *CDEM Act 2002* provisions is covered in Section 4. Section 5 describes the roles, responsibilities and functions of key agencies, positions and groups from local to national level for preparing for and managing recovery. Section 6 explains the recovery framework in New Zealand at local, CDEM Group and National level to manage recovery. Recovery environments, connections between environments and examples of consequences in each recovery environment is described in Section 7.

The purpose of Part A is to provide foundational information on recovery in New Zealand.

It is recommended that this Part is read in conjunction with Parts B and C of the Recovery Preparedness and Management Director's Guideline, which provide guidance on how to prepare for and manage recovery.

Section 2 Defining Recovery

This section outlines the definition and context for recovery in New Zealand, including why we need to prepare for recovery, and the characteristics of recovery. It provides a definition of recovery in New Zealand and emphasises that communities lie at the centre of recovery and defines what a community is. This section also describes the criticality of considering both the resilience of Māori and Māori concepts of resilience in all aspects of recovery. Recovery objectives and principles are described, along with elements of successful recovery. The characteristics of recovery and impacts recovery has on local authorities are described. Recovery environments are also introduced and the intent of them explained.

2.1 What is recovery?

Recovery involves the coordinated efforts and processes used to bring about the immediate, medium- and long-term holistic regeneration and enhancement of a community following an emergency¹.

The recovery process is about supporting people to rebuild their lives and restore their emotional, social, economic and physical wellbeing. It is more than simply building back infrastructure.

In practice, recovery from emergencies is comprehensive, participatory and inclusive of all peoples and organisations, where discussions about priorities, processes and desired outcomes need to happen before emergencies. It brings together the collective efforts of communities; local, regional and central government; lifeline utilities; health providers; the private sector; and many others to enable, empower and support affected individuals and communities.

Recovery involves many interdependent and concurrent activities that need to be managed and coordinated to²:

- support the cultural, emotional and physical wellbeing of individuals and communities
- minimise the escalation of the consequences of emergencies
- reduce future exposure to hazards and their associated risks — i.e. build resilience, and
- take opportunities to regenerate and enhance communities in ways that meet future needs (across the social, economic, natural and built environments).

[Figure 1](#) depicts how recovery activities focused on different stages/timeframes of recovery are interconnected and overlap from pre-emergency reduction and readiness activities through to long-term recovery

¹ CDEM Act 2002.

² National CDEM Plan 2015 clause 153.

activities and community development. The recovery journey is rarely linear and may also be interrupted by additional shocks that reset where a community is on the continuum, e.g. aftershocks, which means recovery planning and management needs to be flexible and responsive.

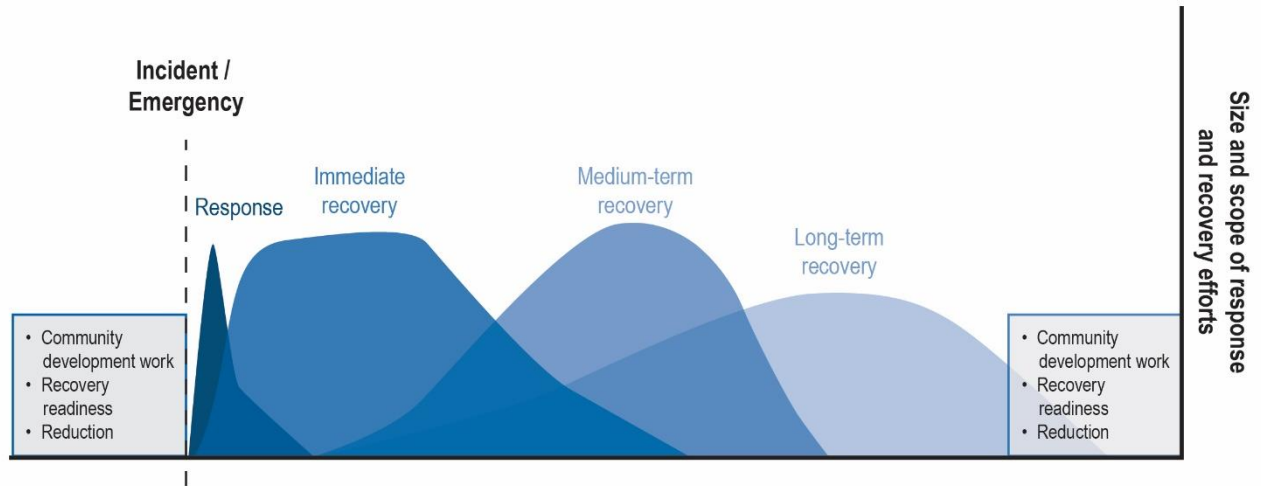


Figure 1³: The recovery continuum

Communities and recovery

Communities lie at the centre of recovery. Every recovery vision, outcome, relationship and activity should have the health and wellbeing, safety and security, and prosperity of communities at the core of its purpose.

Communities are groups of people who:

- live in a particular area of place (geographic or place-based communities)
- are similar in some way (relational or population-based communities), or
- have friendships or a sense of having something in common (community of interest)⁴.

People can belong to more than one community and communities can be any size. Communities can also be virtual.

Communities and individuals affected by an emergency will not be left unchanged by the experience. The very fabric of society and the relationships within these communities can be significantly impacted, including the foundations that support a community to function and thrive.

³ Adapted from Federal Emergency Management Agency 2016. *National Disaster Recovery Framework*, 2nd edition

⁴ National Emergency Management Agency. 2019. *National Disaster Resilience Strategy Rautaki ā-Motu Manawaroa Aituā*, 6.

PART A: Section 2 Defining Recovery

These foundations can be grouped into four key environments:

- social networks and interactions (the **social** environment)
- built assets (the **built** environment)
- economic activity (the **economic** environment), and
- the **natural** environment.

The combination of and interaction between these four environments underpin community sustainability.

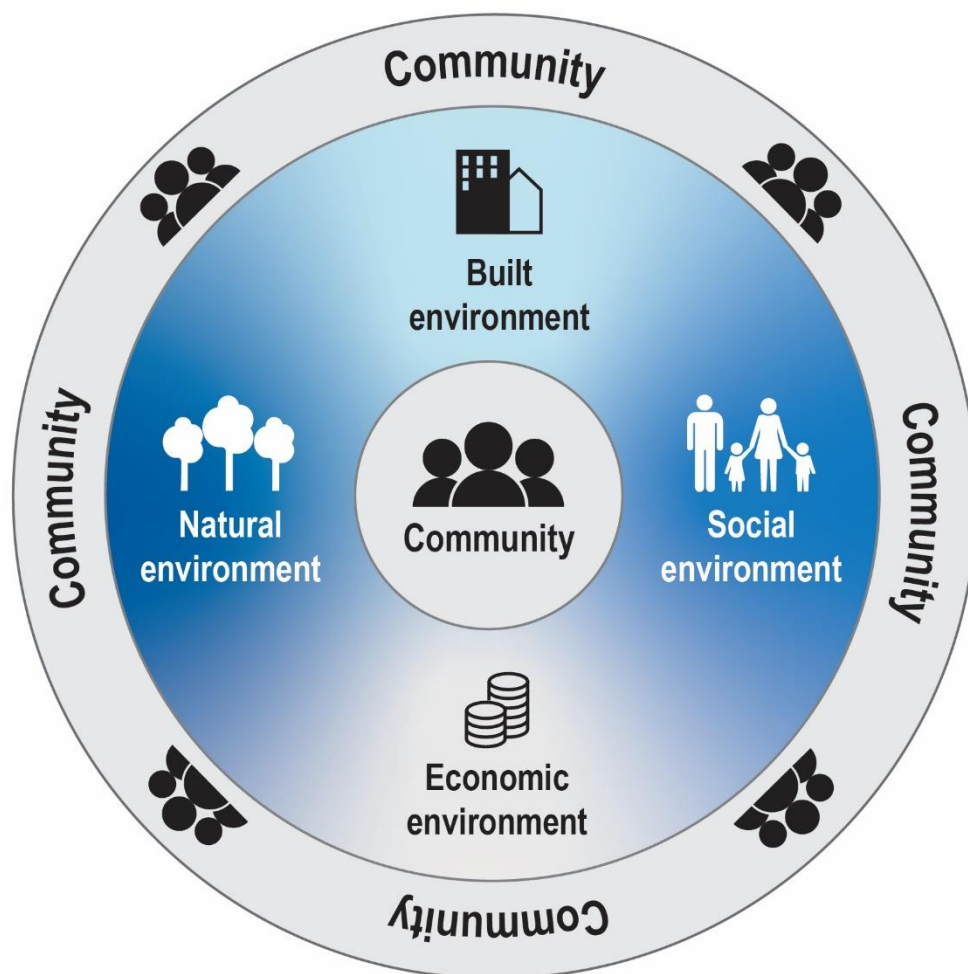


Figure 2: The foundations that interact and connect to support a community to function and thrive

Regardless of the scale of recovery, successful recovery for communities is best achieved when the affected communities are empowered and supported to exercise a high degree of involvement in setting priorities and a vision for recovery and leading community-led initiatives.

Māori and recovery

Any comprehensive framework for recovery in New Zealand needs to consider both the resilience of Māori and Māori concepts of resilience. This reflects the status of Māori as the indigenous population of New Zealand and the principles of the Treaty of Waitangi / Te Tiriti o Waitangi.

When an emergency occurs, the responsibility of caring for others and Te Ao Tūroa (the natural world) falls to whānau, hapū and iwi with historical ties to

the areas impacted by the emergency. Whakapapa creates a kinship-based form of capital understood by Māori as whanaungatanga (close relationships) that may be drawn on to aid whānau, hapū and wider communities during times of adversity. Whānau, hapū and iwi respond quickly and collectively to provide support and to address the immediate needs of their communities as well as to institute practices that will aid the recovery⁵

Māori/iwi capability for recovery includes strong local networks, an understanding of local geography and sites of significance, an ability to identify specific needs and connect with resources, and capacity to offer physical resources such as marae where this is appropriate.

This process is considered whakaoranga⁶ — the rescue, recovery and restoration of sustainable wellbeing — and may be applied to whānau, hapū and iwi tribal homelands as well as all communities and parts of New Zealand impacted by emergencies. The whakaoranga process is underpinned by kaupapa Māori (cultural values), informed by mātauranga Māori (cultural knowledge and science) and carried out as tikanga Māori (cultural practices).

Recent examples of Māori facilitating effective response and significant support to affected communities include the aftermath of the 2010–2011 Canterbury earthquake sequence, the November 2016 earthquake and tsunami, the Whakatāne District floods in 2017, and other emergencies. Māori moral and relational attributes applied to creating community resilience promote a collaborative response to disaster recovery, commitment to environmental restoration, and the extension of hospitality to others experiencing adversity. Māori also have assets and places that support community wellbeing in the aftermath of emergencies. It is important to note that while many Māori may share a similar worldview, there is still a need to recognise different dynamics both within and between iwi, hapū and marae, and to engage with each on an individual basis. There is also a need to recognise that different iwi, hapū and marae have different resource constraints and asset bases and their ability to respond is dependent on this; not all iwi, hapū and marae will have the same resilience or capacity to respond.

Strong trust-based relationships need to be in place with Māori pre-emergency⁷ and Māori need to be part of the recovery, through all environments and phases of recovery.

When engaging with Māori, the CDEM sector should be realistic about expectations, being cognisant of capacity constraints, while still ensuring Māori are given full opportunity to participate.

⁵ National Emergency Management Agency. 2019. *National Disaster Resilience Strategy Rautaki ā-Motu Manawaroa Aitua*, 21.

⁶ The concept and application of the term whakaoranga to disaster resilience was developed in the National Science Challenge Resilience to Nature's Challenges' research project: Whakaoranga marae, led by Dr Christine Kenney.

⁷ At the time of publication, work is continuing regionally to enable this, as well as nationally to provide guidance and expectations around how this can occur. Refer to the National Emergency Management Agency website for more information as this progresses.

PART A: Section 2 Defining Recovery

More information



Refer to the *National Disaster Resilience Strategy Rautaki ā-Motu Manawaroa Aituā* for more information on resilience and Te Ao Māori and the national priorities and objectives for improving the effective response to and recovery from emergencies, available at www.civildefence.govt.nz.

Need for coordination

Recovery involves many people, organisations and communities, both those that are affected and those that support affected communities to recover. Given the range of people and interdependent and concurrent activities occurring, it is crucial that everyone works together to effectively meet the needs of the affected community.

Coordination between the response to and recovery from an incident or emergency is crucial to ensure community needs are met. To affected communities, there is no clear difference between the two phases as they will begin to recover from the emergency or incident immediately afterwards and they will expect support throughout the two phases.

Accepting complexity and change

Recovery is dynamic, with high degrees of complexity, uncertainty and changeability.

The needs of communities, political dynamics, financial constraints, level of coordination needed and competing demands placed on decision makers from diverse parts of a community will change over time and recovery activities will need to adapt in response to these changes.

When the complexity of recovery and changing environment is accepted, it can begin to be addressed by:

- being flexible when managing and coordinating recovery activities, and
- anticipating, monitoring and responding to change.

Immediate, medium-, and long-term

Recovery is a process that can last weeks or months, but can also often extend for years and possibly decades depending on the significance of the consequences. Because of this, recovery of affected communities needs to be considered over a long timeframe (100 years), taking into account the ever-evolving makeup and needs of communities and factors that can influence change such as politics, legislation, future hazards and risks (e.g. climate change) and communities themselves. Monitoring these changes and addressing the evolving needs of communities over this long-term timeframe is crucial and will likely change business-as-usual planning.

Individuals and organisations involved in recovery need to recognise the long-term commitment that will be required and leaders need to be clear from the outset that it will be a long journey. This is to ensure adequate human and physical resources are planned for to support recovery, as well as take into account that business-as-usual services will resume as part of medium- and long-term recovery.

Holistic regeneration and enhancement

Holistic recovery places the community at the heart of planning and decision making. It considers how each decision will achieve goals across all foundations of that community (social, natural, built and economic

environments), acknowledging the connections between different aspects of recovery and the community.

Holistic recovery also recognises that recovery extends beyond just restoring physical assets or providing welfare services. While recovery may involve restoring communities to as close to their 'as before' states as possible, it must also support communities to positively adapt to a changed reality and explore options for further positive change and enhancement.

Recovery objectives

The *National CDEM Plan 2015* outlines recovery objectives in New Zealand. These objectives are a set of attainable intentions that enable the immediate, medium- and long-term holistic regeneration and enhancement of a community. This is done by leveraging the opportunities that an emergency can provide to improve aspects of pre-emergency conditions and increase community resilience⁸.

Recovery objectives include—

- (a) **minimising the escalation of the consequences** of the emergency; and
- (b) **regeneration and enhancement** of—
 - (i) the **social, psychological, economic, cultural, and physical wellbeing** of individuals and communities; and
 - (ii) the **economic, built, and natural environments** that support that wellbeing; and
- (c) taking practicable opportunities to **adapt to meet the future needs** of the community; and
- (d) **reducing future exposure** to hazards and their associated risks; and
- (e) supporting the **resumption of essential community functions**.⁹

Recovery principles

The principles of recovery in New Zealand are outlined in the *National CDEM Plan 2015*. These principles are fundamental to supporting a community recover and need to be integrated in all strategic planning for recovery, recovery preparedness planning and recovery management.

⁸ The well-beings in the Recovery Objectives of *National CDEM Plan 2015* (clause153(b)) are similar to the well-beings in the *Local Government Act 2002*. The *LGA 2002* states that the purpose of local government is to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future.

⁹ *National CDEM Plan 2015* Part 9 clause153.

1. Recovery consists of **co-ordinated** efforts and process to effect the immediate, medium-term, and long-term holistic regeneration and enhancement of a community following an emergency and requires that agencies and CDEM Groups **work together** in establishing **shared goals, priorities, strategies, and information needs**.
2. Recovery **involves the community and activities** across the following 4 environments:
 - (a) social
 - (b) economic
 - (c) natural
 - (d) built.
3. Recovery should be **flexible and scalable** in accordance with meeting the needs of the community.
4. Recovery measures should be **pre-planned and implemented** (with necessary modifications) **from the first day of the response** (or as soon as practicable) and should be **co-ordinated and integrated with response actions**.
5. The aim of immediate recovery activity is to **enable individuals to continue functioning** as part of the wider community.
6. **A return to past normality may be impossible** (for example, continued exposure to unacceptable levels of risk from hazards may necessitate the relocation of people and property at risk).
7. Depending on the nature, scale, and complexity of the emergency, **recovery may take a short time or many years, possibly decades**.¹⁰

In addition to the principles in the *National CDEM Plan 2015*, the Christchurch Earthquake Recovery Learning and Legacy (CERLL) programme developed five themes of recovery. These themes are common ideas or messages that relate to all aspects of recovery planning and management and have been reinforced by the experience gained throughout New Zealand.

The themes have been incorporated throughout this document so recovery leaders can be well placed to facilitate community recovery by applying them to both preparedness for recovery and management of recovery.

The five themes are:

- understanding the recovery context including the constant change and uncertainty present during recovery and the many characteristics of recovery (described in more detail in section 2.2)
- leadership and governance
- communication and community engagement
- resource allocation, and
- conditions for innovation.

¹⁰ *National CDEM Plan 2015* Part 9 clause 154.

What is successful recovery?

“Our success will not be measured by the kilometres of pipe and road that we replace, but by how the people come through this”

Jim Palmer, Chief Executive, Waimakariri District Council

Successful recovery from an emergency will look and be defined differently for each community based on their situation, challenges, vision and priorities. It is difficult and unhelpful to have one single definition of success. However, communities that have, in their eyes, successfully recovered will have elements in common. These elements include where:

- the community overcomes the physical, economic, social, emotional and environmental impacts of the emergency
- the community re-establishes economic stability and social capital that instils confidence in the community’s viability, noting this may be in a different location or way to before the emergency
- the community considers and is inclusive of the needs of all its members in its rebuild (for example, accessibility¹¹ and culturally and linguistically diverse (CALD) communities) and in doing so reduces the future exposure to hazards and their associated risk
- individuals and the community demonstrate they can deal with the consequences of future emergencies through the ability to be prepared, responsive and resilient
- the community exercises a high degree of self-determination, and community-led initiatives are enabled
- individuals lead a life that they value living, even if it is different to their life before the emergency, and
- the wide and diverse range of recovery needs of communities and individuals are all addressed in a coordinated way.

2.2 The characteristics of recovery

The complexity of recovery

Recovery differs from response and business-as-usual in many ways.

Recovery is a complex part of civil defence emergency management in terms of scale, range of activities, and duration.

The potential significant consequences on the social and economic wellbeing of people and communities from emergencies are well

¹¹ Accessibility refers to characteristics of the built environment, and of information and communication systems, that enable their use by all members of the community, regardless of people’s cultural or ethnic identity, or their age, and including people who have physical, sensory, neurological, mental, or intellectual impairment.

PART A: Section 2 Defining Recovery

documented. Supporting community recovery will occur against a backdrop of distress and uncertainty, and can be highly dynamic in nature. There may also be a spectrum of heavily affected to unaffected people within the same community, which can present a challenge to managing the difference in needs. Recovery will also often require both decisive action and careful assessment, but also sensitive and pragmatic trade-offs.

Characteristics of recovery

Recovery has a range of characteristics that need to be accounted for, including:

- recovery leadership is about courage, honesty, collaboration, influence and coordination
- recovery is longer and slower paced than response. It could take many years to achieve recovery objectives
- recovery needs to maintain a strategic focus on the immediate, medium- and long term objectives rather than serving the immediate needs only
- recovery provides a window of opportunity for major change and betterment in a community; however, this often requires trade-offs to be made
- inequities and pre-emergency trends are exacerbated during recovery
- individuals and communities are more likely to be actively involved in recovery, compared to business-as-usual activities because they have been affected by the emergency, their daily life has been interrupted or they appreciate the potential for significant change, and
- grief and psychosocial impacts on people over time are almost always the biggest and most challenging issues as they can be complex, change over time and can vary considerably between individuals.

Impact on local authorities

The impacts of even small emergencies and their subsequent recovery on CDEM Groups and local authorities can be significant. Experience shows that managing a recovery can significantly impact the business-as-usual focus of local authorities and fundamentally change the assumptions behind existing and future annual and long-term plans. This can also lead to changing planning priorities, budgets and financial arrangements, and new political concerns.

Recovery planning, management and delivery go well beyond the business-as-usual activities of local authorities, and can involve shifting priorities and resources, and collaboration with multiple stakeholders across the social, economic, built and natural environments.

Local authorities may be unaware of the level of resourcing and coordination required during recovery and the potential consequences this may have on their business-as-usual activities.

The internal business impacts on local authorities are seen in:

- large increases in demand on staff time at all levels for planning, managing, coordinating, delivering, communicating, engaging and reporting on recovery activities
- psychological impacts on staff, either from prolonged periods of high stress due to the recovery workload, insufficient support or personal impact or suffering personal loss from the emergency
- a drop off in the momentum and productivity from staff due to a mix of exhaustion from the response phase, and demands from business-as-usual roles
- the need to function to the fullest possible extent, even though this may be at a reduced level¹², while also managing recovery efforts, and
- innovative solutions or simplified processes used in recovery being incorporated into business-as-usual activities.

Real world example

Staff from Nelson City Council working on the Pidgeon Valley fire in February 2019 (particularly in governance, administration and communities) worked for a total of 530 hours / 66 days. The extra work generated from the response and recovery to the fires and corresponding accumulated leave put business-as-usual operations behind schedule and the City Council only caught up with the backlog of work four months after the fire began. This also impacted on planning for the Council's Long-term Plan¹³.

More information



More information about the impact of recovery on local authorities and critical success factors in recovery is available in the *Learning from Regional Recovery Events: A Practical Guide for Territorial Authorities and Local Recovery Managers* at www.civildefence.govt.nz.

2.3 Recovery environments

In recovery, each community is viewed as a complex whole. As described in Section 2.2, the foundations that support these communities to function and thrive are grouped into four interdependent environments. These are:

- social
- built
- economic, and
- natural.

Prior to an emergency, the state of these environments and the interaction between them will determine the wellbeing, sustainability and resilience of

¹² Refer to *CDEM Act 2002* s64 for the duties of local authorities.

¹³ Harris, K. 15 June 2019. *Business as usual for NCC after wildfire disruption*. Nelson Mail.

PART A: Section 2 Defining Recovery

the community. Emergencies impact these environments in different ways and to varying degrees, and upset the balance between them.

The definition of recovery activities¹⁴ in the *CDEM Act 2002* includes these four recovery environments.

Intent of the recovery environments

The **intent of the recovery environments** is to provide a framework to **identify and consider all possible and actual, and direct and indirect consequences of an emergency so that these can be addressed during recovery**. Consequences affecting whānau, hapū and iwi must be considered across all recovery environments.

The recovery environments may also be used as a basis for organising recovery management; for example, by having projects based on the consequences in different environments. Refer to Section 12 in Part C for more information on organising and managing recovery.

Refer to Section 7 for definitions of the recovery environments and more detailed information and examples of consequences that can occur in them.

¹⁴ Refer to Section 1.2 *Key Terms* and *CDEM Act 2002* s4.

Section 3 Communities at the centre of recovery

This section gives an overview of how and why communities lie at the centre of recovery, along with community involvement in recovery, how communities are affected and the importance of engaging and communicating with communities. The concept of community-led initiatives is introduced and the end goal of empowering communities is emphasised. The challenges of community engagement during recovery and the benefits of good community engagement are discussed.

3.1 Communities at the centre of recovery

Communities at the centre

Recovery is about regenerating and enhancing community's functions, social structures and systems following an emergency, so communities lie at the centre of recovery. Government, partners, agencies, organisations and groups work alongside communities to achieve this.

Every recovery vision, outcome, relationship and activity should have communities at the centre of its purpose. Communities includes individuals and groups in a community, as well as the foundations (i.e. recovery environments) that support communities function and thrive. Refer to *Communities and recovery* in Section 2.1.

The ability of communities to recover involves the holistic interaction between the communities and the social, economic, natural and built environments, as these environments interact to support communities. This interaction involves members of communities, so it is critical to consider the consequences of an emergency in relation to communities and to support communities by delivering local, regional and national recovery activities as required.

Recovery management is not possible without community involvement. Under the *CDEM Act 2002*, CDEM Groups are responsible for planning and carrying out recovery activities. This includes enabling community participation in recovery planning, both pre- and post-emergency. Recovery leaders need to promote joint ownership of community recovery by all stakeholders and empower communities to drive options, progress, pace and the services that are provided to support them. Community involvement is a core mechanism that drives recovery planning and management.

Community involvement in recovery management is an important means of contributing to the empowerment of individuals and communities to manage their own recovery and of encouraging innovation. Supporting and enhancing the resources, capacity and resilience already present within individuals and communities is the key to a successful recovery¹⁵.

¹⁵ Adapted from Australian Institute for Disaster Resilience. 2018. *Australian Disaster Resilience Community Recovery Handbook*.

Engaging with communities

Engaging with communities can be a balancing act between taking the time to consult, maintaining progress and making decisions that require quick action. Communities will be highly motivated following an emergency; however, they may have difficulty accessing or understanding the messages delivered or engaging in strategic recovery conversations.

There is increasing recognition that the processes used by recovery agencies, organisation and group to interact with communities are critical and can impact on the capacity and willingness of individuals and groups to manage their own recovery process.

When developing recovery plans and managing recovery, recovery leaders and teams need to consider what forms of community engagement and participation are appropriate for different phases, aspects of recovery and communities (as communities are diverse). This could range from informing the community to help them understand a decision, to enabling them to make a decision about their future¹⁶. Regardless of the form of engagement and participation, **empowering the community should always be an aim.**

There may be some decisions that have to be made by particular agencies/leaders that are not supported or understood by the affected communities. In these circumstances, communication about the decision is crucial. In recovery, traditional communication is not enough. The foundation for open and honest partnerships with communities comes from engagement, and honest, meaningful and regular communication.

Refer to Section 12.11 in Part C for more information.

Who is affected?

Emergencies can have far-reaching consequences, even for people who are not directly and obviously affected. Individuals and communities are often affected indirectly through secondary impacts that are not always tangible. For example, the consequences of an emergency are not always confined to the physical location affected by the emergency and may be felt in surrounding communities as people move away from the affected area.

Recovery leaders and teams need to understand the potential (pre-emergency) or actual (post-emergency) extent of an emergency to ensure all individuals and communities affected by the emergency are supported. Refer to Section 10 in Part C for more information.

Community-led initiatives

Successful recovery for a community is best achieved and most effective when affected communities are empowered and supported to lead the direction of their own recovery and their own initiatives.

Communities spontaneously begin their own recovery initiatives from the start of an emergency. The role of recovery leaders is to recognise these initiatives and provide structured support, coordination and communication to facilitate community recovery efforts. This may be through providing land for pop-up villages or space for community-run events.

¹⁶ Refer to the International Association for Public Participation. 2014. *IAP2's Public Participation Spectrum*.

The ability of communities to lead their own initiatives will depend on the pre-existing environment, the scale and complexity of recovery needs, the capacity of community members to participate and the level of trust in recovery leaders. All of which may change over time.

As recovery progresses in the long-term, the majority of initiatives may move from predominantly agency-led initiatives to predominantly community-led initiatives.

Real world example

Following the 2013 Seddon earthquake, Marlborough District Council facilitated and supported the Awatere Community Trust (an existing trust that provides community-based programmes and an information kiosk) to deliver recovery services. Initially the Trust engaged with welfare services, agencies and other organisations, and Marlborough District Council provided support, advice and information. The Trust supported recovery agencies, managed regular information bulletins for the community, supported people in their engagement with the Earthquake Commission and the insurance claims process, and coordinated trade capacity to assist people to get property repairs done¹⁷.

Engagement challenges in recovery

There are various challenges that may hinder individual and community involvement and engagement in recovery that need to be considered and addressed when planning and delivering engagement activities.

For an individual, the emergency may affect their ability and willingness to participate. For example:

- individuals or families/whānau may find that existing stressors have been exacerbated by the emergency, leading to further disconnection from their community
- individuals that have suffered loss or trauma may struggle with bureaucratic processes (both real and perceived)
- affected individuals will use their energy for daily living, which can become more complex and time-consuming
- some people may be physically dislocated from their original community while they live in alternative accommodation or leave the impacted area to work, or live with relatives or friends but still consider it home, or
- some people may be isolated due to age, disability or culture, which could be exacerbated by the emergency.

For communities, challenges can include¹⁸:

- individuals who do not necessarily represent the views of the communities may seek a disproportionate influence on decisions by

¹⁷ Morris, B. 2015. *Learning from Regional Recovery Events: A Practical Guide for Territorial Authorities and Local Recovery Managers*, 15. <https://www.civildefence.govt.nz/assets/Uploads/CDEM-Resilience-Fund/Learning-from-regional-recovery-events.pdf>

¹⁸ Waimakariri District Council. 2018. *Social Recovery 101: A Guide for Local Social Recovery: Waimakariri District Council's social recovery framework and lessons learnt from the Greater Christchurch Earthquakes*

PART A: Section 3 Communities at the centre of recovery

standing up as community spokespeople to media and political leaders

- new groups may emerge that claim ownership of aspects of recovery with or without broader community support
- different views that are largely quiet before an emergency may come to a head as groups blame each other for elements of the emergency
- new divisions may emerge as people make judgements about what they think is fair for them and not fair for others, or
- Councils may feeling less willing to tackle contentious issues in a highly emotive post-emergency environment.

Benefits of good community engagement¹⁹

In spite of these challenges, well-managed community engagement can:

- reduce helplessness and isolation
- create goodwill and trust between the community and the local authority (which can be hard to restore if damaged)
- realise opportunities to fully understand community challenges and discover potential solutions
- minimise divisions in the community and support the spread of reliable information, and
- help the community to understand the breadth of the issues that need to be addressed during recovery and the need to balance competing needs and expectations to achieve a pragmatic outcome.

¹⁹ Waimakariri District Council. 2018. *Social Recovery 101: A Guide for Local Social Recovery: Waimakariri District Council's social recovery framework and lessons learnt from the Greater Christchurch Earthquakes*

Section 4 Legislative Provisions

This section provides an overview of the CDEM legislative provisions in New Zealand relevant for recovery. It includes CDEM legislative definitions and legislative requirements.

The ability to fulfil CDEM functions and carry out responsibilities, including recovery, is a key requirement of the *CDEM Act 2002*. CDEM Groups, each local authority member of the CDEM Group and Recovery Managers must familiarise themselves with the *CDEM Act 2002* and the *National CDEM Plan 2015* requirements to effectively support recovery and meet their statutory obligations.

Legislative definitions

- Definition of **recovery** in s4 of the *CDEM Act 2002*.
- Definition of **civil defence emergency management** in s4 of the *CDEM Act 2002*. It includes the application of knowledge, measures and practices that are designed to recover from, or overcome any hazard or loss that may be associated with any emergency, including the planning, organisation, co-ordination, and implementation of those measures, knowledge and practices.
- Definition of **recovery activity** in s4 of the *CDEM Act 2002* describes activities that deal with the consequences of an emergency. It includes matters such as ‘measures to enable community participation in recovery planning’ as well as ‘new measures that reduce risks from hazards and build resilience’. The term is used in relation to the functions of CDEM Groups (s17(1)(e)), functions of recovery managers (s30A(1)) and tests for considering giving notice of a transition period or extending one (s94B(4)).

Legislative requirements

- **Functions of CDEM Groups** including planning and carrying out recovery activities in s17 of the *CDEM Act 2002*. It includes the application of knowledge, measures and practices that are designed to recover from, or overcome any hazard or loss that may be associated with any emergency, and planning, organisation, co-ordination, and implementation of those measures, knowledge and practices.
- Appointment and functions of Civil Defence Emergency Management **Co-ordinating Executive Groups** in s20 of the *CDEM Act 2002*.
- **Civil Defence Emergency Management Group plan requirements in relation to recovery** in s48 and s49 of the *CDEM Act 2002*.
- **Duties of local authorities** in s64 of the *CDEM Act 2002*.
- **Transition period provisions** in Parts 5A and 5B of the *CDEM Act 2002*.
- **Appointment of Group Recovery Manager and Local Recovery Managers** in s29 and s30 of the *CDEM Act 2002*.
- **Functions of Recovery Managers** in s30A of the *CDEM Act 2002*.

PART A: Section 4 Legislative Provisions

- **Persons authorised to give notice of local transition period** in s25 of the *CDEM Act 2002*.
- Roles & responsibilities of **Lifeline Utility coordination** for CDEM Groups in clause 61 of the *National CDEM Plan 2015*.
- **Transition to recovery** in clause 116 of the *National CDEM Plan 2015*.
- Roles and responsibilities of **national agencies** in Part 5 of the *National CDEM Plan 2015*.
- Part 9 Recovery of the *National CDEM Plan 2015* relating to **recovery objectives, principles, transition from response to recovery, transition periods, recovery activities and exit strategy**.

The *CDEM Act 2002* is not a guide to recovery. It requires local authorities and CDEM Groups to carry out recovery activities and empowers them to do so by allowing flexibility in how recovery is undertaken. This is so that recovery activities can be suited to local needs and can change as best practice develops.

Section 5 Roles, Responsibilities and Functions

This section describes the roles, responsibilities and functions of key agencies, positions and groups in relation to managing a recovery, both pre-emergency and during recovery.

The *CDEM Act 2002*, *National CDEM Plan 2015* and *The Guide to the National CDEM Plan 2015* set out roles and responsibilities of public and private sector agencies and organisations. The roles and responsibilities described in this section must be read in conjunction with these documents.

Past recoveries show that there needs to be clarity and understanding of who does what in recovery. This section provides that clarity. It outlines the roles, responsibilities and functions of The National Emergency Management Agency; CDEM Groups; Coordinating Executive Groups; CDEM Group office; local authorities; local politicians; agencies, NGOs and clusters; community leaders and influencers; individuals and whanau; and the private sector. It also describes the roles, responsibilities and functions of Recovery Managers at the Local, Group and National levels.

Refer to [Figure 3](#) for more information on the links between roles.

5.1 National Emergency Management Agency

The National Emergency Management Agency provides leadership, strategic guidance, national coordination and the facilitation and promotion of various key activities across the 4Rs of reduction, readiness, response and recovery to achieve the purpose of the *CDEM Act 2002*²⁰. The National Emergency Management Agency is responsible for administering the *CDEM Act 2002*.

The National Emergency Management Agency supports the Director CDEM and, if delegated by the Director CDEM, the National Recovery Manager, to carry out recovery activities as required under the *CDEM Act 2002*²¹.

Pre-emergency

In supporting the Director CDEM pre-emergency, the National Emergency Management Agency's role in recovery involves:

- contributing to the development of research, policy, regulation, frameworks and guidance that facilitate understanding of risk and the 4Rs
- planning for recovery, as well as managing, developing and maintaining appropriate national recovery capability including, where necessary, the appointment of a National Recovery Manager
- delegating functions and powers to key personnel (such as a National Recovery Manager), as appropriate

²⁰ *National CDEM Plan 2015* clause22.

²¹ *National CDEM Plan 2015* clause24 and clause25.

PART A: Section 5 Roles, Responsibilities and Functions

- supporting agencies and CDEM Groups to undertake their roles and responsibilities
- providing for recovery capability development, and
- monitoring and evaluating recovery preparedness and performance.

During recovery

No matter the scale or complexity of the recovery, the National Emergency Management Agency supports the Director CDEM and, if delegated by the Director CDEM, the National Recovery Manager by:

- supporting CDEM Group recovery activities, and
- reporting to the Minister of Civil Defence and ODESC, as required.

In practice, this means the National Emergency Management Agency provides advice, support and guidance to CDEM Groups and Recovery Managers as needed, sharing lessons from national and international recovery practices.

The National Emergency Management Agency also monitors recovery activities across New Zealand and routinely reports progress and any emerging risks or issues to the Minister of Civil Defence and ODESC if necessary.

This will be done by operational teams in the National Emergency Management Agency where possible.

The National Emergency Management Agency also supports the Director CDEM and, if delegated, the National Recovery Manager by:

- activating and coordinating National-level recovery activities
- issuing National Recovery Action Plans, and
- issuing public information.

For large or complex recoveries or for multiple recoveries, the National Emergency Management Agency may establish a National Recovery Office (NRO) to coordinate national recovery activities. The makeup, structure and size of the NRO will be determined by the nature, scale and complexity of the recovery or recoveries and by the level of national support needed.

For large, complex or nationally significant emergencies an All-of-Government Recovery Group may be activated to monitor, report and coordinate recovery activities across multiple central government agencies involved in the recovery.

5.2 Civil Defence Emergency Management Group (Joint Committee)

Civil Defence Emergency Management Act 2002

The *CDEM Act 2002* provides several functions to CDEM Groups (s17). CDEM Group functions include the need to plan, organise, coordinate and implement any knowledge, measures or practices to ensure the safety of public and property, and to guard against, prevent, reduce, recover from or overcome any hazard, harm or loss. In relation to recovery, this function includes:

PART A: Section 5 Roles, Responsibilities and Functions

- maintaining and providing suitably trained and competent personnel, including volunteers, and an appropriate organisational structure
- maintaining and providing materials, services, information and any other resources
- managing the effects of emergencies in a CDEM Group's area
- planning and carrying out recovery activities
- assisting other CDEM Groups when requested
- monitoring and reporting on their compliance with the *CDEM Act 2002*, and
- developing, approving, implementing, monitoring and regularly reviewing the CDEM Group plan including strategic planning for recovery included in the Group Plan.

The CDEM Group functions relate to both pre- and post-emergency recovery activities.

The *CDEM Act 2002* allows the CDEM Group to delegate any of their functions to its members, the Group Controller or any other persons (s18). CDEM Group needs to consider who will fulfil the functions in relation to recovery, both pre-emergency and post-emergency, when a transition period is not in place, and put in place any necessary delegations.

There are a range of actions and decisions that the CDEM Group need to make to meet their responsibilities under the *CDEM Act 2002*.

Pre-emergency

Before an emergency, CDEM Groups need to do the following:

- understand their functions, duties and authority in relation to recovery under the *CDEM Act 2002*, including how they will meet their requirements, who will support them in doing so and ensuring any delegations are in place
- appoint a CDEM Group Recovery Manager, and an alternate (in case there is a vacancy/absences of duty of the CDEM Group Recovery Manager), and ensure they are suitably qualified and experienced²². The CDEM Group may also appoint Local Recovery Managers²³
- ensure they have suitable people available to carry out recovery activities. This means determining who will carry out recovery activities on the CDEM Groups behalf after an emergency if no transition period notice is in place and delegating any functions or duties to carry out recovery activities to these people²⁴. These people may be the people appointed as the CDEM Group Recovery Managers under s29 of the *CDEM Act 2002* or someone else
- delegate any functions as appropriate to ensure recovery is adequately prepared for. The delegated person may or may not be

²² *CDEM Act 2002* s29

²³ *CDEM Act 2002* s30

²⁴ Refer to *CDEM Act 2002* s18(1)

PART A: Section 5 Roles, Responsibilities and Functions

the CDEM Group Recovery Manager as appointed under s29 of the *CDEM Act 2002*

- decide and appoint people authorised to give notice of a transition period for the Group's area, in what hierarchy and if there are any limitations on their authority²⁵
- agree and understand their governance role before and during a recovery, and identify what information, advice or reporting is needed from the Recovery Manager and/or others during recovery
- ensure strategic planning for recovery²⁶ is completed and in the CDEM Group Plan, the subsequent work programme delivers against this, and progress is monitored and action taken where needed
- ensure operational recovery planning is undertaken by CDEM Group members
- ensure on an ongoing basis that those with responsibilities to plan or support recovery activities are suitably trained and competent, and
- understand the needs of other CDEM Groups and agree what support can be offered during recovery (for example one CDEM Group area may be a logical evacuation/accommodation area for a neighbouring CDEM Group area).

During recovery

CDEM Groups have a function to carry out recovery activities. In practice, this means they need to do the following:

- ensure they have suitable people available to carry out recovery activities. Delegate a suitably trained and experienced person (or people) to carry out recovery activities²⁷. If a transition period is in place, the Group Recovery Manager (appointed under s29 of the *CDEM Act 2002*) has access to specific functions and powers to help aid these recovery activities. However, if no transition period is in place, the CDEM Group needs to determine who will carry out recovery activities on the Groups behalf (this may be the person appointed as the CDEM Group Recovery Manager under s29 of the *CDEM Act 2002* or someone else)
- determine priorities for recovery and oversee recovery activities to ensure these priorities and the needs of the community are met. This would generally be done in consultation with the affected communities, include specific performance indicators for the desired recovery outcomes and regular reporting against the priorities to the CDEM Group
- consider the wider regional or national consequences beyond the geographical area impacted by the emergency and ensure any

²⁵ *CDEM Act 2002* s25

²⁶ Refer to *Legislative requirement for strategic planning for recovery* in Section 8.2 in Part B and *Strategic Planning for Recovery Director's Guideline [20/17]* at www.civildefence.govt.nz for more information on what needs to be considered in strategic planning for recovery.

²⁷ *CDEM Act 2002* s17(1)(b) and s29

necessary measures are put in place in their Group area to mitigate the consequences

- ensure recovery activities adapt to the changing needs of the recovery and the community, and
- coordinate funding decisions across the area to meet the wider regional needs.

5.3 Coordinating Executive Group (CEG)

The Coordinating Executive Group (CEG) has an important leadership role in coordinating planning and implementation of work programmes within a CDEM Group. The functions of the CEG include²⁸:

- providing advice to the Joint Committee
- implementing, as appropriate, the decisions of the Joint Committee, and
- overseeing the implementation, development, maintenance, monitoring and evaluation of the CDEM Group Plan.

In practice, this means overseeing the annual work programme required to implement the CDEM Group Plan and advising the Joint Committee of, including (but not limited to):

- the adequacy of resources, facilities, information and arrangements to plan for and manage recovery activities, including the level of community engagement in planning
- the associated budget requirements
- progress against the annual business plan and the effectiveness of any actions in achieving defined recovery priorities and objectives stated in the CDEM Group Plan, including strategic planning for recovery activities
- any emerging or actual risks or issues and the necessary mitigation measures needed
- the capability of anyone with direct or delegated responsibilities under the *CDEM Act 2002* under the governance of the CDEM Group, and
- the level of the CDEM Groups compliance with the *CDEM Act 2002* and its associated regulations.

²⁸ *CDEM Act 2002* s20(2).

PART A: Section 5 Roles, Responsibilities and Functions

Pre-emergency

The CEG provides advice to their CDEM Group on the activities needed to prepare for recovery and implements decisions of the CDEM Group related to pre-emergency recovery planning. Before an emergency, CEGs need to do the following:

- understand their functions, duties and authority in relation to recovery under the *CDEM Act 2002*, including how the CDEM Group will meet their requirements, who will support them in doing so and ensuring any delegations are in place
- agree and understand their governance role before and during a recovery, and identify what information, advice or reporting is needed from the Recovery Manager and/or others during recovery
- ensure operational recovery planning is included and delivered in their councils work programme
- identify collective capability across the Group area and agree arrangements between other CDEM Groups and local authorities. This includes the capability needed to manage recovery activities, recognising that much of the work will be done by local authority staff. This could involve agreeing on Memorandums of Understanding and Service Level Agreements
- ensure on an ongoing basis that those with responsibilities to plan or support recovery activities are suitably trained and competent, and
- understand the needs of other CDEM Groups and agree what support can be offered during recovery (for example one CDEM Group area may be a logical evacuation/accommodation area for a neighbouring CDEM Group area).

During recovery

The CEG provides senior executive oversight, management support and advice to the Group Recovery Manager and the CDEM Group during recovery management, including during transition periods. In practice, this means they need to do the following:

- provide suitably trained and competent staff to support the Recovery Manager. This is likely to include staff from across the local authorities
- implement organisational arrangements / a structure for recovery and the associated Recovery Team and office if necessary
- make available information to support the recovery
- ensure recovery activities adapt to the changing needs of the recovery and the community
- make decisions regarding the gradual transition to business-as-usual activities and the disestablishment of the recovery arrangements and Recovery Team/office in a managed and coordinated way, and
- make staff available from across the CDEM Group area to support a recovery in another CDEM Group.

5.4 Recovery Managers

Overview

A Recovery Manager means the National Recovery Manager, a Group Recovery Manager or a Local Recovery Manager and includes any person acting under the authority of the National Recovery Manager, a Group Recovery Manager or a Local Recovery Manager²⁹.

In relation to Recovery Managers, the *CDEM Act 2002*:

- requires Group Recovery Managers, and Alternate Group Recovery Managers, be appointed
- states that Local Recovery Managers may be appointed
- provides functions to Group Recovery Managers during transition periods
- allows the Director CDEM to delegate specific functions and powers to a National Recovery Manager
- allows the CDEM Group to delegate functions to Group Recovery Managers and Local Recovery Managers, and
- provides powers to all Recovery Managers, no matter their level, during transition periods.

The appointments, functions and powers of different levels of Recovery Managers are summarised in [Table 1](#), and this section explains what this means in practice.

The functions and powers provided for Recovery Managers under the *CDEM Act 2002* are only applicable when a notice of transition period is in effect. This section also considers responsibilities when a transition period is not in effect.

Recovery Manager skills

The Recovery Manager role is pivotal and requires advanced leadership skills due to the complexity of managing a diverse recovery programme and the wide range of stakeholder liaison and management required.

Knowledge of the workings of communities, local and central government and the four recovery environments is essential for the role.

Recovery Managers at all levels need to be:

- empathetic and realistic
- consistent in their approach to dealing with people
- strong and assertive — and be comfortable saying no when required
- actively communicating with Councils, Recovery Team members, the recovery environment sector groups and other agencies, and ensuring ongoing communications with communities
- willing to have straight and honest conversations, especially with senior executives and political representatives, including Mayors and

²⁹ *CDEM Act 2002* s4.

PART A: Section 5 Roles, Responsibilities and Functions

Councillors, central Government Ministers and the affected community

- able to manage and navigate strong personalities
- appointed at a senior level that allows recovery matters to be managed with an adequate level of resourcing and urgency
- able to get on the ground and understand what the issues are³⁰, and
- be proactive and think strategically across all areas of recovery, making links between projects.

Table 1: CDEM Act 2002 provisions for the appointment, functions and powers of Recovery Managers

Role	Appointment	Functions	Powers
National Recovery Manager	<u>By delegation from Director CDEM under s11A(1), otherwise remains with the Director CDEM</u>	<u>s8(2)(h)</u>	<u>s9(2)(a) and s94H, 94I and 94K - 94N</u>
CDEM Group Recovery Manager & Alternate	<u>CDEM Group <i>must</i> appoint under s29(1) and s29(2)</u>	<u>s30A(1) and s30A(2) if CDEM Group delegates any functions</u>	<u>s94H, 94I and 94K - 94N</u>
Local Recovery Manager	<u>CDEM Group <i>may</i> appoint under s30(1)</u>	<u>s30(A)(1) if directed to perform functions of CDEM Group Recovery Manager (including those delegated) by CDEM Group</u>	<u>s94H, 94I and 94K - 94N</u>

5.5 National Recovery Manager / Director Civil Defence Emergency Management

National recovery activities³¹

If the Minister of Civil Defence gives notice of a national transition period, the Director CDEM is responsible for coordinating, directing and controlling resources made available for CDEM (s8(2)(h) and 9(2)(a) of the *CDEM Act 2002*). The National Emergency Management Agency supports the Director CDEM to do this, but the Director CDEM may also delegate certain functions and powers to the National Recovery Manager, in s8(2)(h) and s9(2)(a) of

³⁰ Morris, B. 2015. *Learning from Regional Recovery Events: A Practical Guide for Territorial Authorities and Local Recovery Managers*, 15. <https://www.civildefence.govt.nz/assets/Uploads/CDEM-Resilience-Fund/Learning-from-regional-recovery-events.pdf>

³¹ *National CDEM Plan 2015* clause 156.

PART A: Section 5 Roles, Responsibilities and Functions

the *CDEM Act 2002*, for the purposes of dealing with a national transition period and, where necessary, establish a National Recovery Office.

These functions and powers available to the Director CDEM (and the National Recovery Manager if a delegation is in place) are, during a national transition period, to:

- direct and control for the purposes of the Act the resources available for CDEM (s8(2)(h) *CDEM Act 2002*), and
- coordinate the use of and use for the purposes of the Act, personnel, material, information, services and any other resources made available by departments, CDEM Groups, emergency services, New Zealand Defence Force (as provided in the *Defence Act 1990*) and other persons (s9(2)(a) *CDEM Act 2002*).

While the delegation is in force, the delegated person is the National Recovery Manager and has all the powers of the National Recovery Manager in the *CDEM Act 2002*. If no delegation has been made under the *CDEM Act 2002*, the Director CDEM is the National Recovery Manager.

In a large-scale recovery, the Government may establish an agency to manage and coordinate the Government's interest in the recovery. This agency will partner with the affected local authorities and CDEM Groups and may be given specific roles, responsibilities and powers.

In smaller scale recoveries, where the scale of coordination is beyond the resources of the CDEM Group or the consequences of the emergency are nationally significant, the Director CDEM may coordinate national recovery activities through a National Recovery Manager and, where necessary, a National Recovery Office.

Role during a national recovery transition period

In addition to the functions and powers provided by the *CDEM Act 2002*, the role of the National Recovery Manager is set out in clause 156 of the *National CDEM Plan 2015*. The National Recovery Manager:

- coordinates the establishment of, and planning for, recovery activity in the short, medium, and long term
- implements appropriate reporting and tracking mechanisms
- activates and coordinates the agencies involved in recovery
- chairs and coordinates meetings of representatives from recovery environment sector groups
- assists with the provision of advice to the Minister and to Cabinet on recovery activities, as required
- works with the National Controller and the Public Information Manager to ensure a smooth transition between response and recovery
- coordinates the recovery activity of the relevant CDEM Groups, lifeline utilities, agencies, and international assistance following the transition from response to recovery and during the short, medium, and long term

PART A: Section 5 Roles, Responsibilities and Functions

- if necessary, establishes a National Recovery Office to ensure that recovery activity is co-ordinated and the recovery function is implemented
- liaises with CDEM Group Recovery Managers
- determines and prioritises major areas of recovery
- develops recovery policies
- develops a national recovery plan and national action plan, to establish time frames for the implementation of recovery activities
- coordinates advice on government assistance, and
- provides national-level co-ordination of public information related to recovery.

5.6 Group Recovery Manager

Pre-emergency

CDEM Group Recovery Managers appointed under s29 of the *CDEM Act 2002* must perform any functions or duties delegated to them by the CDEM Group or conferred on them by the *CDEM Act 2002* or any other enactment, and may exercise any power conferred on them by delegation under the *CDEM Act 2002*³².

During readiness, it is recommended CDEM Groups delegate their function to plan for recovery activities to either the Group Recovery Manager (as appointed under s29 of the *CDEM Act 2002*) or to another suitably qualified and experienced person (for example, the recovery portfolio holder)³³.

In delivering this function, the readiness activities include the following:

- Planning
 - providing advice and assistance on planning and preparation activities to Local Recovery Managers (if appointed) and other agencies with potential recovery roles
 - helping ensure that arrangements and procedures for local and CDEM Group-level recovery are in place, are being put in place or are being improved
 - planning with other CDEM roles, CIMS functions and local authority teams on how recovery will be supported and managed and the move from response to recovery will be managed
 - establishing recovery environment sector groups and appointing recovery environment sector group Chairs, and
 - actively encouraging and driving strategic planning for recovery and participating in this planning.

³² *CDEM Act 2002* s30A(2).

³³ Refer to *CDEM Act 2002* s18(1)

PART A: Section 5 Roles, Responsibilities and Functions

- Developing recovery capability
 - determining recovery capability needs across the CDEM Group area
 - ensuring capability is grown through training courses, on-the-job learning and assessment, and wider development programmes
 - participating in workshops, forums and conferences
 - collaborating within and across CDEM Groups and agencies
 - assisting with building and maintaining relationships with and among local- and regional-level agencies, organisations and stakeholders, and
 - working with CDEM Group personnel and the CEG to elevate the status of recovery at the governance level.
- Exercising and testing
 - exercising and testing recovery arrangements to evaluate capability, identify gaps and issues, practice roles and responsibilities and implement lessons learned to continually improve recovery preparedness.
- Monitoring, evaluation and reporting
 - monitoring and reporting to the CEG and the Joint Committee on the capacity and capability across the CDEM Group in meeting their legislative requirements in relation to recovery
 - establishing an effective recovery monitoring framework to monitor recovery preparedness and actual recovery progress
 - regularly reporting to the CEG and the Joint Committee on progress and outcomes, and
 - ensuring lessons from post-recovery debriefs and/or reviews are incorporated into recovery arrangements.
- Public education and community engagement
 - ensuring local authorities engage with their communities to understand the likely consequences from specific emergencies, and the communities' recovery priorities
 - supporting local authorities with education programmes to build public awareness of the likely consequences of emergencies and how to prepare for recovery
 - working with regional and/or local-level decision-makers and leaders to enhance their understanding of recovery and to promote the importance of recovery, and
 - engaging and building relationships with iwi.

Refer to Section 8 in Part B for detailed activities.

PART A: Section 5 Roles, Responsibilities and Functions

During response Refer to Sections 10.3 and 10.4 in Part C for guidance on what a Recovery Manager, if delegated authority by the CDEM Group, should do during response.

During recovery Group Recovery Managers and Local Recovery Managers are responsible for managing recovery at their respective levels and areas of appointment during transition periods (refer to [Section 6](#) for more information on responsibilities across the national recovery framework). During transition periods, Group Recovery Managers and Local Recovery Managers must:

...direct and co-ordinate the use of the personnel, material, information, services, and other resources made available by departments, Civil Defence Emergency Management Groups, and other persons for the purpose of carrying out recovery activities.³⁴

During recovery management (whether a transition period is in place or not), the responsibilities of CDEM Group Recovery Managers are to³⁵:

- perform any functions or duties delegated to them by the CDEM Group or conferred on them by the *CDEM Act 2002* or any other enactment, and may exercise any power conferred on them by delegation under the *CDEM Act 2002*³⁶
- undertake planning, and manage, direct and coordinate activities throughout recovery and, if necessary, establish a CDEM Group Recovery Team and office to manage the Recovery function
- oversee and maintain an awareness of ongoing impacts and needs assessment, and review recovery activities and priorities according to information gathered
- liaise with, and adequately brief, the National Recovery Manager (where delegated) or the National Emergency Management Agency and, at the local level, a Local Recovery Manager or Managers, where these are appointed by the CDEM Group
- lead the development of the CDEM Group (emergency-specific) Recovery Plan to establish timeframes for recovery activities³⁷
- facilitate communication between agencies and organisations undertaking recovery activities
- ensure there are appropriate reporting and tracking mechanisms and monitor the progress of recovery against the objectives and arrangements identified in the CDEM Group Recovery Plan
- report recovery progress and risks to governance, including the CDEM Group (Joint Committee) and CEG

³⁴ *CDEM Act 2002* s30A(1).

³⁵ Built on the *Guide to the National CDEM Plan 2015* clause 32

³⁶ *CDEM Act 2002* s30A(2).

³⁷ Refer to Section 8.3 in Part B

- coordinate recovery activities of the relevant recovery environment sector groups/programmes, territorial authorities, lifeline utilities and agencies
- work alongside Local Recovery Managers to determine and prioritise major areas of recovery, and coordinate advice on regional assistance
- provide regional coordination of public information related to recovery
- ensure that, where possible, new measures are undertaken to reduce risks, and
- work with the Recovery Team, recovery environment sector group/programme representatives, communities, and local authorities to develop a recovery Exit Strategy, and oversee the implementation of recovery exit arrangements to ensure that communities continue to receive the support they need.

More information



More information on the responsibilities of CDEM Group Recovery Managers during a transition period, including on taking direction from the National Recovery Manager and reporting after transition periods is in the following documents at www.civildefence.govt.nz.

- *Factsheet: Local Transition Periods*
- *Factsheet: Powers of a Recovery Manager during transition*
- *Factsheet: Reporting on use of powers during a transition period*

Acting as Local Recovery Manager

A CDEM Group may appoint a suitably qualified and experienced person or persons to perform the function of a Local Recovery Manager. Where a Local Recovery Manager is not delegated authority by the CDEM Group, a CDEM Group Recovery Manager, with support from the affected Council, may fulfil the role.

5.7 Local Recovery Manager

Pre-emergency

During readiness, the Local Recovery Manager should:

- understand their role, responsibilities and powers available during a transition period
- help build relationships with (and among) community leaders, groups and local agencies and stakeholders
- ensure that arrangements and procedures for community and local recovery are in place, are being put in place or are being improved
- work with local decision-makers, leaders, Council and senior executives to enhance their understanding of recovery and the potential impacts of recovery management on the Council, and promote the importance and elevate the status of recovery
- work with other Local Recovery Managers and the CDEM Group Recovery Manager on planning (including strategic planning for

PART A: Section 5 Roles, Responsibilities and Functions

recovery) and other preparation activities in the local or CDEM Group area, and

- contribute to and champion territorial authority strategic planning for recovery.

During response Refer to Sections 10.3 and 10.4 in Part C for guidance on what a Recovery Manager, if delegated authority by the CDEM Group, should do during response.

During recovery Group Recovery Managers and Local Recovery Managers are responsible for managing recovery at their respective levels and areas of appointment during transition periods (refer to [Section 6](#) for more information on responsibilities across the national recovery framework). During transition periods, Group Recovery Managers and Local Recovery Managers must:

...direct and co-ordinate the use of the personnel, material, information, services, and other resources made available by departments, Civil Defence Emergency Management Groups, and other persons for the purpose of carrying out recovery activities.³⁸

During recovery management (whether a transition period is in place or not), the responsibilities of Local Recover Managers are to:

- lead the development of a local recovery action plan, ensuring that recovery environment sector group and community input is sought and provided
- lead, facilitate and enable community engagement
- be the primary interface with territorial authority management and governance functions
- be responsible and accountable for financial processes, arrangements and budgets
- coordinate the ongoing activity of local recovery environment sector groups/programmes
- oversee or maintain an awareness of continued local impacts and needs assessment, and review recovery activities and priorities
- facilitate communication between community leaders, groups and organisations
- work with staff of centres for community recovery, if activated, to ensure that recovery-related services and information are available to the public
- liaise with other Local Recovery Managers and ensure information flows / is reported to the CDEM Group Recovery Manager

³⁸ CDEM Act 2002 s30A(1).

PART A: Section 5 Roles, Responsibilities and Functions

- liaise with, and adequately brief, the National Recovery Manager, where delegated, or the National Emergency Management Agency and the CDEM Group Recovery Manager
- monitor the progress of recovery against the objectives and arrangements identified in the local recovery action plan, and
- work with the Recovery Team, recovery environment sector group/programme representatives, communities and the local authority to develop a recovery Exit Strategy, and oversee the implementation of local recovery exit arrangements to ensure that communities continue to receive the support they need.

Local Recovery Managers should regularly communicate with Council leadership and staff, and engage the whole council in recovery. This will help to ensure that:

- an appropriate level of resources are applied to recovery
- there is no 'drop-off' of interest and awareness of the event, and
- recovery staff are adequately supported.

Council and senior executive awareness usually leads to greater organisational support for recovery management.

Following direction during a local transition notice

During a local transition period, the Local Recovery Manager may perform any of the functions and duties of, or delegated to, the Group Recovery Manager. The Local Recovery Manager may also exercise the powers of the Group Recovery Manager in the area the Group Recovery Manager is appointed³⁹.

A Local Recovery Manager must follow any directions given by the Group Recovery Manager during a transition period⁴⁰.

The Minister of Civil Defence may also direct the CDEM Group, Director CDEM or a person — notably a Recovery Manager or constable — to perform or cease to perform any functions or duties or exercise powers during a transition period⁴¹.

5.8 Civil Defence Emergency Management Group Office / Civil Defence Emergency Management staff

Group Emergency Management Offices (GEMOs), where established, or CDEM staff embedded in territorial authorities, support and/or manage the delivery of strategy and work programmes on behalf of the CDEM Group (Joint Committee) and the CEG. They usually coordinate day-to-day planning and project work prior to emergencies, and respond to advisories, warnings and emergency events as required. The involvement of GEMOs in

³⁹ CDEM Act 2002 s30(1)

⁴⁰ CDEM Act 2002 s30(2)

⁴¹ CDEM Act 2002 s94J

PART A: Section 5 Roles, Responsibilities and Functions

recovery varies according to the delegations of each CDEM Group, and may include the pre- and post-emergency roles.

Pre-emergency

Pre-emergency, as required by the CDEM Group, GEMOs and CDEM staff may:

- coordinate, manage and facilitate recovery planning and preparation activities
- provide recovery advice and assistance to Recovery Managers, local authorities, support agencies and recovery project teams
- assist with building and maintaining relationships with stakeholders who have roles in recovery management, and
- work with Recovery Managers and the CEG to raise awareness of recovery among stakeholders.

During recovery

During recovery, as required by the CDEM Group, GEMOs and CDEM staff may:

- support the Group Recovery Manager in recovery planning and coordination activities
- establish a CDEM Group Recovery Team, including leadership of functions and support staff, as required
- support the development of the CDEM Group recovery action plan, and monitoring and reporting of progress, and
- support and advise Local Recovery Managers, as required.

5.9 Local authorities

As members of a CDEM Group, individual local authorities have the same functions as the CDEM Group to '*plan and carry out recovery activities*'⁴².

Local authorities must also ensure they are able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency⁴³. Recovery activities needed to support communities after an emergency rely heavily on a local authority's core business. For example, housing, infrastructure, funding, land use, community engagement and community development. These will significantly impact on local authorities and need to be prepared for.

Local authorities need to understand the likely impacts on their core business and plan accordingly. They must ensure they have the capability, arrangements and protocols (this may be in the form of Service Level Agreements between CDEM Groups and territorial authorities) in place for recovery, and that they have a business continuity plan to ensure their core

⁴² CDEM Act 2002 s17(1)(e).

⁴³ CDEM Act 2002 s64.

business is able to function following an emergency, taking into account the additional recovery activities.

Other roles of particular relevance to recovery include the roles of territorial authorities as lifelines utilities owners and operators, and the responsibilities of all local authorities for strategic planning for recovery as members of CDEM Groups.

Territorial authorities (city and district councils)

Territorial authorities are at the forefront of recovery delivery and coordination. Territorial authorities represent their communities and are almost always the first port of call for communities in need.

The roles of territorial authorities in recovery are to:

- lead, promote and champion city-/district-wide investment in resilience including tackling gaps in hazard risk management policy, pursuing resilient urban development, increasing infrastructure resilience, safeguarding natural buffers, strengthening financial and societal capacity and investing in organisational resilience⁴⁴
- lead and manage pre- and post-emergency recovery activities at the local level to bring about regeneration and enhancement of communities
- prepare for recovery prior to emergencies by ensuring that appropriate people, structures, planning and resources are not just fit-for-purpose but future-ready and adaptable, and
- provide a coordination point for recovery management at the local level; support for a Local Recovery Manager, if appointed; and a Local Recovery Team, if required, including managing recovery claims and Mayoral Funds.

Regional councils

Regional councils have an important role to play in supporting recovery preparation and management, often as a part of recovery arrangements at the CDEM Group level.

The roles of regional councils in recovery, depending on CDEM Group requirements and delegation, are to:

- provide support to CDEM Groups and/or territorial authorities in preparing for and managing recovery — this may be through the provision of staff to boost capacity or specialised skills — and plan and carry out specific recovery activities in relation to the regional councils business-as-usual functions, and
- contribute to regional recovery management by providing agreed services to other CDEM Groups, territorial authorities and communities, as required.

⁴⁴ National Emergency Management Agency. 2019. *National Disaster Resilience Strategy Rautaki ā-Motu Manawaroa Aituā*.

**Unitary
authorities**

Unitary authorities have the responsibilities of both territorial authorities and regional councils.

5.10 Local politicians (Mayors, Councillors and Regional Council Chairs)

Pre-emergency

As members of a CDEM Group, Mayors have functions under the *CDEM Act 2002* to plan for and carry out recovery activities. In planning for recovery, they need to:

- ensure sufficient resources are made available to enable coordinated recovery planning and implementation
- ensure they understand their role and responsibilities under the *CDEM Act 2002* with respect to recovery, and how to undertake their role in accordance with the legislation
- ensure they understand the hazards and risks within their area, including the risk management measures in place to enable them to make informed decisions
- understand their communities, and build trusted relationships within their communities to ensure they are well connected and able to represent them and support them should the need arise, and
- build relationships with leaders in their area across the private sector, lifeline utilities, iwi and government agencies.

During recovery

Governance leadership sets the whole tone and approach towards recovery management, and this shapes how recovery activities are managed to support communities. Experience from recoveries show that the following factors will greatly enhance recovery effectiveness:

- highly engaged Mayors are the public 'face and voice' of recovery and are the primary political link between local authorities and communities
- Mayors play an oversight role by understanding issues first, and providing linkages and liaison with local and central Government, and
- Councillors, Chairs and Community Board members understand their roles and responsibilities during recovery, and actively support recovery. Active involvement of Councillors and Community Boards in recovery will allow community leaders or champions to step forward and utilise existing community networks and strengths.

In supporting their communities following an emergency, Mayors, Councillors and Chairs will:

- attend briefings with the Recovery Manager during response and recovery on recovery matters to keep up to date on the situation
- attend and participate in community meetings to provide information and support to affected communities

PART A: Section 5 Roles, Responsibilities and Functions

- the Mayor or person designated to act on their behalf will act as spokesperson, providing information or statements to the media and Government officials on recovery activities
- communicate information to the affected communities, and act as a conduit between the communities and the Recovery Team, ensuring their issues, needs and concerns are raised and acted upon, and
- advocate to central government and the private sector for support, where necessary.



CDEM Group plans identify persons who are appointed and otherwise authorised to give, extend or terminate a notice of a local transition period under the *CDEM Act 2002*⁴⁵. The Mayor of a territorial authority, or an elected member of that territorial authority designated to act on behalf of the mayor if the mayor is absent need to understand the legal tests that must be met in order to do so, and familiarise themselves with the related guidance and forms that must be used.

Factsheet: Local transition periods and Quick Guide: Giving notice of a transition period are available at www.civildefence.govt.nz.

The forms for giving, extending or terminating a local transition period are in Schedule 2 of the CDEM Regulations 2003, available at www.civildefence.govt.nz.

5.11 Agencies, non-government organisations or clusters

Many agencies⁴⁶, non-government organisations or clusters⁴⁷ have roles to play in CDEM, including during recovery management. A comprehensive list of agencies, non-government organisations or clusters with roles and responsibilities in CDEM is provided in Appendix 3 of *The Guide to the National CDEM Plan 2015*.



Additional information on the roles and support that central government can provide during recovery can be found at www.civildefence.govt.nz.

5.12 Community leaders and influencers

Pre-emergency

The role community leaders and influencers have prior to an emergency is similar to aspects of the roles of Mayors and Councillors. Community leaders have a role to play in:

- understanding their communities, and building trusted relationships within their communities, to ensure they (community leaders and

⁴⁵ *CDEM Act 2002* s25(5).

⁴⁶ Agency means a government or non-government organisation or entity (other than a CDEM Group) with responsibilities under the *National CDEM Plan 2015*

⁴⁷ Cluster means a group of agencies that interact to achieve common CDEM outcomes.

PART A: Section 5 Roles, Responsibilities and Functions

influencers) are well connected and able to represent and support their communities should the need arise

- raising the awareness and understanding of hazards and recovery in their communities
- building relationships with other leaders in their community, including across the private sector and with iwi and local authorities, and
- contributing to shaping their community's visions and values by participating in community planning with their local authorities, iwi or community groups, and encouraging others in the community to do the same.

Recovery Managers and leaders should build relationships with community leaders and influencers before an emergency to ensure they are included during recovery.

During recovery

Following an emergency, new community leaders and influencers are likely to emerge. Some will self-identify as community leaders, some will be put forward as leaders by their community, and some communities may have several (sometimes conflicting) leaders present themselves.

In practice, community leaders and influencers will support their communities following an emergency. This may include:

- liaising with the Recovery Manager to inform them about the consequences for the community and the recovery progress
- attending and participating in community meetings and events, sometimes as a community spokesperson, to provide information and support to affected communities
- communicating information to the affected community and acting as a conduit between the community and the Recovery Team, ensuring community issues, needs and concerns are raised and acted upon, and
- advocating for support, where necessary.

5.13 Individuals and whānau

Pre-emergency

Prior to an emergency, individuals and whānau have a role in improving their own resilience and preparedness. This may include:

- understanding their risks
- reducing their risk factors, which could include insuring personal assets
- preparing family/whānau emergency plans
- helping to shape their community's vision and values and identifying collective resources by participating in community planning with their local authorities, iwi or community groups, and
- participating in community response and recovery planning.

During recovery

Recovery management is not possible without community involvement. Communities and individuals spontaneously begin their own recovery activities from the start of an emergency. During recovery, individuals and whānau may:

- participate in recovery planning, including contributing to the development of recovery objectives and priorities
- participate in the delivery of recovery activities
- lead community recovery activities/projects
- support friends, whānau and neighbours to recover
- make financial transactions to support economic recovery of a community, and
- rebuild personal assets/property.

5.14 Private Sector

Pre-emergency⁴⁸

Pre-emergency private sector organisations and businesses can do the following:

- Understand their risks and invest in resilience
 - make resilience a strategic objective and embed it in appropriate actions, plans and strategies. The continuity of their business, and the wellbeing of the people who rely on their products/services, depends on it. They need to include all aspects of their businesses, including employees, customers, suppliers and distribution channels, assets, information and any other factors influencing an organisation's prosperity or survival. Developing an understanding of all risks and associated consequences, will enable organisations to identify the appropriate actions to reduce risk and prepare for recovery.
- Learn about and plan for recovery
 - take a holistic view of the likely consequences so that organisations understand the critical functions and actions that will be needed, and plan accordingly. The act of planning will allow roles to be clearly established; inform employees, suppliers and customers of steps the business will take to recover; and place organisations in a stronger and more agile position.
- Invest in organisational resilience and recovery arrangements
 - ensure plans are sufficiently practiced so organisations can be more agile and confident in managing their risks and are able to adapt to unforeseen circumstances. Practicing plans can identify

⁴⁸ Adapted from Resilient New Zealand. Contributing More – Improving the Role of Business in Recovery.

PART A: Section 5 Roles, Responsibilities and Functions

gaps in arrangements and allow for corrective actions to be taken to further strengthen recovery preparedness.

- Collaborate with others and build networks
 - organisations need to build broad networks with other organisations, central and local government and NGOs with similar objectives for risk, resilience and recovery. They need to identify contributions they can make to community recovery and support other organisations to do the same.

During recovery

The private sector plays an important role in recovery. It supports:

- recovery activities by providing goods and services and specialist expertise
- social recovery by providing employment and a sense of normality to employees
- economic recovery by enabling, encouraging or making economic transactions
- built recovery by rebuilding infrastructure that has been damaged, and
- natural recovery by regenerating and enhancing land that has been damaged.

Section 6 Recovery Framework

This section describes the national recovery framework in New Zealand emphasising the flexibility and scalability of the framework. It describes the strategic and operational responsibilities, at a local, CDEM Group and National level to manage, coordinate and deliver recovery activities. It also explains the factors that determine the role CDEM Group and National level take to support community recovery. Recovery environment sector groups are explained including their purpose, formation and activation.

The recovery framework should be applied for emergencies where the National Emergency Management Agency or CDEM Groups / local authorities are:

- the lead agency, or
- supporting another lead agency.

6.1 The National Recovery Framework

The National Recovery Framework describes the arrangements for managing recovery at the Local, CDEM Group and National level and is illustrated in Figure 3.

[Figure 3](#) shows the common arrangements, connections and interactions between the three levels of government and the community. These interactions (note these are not reporting lines) are shown by the solid blue arrows, while the graduated horizontal blue arrows show responsibilities that vary depending on the scale and specific circumstances. Note not all levels of the framework might be active for any given recovery.

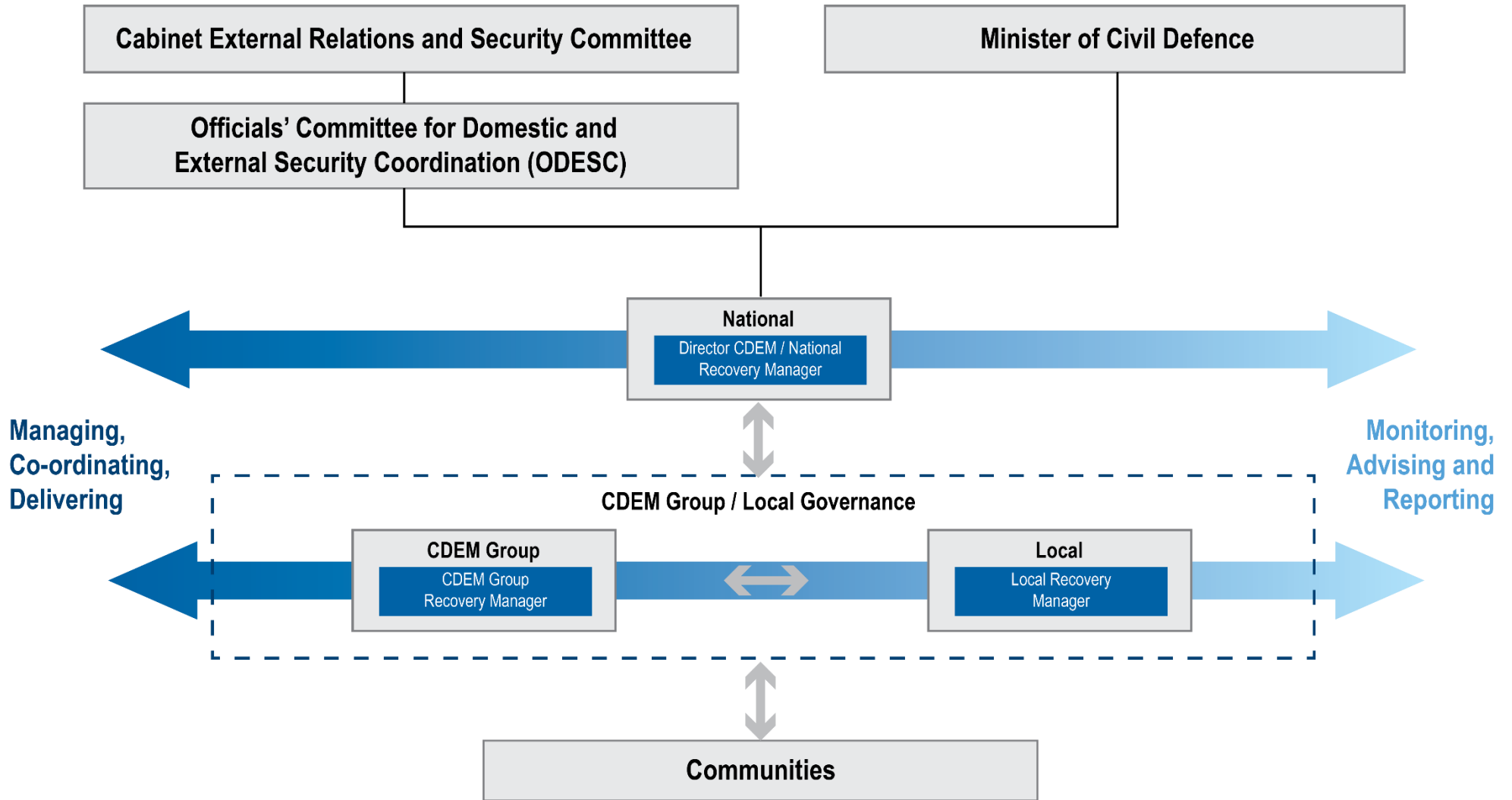


Figure 3: The national recovery framework

Flexibility and Scalability

All levels of the framework — from community to Government — have a role in recovery, no matter the scale of the emergency.

The role of each level varies depending on factors specific to the circumstances. These include:

- complexity of the consequences of the emergency
- the geographical extent and nature of the consequences
- whether there are multiple recoveries across a local area/region/country
- the indirect regional or national consequences (for example national economic impacts from interrupted tourism)
- the capacity and capability to manage and/or coordinate recovery activities
- the knowledge and experience of key recovery personnel
- the strength of relationships
- political risks or interests, and
- funding streams.

These factors require a recovery framework that is flexible and scalable.

Responsibilities across the framework

The key responsibilities across the framework are:

- monitoring, advising and reporting, and
- managing, coordinating and delivering activities to support the community.

The extent to which each level (Local, CDEM Group and National) activates these responsibilities for a specific recovery will depend on the factors outlined above. For example, for a smaller, local-scale emergency, the local level will manage, coordinate and deliver recovery activities, but because of their capacity, the CDEM Group may provide additional support by managing or coordinating a particular activity and monitoring and advising on others. The National level will also have a role in monitoring and in reporting to the Minister of Civil Defence, and may provide advice and guidance to the local level where necessary. This scalability of responsibilities is represented in [Figure 3](#) by the sliding red/green, which shows that individual levels may move between managing, coordinating and delivering, and monitoring, advising and reporting.

For any recovery, there are strategic and operational responsibilities that need to be defined and established across the levels to manage, coordinate and deliver the recovery activities needed to support the community. Some of these responsibilities sit at all levels in the framework, some sit at local level and some can only be fulfilled by central government. Refer to [Section 6.4](#) for examples.

Strategic responsibilities

Strategic responsibilities across the framework include:

- setting, and reviewing, the strategic vision, objectives, outcomes and priorities for recovery
- directing the development of strategic plans and reviewing and approving these plans
- establishing governance and decision-making groups
- directing and compelling actions to be taken
- having public-facing leadership, strategic coordination of communications and political engagement
- coordinating funding disbursement, audit and accountability at a high level
- making decisions on reconstruction and design
- making decisions on land remediation and hazard risk mitigation
- managing significant existing, new and cascading risks and intervening when needed
- directing Exit Strategy development, review and approval, and
- influencing change to increase recovery preparedness and commissioning recovery reviews.

Operational responsibilities

Operational responsibilities across the framework include the following:

- **Coordination**
 - establishing and coordinating operational governance arrangements
 - determining operating principles to guide how recovery activities are managed, coordinated and delivered
 - coordinating recovery activities, the core recovery team, community hubs and navigators, and
 - coordinating volunteers.
- **Planning**
 - developing, implementing, reviewing and updating the Recovery Plan
 - developing and implementing a monitoring and evaluation framework for the specific recovery
 - planning and managing programmes across recovery projects
 - project planning
 - developing and implementing an Exit Strategy, and
 - facilitating community planning.
- **Funding**
 - controlling special funding policy and establishing priorities

- managing contracts, procurement and purchases
- mobilising funding resources and logistics
- liaising with insurers
- managing claims
- managing donations, and
- disbursing relief funds.
- **Information management**
 - directing the provision of information
 - analysing information to inform decision-making and priorities
 - commissioning reviews, reports and investigations
 - implementing processes to examine, record and maintain information management systems or databases
 - coordinating information gathering, including damage and needs assessments, and
 - ensuring information systems enable real-time reporting.
- **Engagement and liaison**
 - developing and implementing an engagement strategy and plan
 - determining the most appropriate engagement approach, channels and methodologies
 - undertaking community engagement, and
 - developing community recovery plans where appropriate.
- **Communications**
 - undertaking communications needs assessment
 - identifying relationships and responsibilities for maintaining them, and
 - developing and implementing a coordinated communications strategy and plan.
- **Monitoring and evaluation**
 - establishing an evaluation approach, including key performance indicators and processes for data collection and analysis
 - monitoring and evaluating performance indicators to evaluate progress and identify emerging risks and issues, and
 - reporting on progress against recovery outcomes and advising on risks and issues, including any mitigation that may be needed.

Common responsibilities

There are common responsibilities that sit across all levels of the framework, including:

- relationship management
- reporting

PART A: Section 6 Recovery Framework

- risk identification and management
- corporate functions, e.g. IT, HR and finance
- reviewing outcomes and practices to inform future recovery preparedness, and
- advising on and sharing practices to foster a learning culture.

Scalability of the National Recovery Framework

The framework depicted in

[Figure 3](#) is the full extent of the National Recovery Framework, showing all levels within it. For the majority of recoveries in New Zealand, only the Local level will be fully activated. Various regional and national components can be established when needed to support local recovery.

Within the National Recovery Framework, a programme approach is taken with recovery projects.

Real world examples

For the recovery from the flooding in Rotorua in 2018, the CDEM Group Recovery Manager supported and advised the Local Recovery Manager on recovery practices, and monitored the provision of services and support. Given the CDEM Group structure, the Ministry of Civil Defence & Emergency Management (MCDEM)⁴⁹ interacted with both the Local Recovery Manager and the CDEM Group Recovery Manager to provide guidance and to monitor the provision of services and support.

For the Tasman Fires in 2019, MCDEM interacted directly with both the CDEM Group and Local Recovery Managers who worked as a collective. MCDEM had a monitoring, advising and reporting role for this recovery.

In the November 2016 earthquake and tsunami, the National Recovery Manager and National Recovery Office, established by MCDEM, interacted directly with affected local authorities due to the regional and national consequences caused by damage to State Highway 1 and the Main North Rail Line, political interest and the geographic extent of consequences. The National Recovery Office had a managing, coordinating role for some elements of the recovery.

6.2 At the local level

Key role

Recovery at the local level focuses on working alongside and supporting individuals, communities and groups. It also involves coordinating activities across local-level agencies and organisations involved in the recovery.

The key recovery role at this level is the Local Recovery Manager, who manages, coordinates, monitors and reports at the local level. The Local Recovery Manager is appointed by the CDEM group and will work with local and regional stakeholders and coordinate across local recovery programmes

⁴⁹ In December 2019 the Ministry of Civil Defence & Emergency Management (MCDEM) was replaced by the National Emergency Management Agency.

and recovery environment sector groups. Refer to 5.7 for more information on a Local Recovery Manager's relationship with their Group Recovery Manager.

Responsibilities

No matter the scale or scope of recovery activities, the local level will always be active to some degree following an emergency. Responsibilities at the local level will span the strategic and operational responsibilities outlined in [Section 6.1](#), depending on the specific circumstances.

Dependent on the factors outlined under *Flexibility and Scalability* in [Section 6.1](#), recovery activities may be delivered by business-as-usual local authority teams and overseen by the Local Recovery Manager. However, for more complex or significant recoveries, a dedicated Local Recovery Team may need to be established. See Section 12.4 in Part C for further guidance on deciding the most appropriate approach.

6.3 At the CDEM Group level

Key role

At the CDEM Group level, the focus is on supporting and, where necessary, coordinating local-level recovery.

The key recovery role at this level is the CDEM Group Recovery Manager, who supports and provides advice or direction to the Local Recovery Manager or Managers. The CDEM Group Recovery Manager also works with and coordinates across regional-level recovery programmes and recovery environment sector groups.

Refer to [Section 5.6](#) for more information on a CDEM Group Recovery Manager's relationship with the National Recovery Manager.

Monitoring, advising and reporting

No matter the scale of the recovery, the CDEM Group Recovery Manager, with support from across the CDEM Group, will:

- advise the Local Recovery Manager on relevant legislative provisions, recovery arrangements within the CDEM Group area and any other recovery matters
- provide for additional resources as required by the Local Recovery Team
- facilitate connections and coordinate where necessary with agencies, organisations and other recovery stakeholders
- advise on recovery practices, sharing relevant regional lessons learned
- monitor recovery progress and any emerging risks or issues pertaining to the recovery, and advise the Local Recovery Manager and CDEM Group accordingly, and
- report progress to the National Emergency Management Agency, including any risks or issues.

PART A: Section 6 Recovery Framework

Management, coordination and delivery

The CDEM Group may take responsibility for aspects of the strategic or operational recovery responsibilities depending on the factors outlined in [Section 6.1](#). This will particularly be the case when:

- more than one local authority area is impacted
- the local authority does not have sufficient capacity or capability
- the local authority is a unitary authority
- there have been multiple emergencies across the region from different events
- there are regional implications or risks arising from the emergency that need to be managed, or
- there are national implications.

In taking responsibility, the CDEM Group will coordinate across local authorities and work with nationally and regionally based agencies and organisations involved in the recovery.

They may also need to manage certain recovery activities at a regional level to ensure consistency and equity of services and support across the region.

6.4 At the National level

Key role

At the National level, the focus is on supporting recovery by advising and monitoring and, when necessary, coordinating recovery activities at a national level, and managing and delivering responsibilities that can only be done by central government to support recovery.

The key recovery role at the National level is either the:

- Director CDEM, or
- National Recovery Manager, if delegated by the Director CDEM.

Monitoring, advising and reporting

No matter the scale of the recovery, the Director CDEM (or National Recovery Manager if delegated), with the support from the National Emergency Management Agency operational teams, will:

- advise the CDEM Group Recovery Manager and the Local Recovery Manager on any recovery matters, as required
- advise on recovery practices, sharing relevant national or international lessons learned
- monitor the provision of services and support being provided across central government agencies to ensure the needs of the community are met, and
- monitor the progress and effectiveness of recovery activities, identify any emerging risks or issues, and report to the Minister of Civil Defence accordingly (and support the Officials' Committee for Domestic and External Security Coordination (ODESC), as required).

**Management,
coordination and
delivery**

Depending on the scale and consequences of an emergency, for example where the emergency is of a larger scale or there are nationally significant consequences⁵⁰, the focus at the National level may be on:

- coordinating recovery activities across central government agencies, National-level recovery programmes and recovery environment sector groups where necessary
- providing support to the CDEM Group or local authority, as necessary or requested, or
- managing and delivering any responsibilities that can only be done by central government to support the recovery.

Where the scale or consequences of the emergency, or where there are multiple recoveries across the country that collectively need national level management or coordination, the Minister of Civil Defence may decide to either:

- establish a National Recovery Office, i.e. a dedicated National Recovery Team, or
- establish a national agency (as provided for in the *National CDEM Plan 2015*) to manage and coordinate the central government's interests in the recovery.

The National Recovery Office or a national agency will act in partnership with the affected local authorities and CDEM Groups and may be given specific roles, responsibilities and powers⁵¹.

**Central
Government
responsibilities**

There are a range of responsibilities, or functions, that only central government are able to deliver, including:

- supporting Ministerial oversight and reporting to Parliament
- determining the need for providing Government financial support and overseeing expenditure
- advising on new Government policy or revising existing policy, including revising legislation or regulations
- advising on appointments to national reference groups and establishing new national institutional structures to facilitate recovery
- coordinating state sector agencies' recovery activities
- enforcing aspects of regulation and addressing non-performance of statutory roles
- receiving and considering offers of assistance from foreign governments, and
- managing claims for response- and recovery-related costs incurred by a local authority.

⁵⁰ Refer to *National recovery activities* in [Section 5.5](#) for more information

⁵¹ *National CDEM Plan 2015* clause 156(3).

Interactions across the framework

As well as interacting with the Minister of Civil Defence and ODESC, the National level may interact with both the CDEM Group and the Local level within the framework. The factors listed in [Section 6.1](#) will influence these interactions and inform whether there is a direct interaction between the National and CDEM Group level or whether interaction with the Local level is through and along the CDEM Group level.

Similar to the factors that influence the role of the CDEM Group, the National level may interact directly with the local level when:

- the CDEM Group does not have sufficient capability or capacity
- the local authority is a unitary authority
- there are multiple emergencies across the country requiring national distribution and equity of resources to be considered, or
- there are national, international, political or reputational implications or risks arising from the emergency that need to be managed.

Real world example

An example of this was the November 2016 earthquake and tsunami where the National level was interacting directly with the local level as the National level coordinated and supported nationally significant transport activities.

6.5 Recovery environment sector groups

Recovery environment sector groups

At an operational level, the National Recovery Framework is applied through the recovery environment sector groups ([Figure 4](#)). While the recovery environments (see [Section 7](#)) are a means of understanding communities and categorising recovery needs, **recovery environment sector groups are the structures through which agencies, organisations and groups involved in recovery activities are organised and coordinated.**

A recovery environment sector group is a collective of agencies and organisations that focuses on a particular aspect of recovery. Recovery environment sector groups are primarily based on the four recovery environments.

Recovery environment sector groups report to the Recovery Manager at the level they are operating, i.e. local recovery environment sector groups report to the Local Recovery Manager, whereas CDEM Group recovery environment sector groups report to the CDEM Group Recovery Manager,

Recovery environment sector groups are similar to clusters, as described in section 7 of *The Guide to the CDEM Plan 2015*, and have similar objectives and principles. They may also incorporate currently formed clusters listed in *The Guide to the CDEM Plan 2015*.

Recovery environment sector groups need to take a programme management approach to ensure that the work and thinking needed about the direction of recovery and outcomes related to particular environments, activities needed to deliver them, resources, monitoring and oversight and coordination with other programmes is considered in a holistic way.

Recovery environment sector groups provide a mechanism for:

- sharing information, planning, and integrating arrangements for carrying out recovery activity related to their focus area through establishing and maintaining inter-group communications, and
- ensuring that each member agency or organisation operates as part of a coordinated collective that supports the delivery of the overall recovery objectives, sharing resources and avoiding duplication.

For more information on recovery projects refer to Section 12.4.2 in Part C.

The consequence matrix described in Section 10.4 in Part C can be used to identify the needs of different communities (such as urban, rural, CALD communities) across the four key recovery environments so the needs can be addressed by recovery environment sector groups.

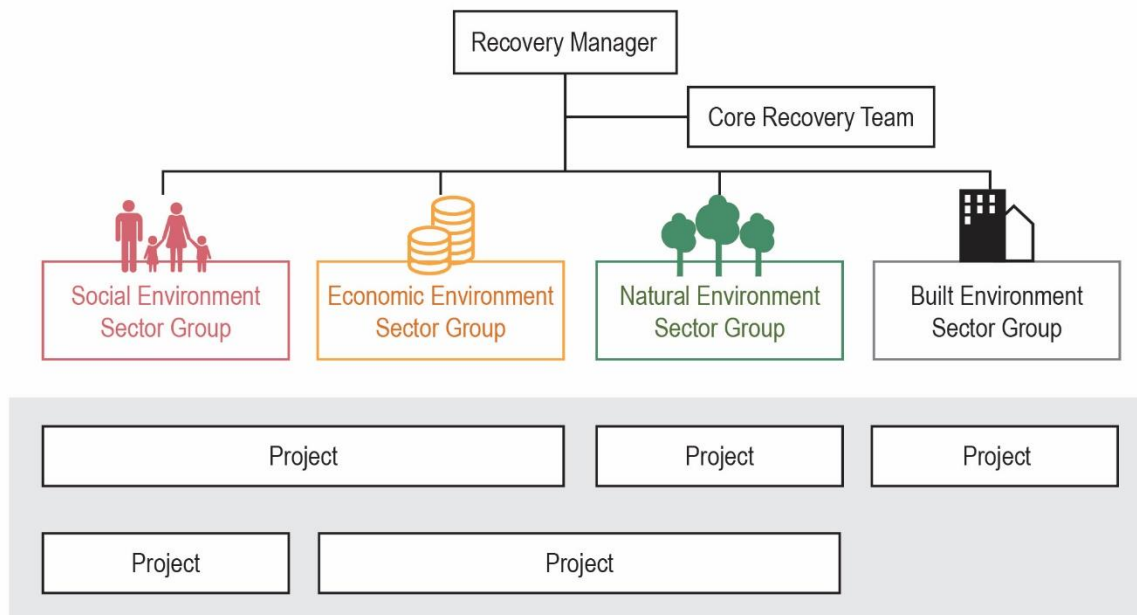


Figure 4: The recovery framework at an operational level (at any level)

Recovery environment sector group formation

Recovery environment sector groups need to be identified, formed and developed in readiness, and be active in recovery. Recovery Leaders and Managers (at both the CDEM Group and the local level) need to consider:

- if recovery environment sector groups will be established at both the CDEM Group and local level — pure duplication should be minimised; however, careful consideration needs to be given to how these groups will plan and operate in recovery and what level relationships are needed; this may be influenced by the structure of the CDEM Group and local arrangements, and
- whether other groups already exist that have a similar focus or could have their scope broadened to incorporate the role of recovery environment sector groups (for example, the Welfare Coordination

PART A: Section 6 Recovery Framework

Group broadening their scope to social recovery). If there are existing groups, all agencies, organisations and groups that are part of that recovery environment need to be part of the group. Broadening the scope of an existing group needs to be discussed with that group.

During readiness, recovery environment sector groups operate as cooperative networks. In readiness, the groups need to convene (either in person or remotely) to:

- carry out collaborative strategic and operational planning including arrangements for how they will operate during readiness and recovery
- appoint a Chair (see Recovery environment sector group Chair in [Section 5.5.1](#))
- develop terms of reference
- develop relationships
- share information, planning, and arrangements for carrying out recovery activities, and
- ensure each member agency or organisation operates as part of a coordinated collective.

Recovery environment sector group activation

Depending on the unique consequences of a particular emergency, not all recovery environment sector groups formed in readiness may need to be activated for each emergency. Similarly, additional recovery environment sector groups may need to be set up. The matrix approach described in Section 12.3 in Part C may assist in identifying these.

During recovery, recovery environment sector groups convene regularly (as appropriate for the scale and consequences of the emergency) to coordinate their recovery-related activities to ensure recovery objectives are being achieved.

6.5.1 Recovery environment sector group key roles

Recovery Manager

Recovery Managers are responsible for overall coordination of the recovery environment sector groups. Recovery Managers ensure that recovery environment sector groups:

- have the support and facilities they need to operate and deliver their recovery objectives
- input into recovery action planning and other key strategic activities, and
- have a comprehensive understanding of the overall recovery objectives.

All recovery environment sector group Chairs report to the Recovery Manager.

Refer to [Sections 5.4–5.7](#) for more information on the role of Recovery Managers.

Recovery environment sector group Chair

Each recovery environment sector group needs to appoint a Chair, who manages the groups programme of work, including:

- leading and coordinating agencies, organisations and groups in the recovery environment sector group, planning, recovery activities and projects that sit within their recovery environment sector group
- facilitating recovery environment sector group meetings
- coordinating and communicating with other recovery environment sector group Chairs
- coordinating, with other recovery environment sector group Chairs, projects that span multiple environments
- reporting activity, progress and risks to the Recovery Manager
- passing on information from the Recovery Manager and other recovery environment sector groups to their recovery environment sector group members, and
- assessing and identifying needs and issues arising, and working with the Recovery Manager and other recovery environment sector group Chairs to manage these.

Flexibility and scalability

The person appointed as the recovery environment sector group Chair can be one of the agency or organisation representatives on a recovery environment sector group. However, if the scale and consequences of a particular recovery are significant, the Recovery Manager may decide to appoint a dedicated programme manager as the Chair to allow agencies and organisations in the recovery environment sector group to focus on the delivery of activities and projects.

6.5.2 Recovery environment sector group examples

Recovery environment sector group membership

*Figure 5*⁵² shows an example of four recovery environment sector groups and their membership, based on the four recovery environments. It illustrates how recovery environment sector group representation may be scaled up according to the scale and complexity of an emergency.

Agencies and groups listed are **examples only and do not represent an exhaustive list**. Actual recovery environment sector group representation needs to be reviewed for each specific recovery to ensure all active agencies are coordinating with each other through the recovery environment sector groups and subject to the particular circumstances and priorities of each recovery. This example should not be used as a 'one-size-fits-all' rule for all recoveries. It must be tailored to local and regional areas and to specific recoveries.

⁵² Acronyms used in Figure 5 mean: MSD: Ministry of Social Development, DHB: District Health Board, MBIE: Ministry of Business, Innovation and Employment, MPI: Ministry for Primary Industries, MoE: Ministry of Education, TPK: Te Puni Kōkiri, DIA: The Department of Internal Affairs, EQC: Earthquake Commission, NIWA: National Institute of Water and Atmospheric Research.

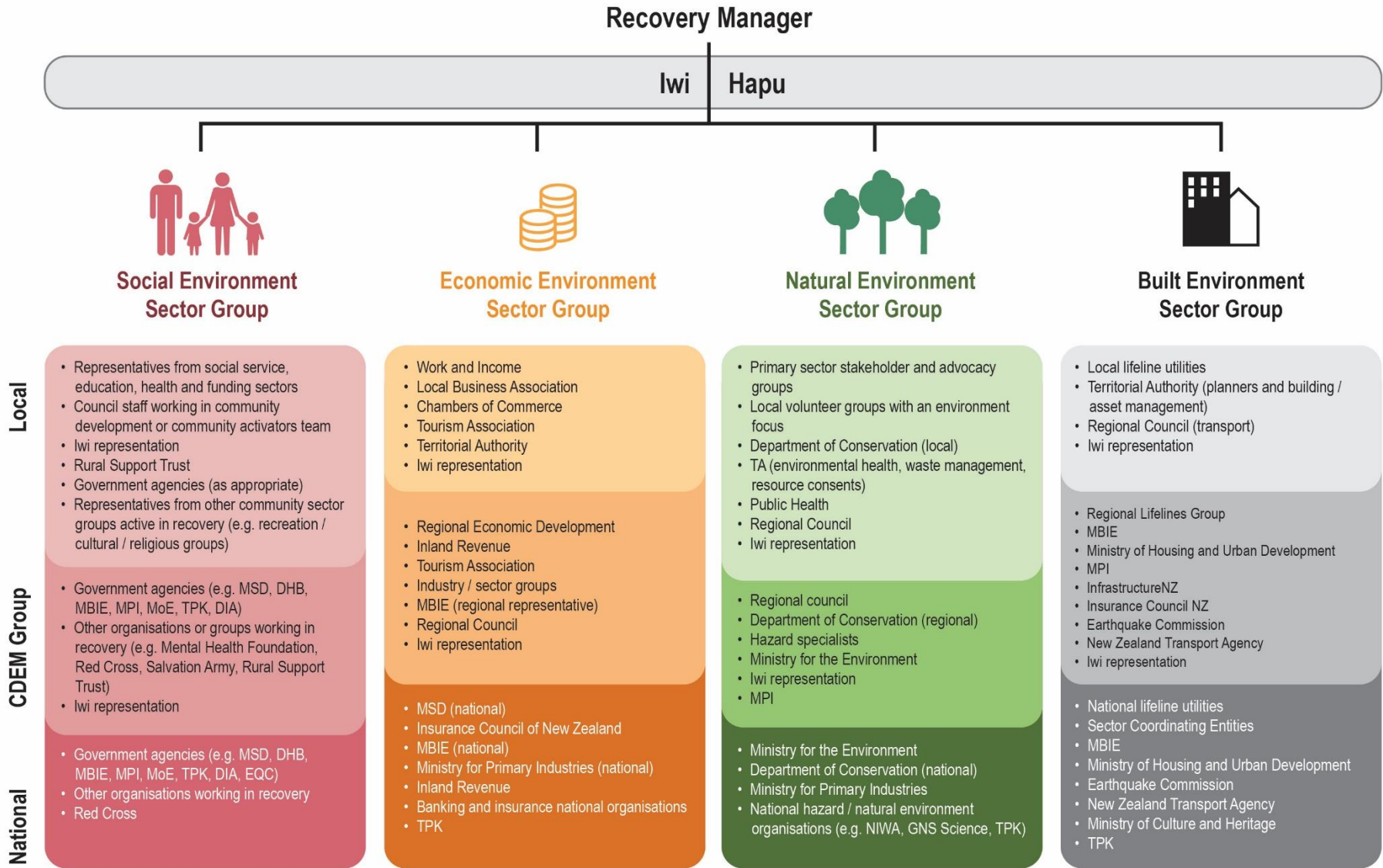


Figure 5: Example of environment sector group membership – the four environments'

Additional recovery environment sector groups

Additional recovery environment sector groups may be adopted by CDEM Groups or local authorities to reflect the unique nature of their communities and the possible or actual consequences of emergencies. When considering additional groups, the relationships between all recovery environment sector groups need to be considered to ensure that recovery activities or a community won't be siloed.

An example that has been used in several recoveries is the rural environment sector group. The rural community may have needs that need to be considered by the social, natural, economic and built recovery environment sector groups. If key stakeholders are only within a rural recovery environment sector group, some of the needs of the rural community may not be considered by these other sector groups, or there could be a duplication of effort.

Refer to Sections 10.4 and 12.3 in Part C for more information on how these other recovery environment sector groups could be determined. These sections describe how a consequence matrix can be used to identify specific projects that may need to be targeted for particular communities but are considered by one or more of the four standard recovery environment sector groups.

6.5.3 Recovery environment sector group flexibility and scalability

Although pre-emergency recovery planning will include recovery arrangements, pre-determined recovery arrangements need to be flexible and scalable so they can be tailored to the consequences of a particular emergency. 'One-size-fits-all' arrangements should not dictate the way a recovery is managed. The scale and consequences of the recovery will determine how arrangements prepared in readiness need to be adjusted or adapted.

The flexibility and scalability of recovery environment sector groups must be considered before emergencies occur. This involves developing:

- a flexible approach to membership
- building on and augmenting local capability, and
- using adaptable and modular arrangements.

Flexible membership

Developing recovery environment sector group membership includes identifying:

- core members — those whose input is essential in many types of emergencies, and
- wider members — those whose input can be called on if the recovery is larger in scale or complexity or there to address consequences from a specific hazard.

Where possible, members should be identified by their role, job title or expertise rather than by name. In addition, multiple potential recovery environment sector group members from the same agency, organisation or

PART A: Section 6 Recovery Framework

community group should be identified to enable recovery environment sector groups to scale up as necessary.

All members must be able to:

- actively represent and make, or at least facilitate, decisions on behalf of the agency, organisation or group they represent
- provide information and expertise, and
- participate fully in recovery environment sector group meetings and activities.

Where possible, representatives should be from the senior management level and empowered to make decisions and commitments on behalf of their agency, organisation or group.

Scalable and modular structure

Recovery environment sector groups need to be scalable and modular, similar to the principles of the Coordinated Incident Management System (CIMS).

Recovery environment sector groups identified in readiness may be activated according to the scale and consequences of the emergency. Some recovery environment sector groups may:

- not be needed at all during recovery
- may need to have their membership expanded or adapted
- be activated early on but stood down later, or
- only be needed in medium- or long-term recovery.

Identifying recovery priorities early on in the planning phase and re-evaluating them as recovery progresses will determine and inform the continuing activity of recovery environment sector groups.

6.5.4 Continuity of coordination arrangements between response and recovery

Coordination arrangements established in readiness and response may be continued (where appropriate) in recovery.

Coordination, experience and continuity of planning from response to recovery may be achieved through:

- building recovery environment sector groups around local/community networks or collectives established before or during response
- ensuring that key people involved in the response have the opportunity to participate in recovery environment sector groups
- ensuring (where appropriate) that key response functions continue into recovery, for example:
 - Public Information Management personnel, and
- ensuring recovery staff sit alongside and/or are aware of the work being done by the response functions of planning, intelligence, control in the Coordination Centre. Refer to Section 10 in Part C for more information on the relationship between a Recovery Manager and Controller.

Refer to Section 8.6 in Part B and Section 12.4 in Part C for more information about coordination arrangements.

Section 7 Recovery Environments

This section reiterates the intent of recovery environments. It describes the intrinsic links and interconnections between recovery environments and cumulative and cascading consequences that can result from an emergency. The four core recovery environments are defined and the elements within them described, along with potential consequences that may occur in each environment. Examples are also provided of partners, agencies, organisations and groups that may be in each environment.

This section should be read in conjunction with [Section 2.3](#) and [Figure 2](#).

Refer to Sections 10.4 and 12.4 in Part C for more information on how recovery environments are used to identify consequences of an emergency and how recovery can be managed.

The intent of the recovery environments is to provide a framework to identify and consider all possible and actual, and direct and indirect consequences of an emergency so that these can be addressed during recovery.

7.1 Intrinsic links and interconnections

Intrinsically linked and interconnected

It is important to understand that the features, activities and consequences within each recovery environment cannot be isolated from the other environments and are often difficult to separate.

Because of these linkages and dependencies between the different environments, disruptions within one environment will likely have a flow on effect to one or more of the others. In particular, any disruption to the built, economic or natural environments will impact the social environment. Recovery in one environment can be highly dependent on recovery in another, and a holistic approach to recovery planning and management is needed.

Community-centred

As described in [Section 3](#), the community sits at the centre of recovery. All impacts across each environment need to be described in terms of the consequences for the community.

See Section 10 in Part C for examples of how impacts on the recovery environments can lead to consequences for the community.

Culture and social capital

The culture and social capital of a community should be considered within all environments. Culture and social capital includes community norms, values and beliefs; how a community functions; and a community's way of life. It also includes things like trust, the rule of law, cultural identity and the connections between people and communities⁵³. These characteristics need to be understood and should assist in understanding recovery environments and influence recovery activities and projects.

7.2 Cumulative and cascading consequences

Recovery environments are intrinsically linked with many interdependencies between them. There is also the potential for cumulative and cascading consequences from an emergency. When identifying the consequences of an emergency (refer to Sections 10.4 and 12.3 in Part C for more information), cumulative and cascading consequences need to be considered to ensure all possible consequences (and unintended consequences from recovery activities) are identified and addressed.

Cumulative consequences

Cumulative consequences occur when individual impacts to a single component of an environment combine to form a significantly larger consequence than the individual impacts on their own. This may occur over time. For example, aftershock sequences following an earthquake can continue to significantly alter the hazardscape, and insurance processes can take time and involve delays and possibly disputes. Displaced individuals, families and whānau may have to move multiple times between emergency and temporary accommodation until they are able to return home or move to a new permanent residence. Businesses may also be affected by the same level of disruption. Land damage can affect the long-term viability of some buildings and infrastructure if it creates new hazard risks, and decision making on mitigations can be complex and lengthy. These aspects and disruptions also significantly impact the social and economic wellbeing of individuals, families, whānau and the community, and need to be factored into understanding the consequences of the emergency.

Cascading consequences

Cascading consequences occur when consequences in one environment have a flow-on effect or consequence in another environment or location. Cascading consequences can be positive or negative.

Cascading consequences can cross jurisdictional and geographic boundaries.

An example of cascading consequences is a severe weather event causing partial or full disruption to the national power grid, which then has cascading consequences on business continuity and critical infrastructure⁵⁴.

⁵³ New Zealand Treasury. 2018. *The Treasury Approach to the Living Standards Framework*. <https://treasury.govt.nz/sites/default/files/2018-02/tp-approach-to-lsf.pdf>

⁵⁴ United Nations Office for Disaster Risk Reduction. 2019. *GAR Distilled. Global Assessment Report on Disaster Risk Reduction Distilled*. <https://gar.unisdr.org/sites/default/files/gar19distilled.pdf>

Real world examples

A consequence of opening the transport corridor between Kaikōura and Hurunui following the 2016 earthquake and tsunami was improved community connections to social and economic opportunities, and hence social and economic recovery.

Land zone changes following the 2010–2011 Canterbury earthquake sequence had cascading and cumulative consequences on the future shape of Christchurch City. Large areas of damaged land previously zoned residential were re-zoned as green space and, in the future, a new Green Spine will connect the central city to New Brighton with a mix of recreational, commercial and community uses.

The 15 March Terrorist Attack in Christchurch had cascading consequences through the rest of New Zealand as it impacted New Zealand's values of diversity, kindness and compassion

7.3 Social environment

Impacts in the social environment are often difficult to measure and can be difficult to identify and describe. Effective social recovery is critical to recovery in all aspects of a community.

What is the social environment?

The social environment incorporates individuals, whānau and common-interest groups, and the relationships, communication and networks between them⁵⁵. Key elements of the social environment include:

- safety and security
- health
- education
- community activities/networks, and
- psychosocial.

A strong social environment is dependent on healthy built, economic and natural environments.

Influencing factors

The characteristics and experiences of a community (or its social and human capital⁵⁶) can, in part, determine the way a community reacts to an emergency. These characteristics include the:

- diversity of the community
- culture and values of the community
- the population makeup or characteristics
- belief systems

⁵⁵ Adapted from Australian Institute for Disaster Resilience. 2018 *Australian Disaster Resilience Community Recovery Handbook*

⁵⁶ National Emergency Management Agency. 2019. *National Disaster Resilience Strategy Rautaki ā-Motu Manawaroa Aituā*.

- individual and community experiences of previous emergencies, and
- community outlook.

The combination of these factors in the community can alter the way a community reacts to consequences in the built, economic and natural environments (refer to [Sections 7.4–7.7](#) for more information).

Recovery in the social environment

An emergency can disrupt the normal social interactions and activities of a community and can impact on the social environment.

Recovery in the social environment can mean different things to different people. For an individual, social recovery may mean returning to a meaningful life that they want to lead. Whereas for a community, social recovery may mean when people and the community have established a relatively stable pattern of functioning, regained a sense of control and are focused on their future⁵⁷.

Effective social recovery is essential for building community resilience and sustainability and recovery in other environments. Recovery across the economic, natural and built environments hinges on:

- understanding the complexity and diversity of communities
- development and strengthening of partnerships between communities and national agencies
- work done with communities to support the development of community connections and infrastructure
- continual assessing and monitoring of needs, and adaptation to these as they change, and
- integration of the activities of groups, organisations and agencies that provide health and welfare services to communities.

Evidence shows that community participation in recovery enhances the wellbeing and sense of belonging of people in those communities. This effect has been observed in those giving community support and in those receiving support from their community.

Addressing consequences in the social environment involves identifying and adapting to the changing needs of individuals and communities as time goes on, and ensuring that these needs are met in an integrated way.

A critical first step in social recovery is to forge links with the CDEM Group or local authority welfare structure, especially with personnel (such as Welfare Managers) who may have been appointed to the Welfare function during response.

Community networks

Individuals, groups and communities compose networks and connections that are a part of the social environment. These networks or connections are both between people in the same community and between different communities and can be seen as the glue that binds different individuals and

⁵⁷ Canterbury Earthquake Recovery Authority. 2016. *Understanding Social Recovery*.

PART A: Section 7 Recovery Environments

groups together. They can assist with bridging the gap created by an emergency as a community transitions from pre-emergency normality to a new post-emergency norm.

These networks can be formal or informal. Formal networks include work places or living in the same rating district. Informal networks include school pickup/drop-off points, shops, supermarkets, parks where people walk their dogs, livestock sale yards, sports fields, venues and cafés.

Social environment consequences

Examples of consequences on the social environment include:

- psychosocial trauma, grief and stress from bereavement, injury or direct threat to life, personal health and safety
- loss of things that individuals value
- isolation or dislocation from home, school, family (including family separation) and support networks
- loss and separation of companion animals and livestock
- physical isolation from transport infrastructure damage and public transport closure
- financial hardship and inability to maintain income-generating activities
- escalation of pre-existing social issues such as poverty, homelessness, family violence, substance abuse and poor mental health
- loss or disruption of routines, relationships, social interactions, communication and familiar patterns of daily life
- reduced quality, access and timelessness in providing education, health, childcare and government and non-government services
- changes in recreational activities including community activities such as through Rotary, Lions or parent groups
- loss of future plans, hopes and aspirations, and
- loss, damage or threat to homes, property, assets, livestock, businesses, sources of income and social infrastructure including historical and spiritual places.

Safety and security consequences

The first priority in any recovery is ensuring the safety of people, particularly when:

- keeping people out of unsafe areas and/or buildings
- implementing emergency movement control measures (i.e. road blocks, checkpoints and cordons), and
- supporting people displaced by emergencies or sheltering in place.

The security of people's homes and assets also needs to be protected. If people have been evacuated quickly, they may not have been able to secure their property before leaving. Unoccupied property can also attract criminal activity such as theft or vandalism. If properties need to be inspected for any

reason, they need to be treated with respect, and even when forced entry is required, this should be done in a way that minimises damage.

Ensuring the safety and security of people remaining in the area may include:

- demolishing damaged buildings
- restricting access to damaged buildings
- repairing sanitation and hygiene facilities or providing temporary facilities to allow people to return home
- evacuating people from affected areas;
- securing property, or
- increasing police presence to ward off criminal activity.

A range of agencies and organisations work together to ensure a community's sense of safety and security, including local authorities, CDEM Groups, health and disability services, police, emergency services and welfare services agencies.

Health consequences

During recovery, coordination between the CDEM and health sectors is crucial for minimising the consequences for individual and community health.

Health consequences from an emergency can include deaths and injuries, exposure to diseases and environmental hazards, or individuals or groups being traumatised by their experiences. In recovery pre-existing health conditions are often exacerbated and can stretch the health system to support people.

Other health consequences can include:

- people being disconnected from their usual health care providers, medication and personal support systems due to being evacuated or isolated
- damage or failure of medical infrastructure
- inaccessible case notes, or
- lack of medical staff due to personal impacts.

Zoonosis are infectious diseases that can be transferred from animals to humans or to animals from humans (reverse zoonosis). Animals are environmental indicators for a number of diseases where the disease first shows in animals. To reduce the incidence of zoonosis, a proactive approach to public messaging is needed as well as collaboration between public health and veterinarians.

As well as providing health services, emergency medical facilities, and support to directly affected individuals, existing health services need to be maintained for pre-existing health needs. This can be difficult if health professionals are personally impacted by the emergency or health facilities and infrastructure are damaged.

The Ministry of Health and other health and disability providers plan and coordinate to provide health and disability services in emergencies to ensure continuity of care and the ability to manage increased demand. Health sector

PART A: Section 7 Recovery Environments

agencies include district health boards (DHBs), Public Health Units (PHUs), Land and Air Ambulance providers and other health or disability service providers.

More information



More information on health consequences from emergencies is available at www.health.govt.nz.

Education consequences

Disruption to schools and early childhood centres can affect children's sense of normality and routine as well as their education. Disruption to the education system can also have consequences for family/whānau and communities as closure can stop parents returning to work and networking within their community.

Schools, with support from the Ministry of Education when required, have plans in place for returning to normal operations.

Shelter and accommodation consequences

Impacts on an individual's shelter and accommodation can be short-term but may also last for many weeks, months or years. Finance, insurance, rebuilding or relocating compound the complexity of impacts on people.

Protecting people's welfare related to accommodation during recovery includes:

- providing shelter and accommodation
- financial assistance
- psychosocial support, and
- addressing animal welfare needs and support people to look after their animals.

Psychosocial consequences

Most people will experience some psychosocial reaction in an emergency, usually within a manageable range. A smaller number may exhibit more extreme reactions in the immediate-, medium-, or long-term and may require more in-depth support.

Irrespective of the duration of the recovery, psychosocial support is about easing physical, psychological and social difficulties for individuals, families/whānau and communities, as well as enhancing wellbeing to support community recovery. With effective psychosocial support, other aspects of recovery will not further harm individuals or their communities⁵⁸.

Planning and early action is essential to effectively reducing and managing psychosocial consequences, and psychosocial support providers should be involved in pre- and post-emergency recovery planning⁵⁹. The Ministry of

⁵⁸ Ministry of Health. 2016. *Framework for Psychosocial Support in Emergencies*. <https://www.health.govt.nz/system/files/documents/publications/framework-psychosocial-support-emergencies-dec16-v2.pdf>

⁵⁹ Ibid.

Health and DHBs are the agencies responsible for coordinating psychosocial support to communities during and after an emergency. Other organisations and groups may support the Ministry of Health and DHBs by support the provision of psychological support, for example New Zealand Red Cross.

Refer to *Community networks* in this section, *Communities and Recovery* in [Section 2.1](#) and [Section 3](#) for more information on the psychosocial context.

More information



More information about psychosocial support in emergencies, how emergencies affect people, and delivering psychosocial support is available in the *Framework for Psychosocial Support in Emergencies 2016* at www.health.govt.nz.

More information about welfare services, including psychosocial support is available in the *Welfare Services in an Emergency Director's Guideline [DGL 11/15]* at www.civildefence.govt.nz.

More information about social recovery and the lessons Waimakariri District Council learnt from the Greater Christchurch earthquakes is available in *Social Recovery 101: A Guide for Local Social Recovery* at www.waimakariri.govt.nz.

More information about planning and running effective wellbeing initiatives is available at <https://hewakaora.nz/>.

Who is involved?

Some examples of the partners, agencies, organisations and groups in the social environment include the following:

- Iwi
- Local authorities and CDEM Groups
- Ministry of Social Development
- Ministry of Education
- Ministry of Business, Innovation and Employment
- Ministry for Primary Industries
- Housing New Zealand
- Ministry of Health and District Health Boards
- New Zealand Red Cross
- NGOs such as the Salvation Army and Victim Support
- community support groups
- faith-based organisations, and
- industry organisations.

7.4 Built environment

Communities are highly dependent on services supported by the built environment. Recovery of built infrastructure is essential for recovery in the social, economic and natural environments, but it should not become the main focus of a recovery as it is likely to lead to imbalances in the recovery of the other environments.

What is the built environment?

The built environment refers to the physical setting for human activity, including buildings and their supporting infrastructure. It includes physical assets that have a direct role in supporting incomes and material living conditions⁶⁰ such as:

- residential housing, including apartments
- commercial and industrial properties
- essential services infrastructure that supports health and community services and education
- rural infrastructure
- public buildings and assets, and
- lifeline utilities.

The built environment supports many services that communities rely on such as⁶¹:

- water supply, wastewater removal, power, gas and communications
- food production and distribution systems
- supply chains which move goods around including food, construction material, fuel and fast-moving consumer goods
- public transport
- the building sector
- the health care sector
- education
- employment
- recreation
- tourism, and
- financial systems.

Disruption of built infrastructure and services inhibit recovery operations and the capacity of a community to recover.

⁶⁰ New Zealand Treasury. 2018. *The Treasury Approach to the Living Standards Framework*. <https://treasury.govt.nz/sites/default/files/2018-02/tp-approach-to-lsf.pdf>

⁶¹ Adapted from Australian Institute of Disaster Resilience. 2018. *Australian Disaster Resilience Community Recovery Handbook*

Residential housing

Residential housing can include houses, apartments, aged-care facilities, hostels and permanently occupied caravan parks.

Residential housing can be impacted in a variety of ways including direct destruction or damage or indirect causes such as lack of access or damage to lifeline utilities, such as sewerage, water or electricity.

Consequences of impacts on residential housing can be significant. For example, it can result in:

- individuals and whānau having to relocate, disrupting access to their usual employment, education services and support networks
- displaced and dispersed communities
- difficulties in coordinating recovery as displaced people may not be able to access community recovery services
- housing and rental market fluctuations due to decreased housing stock and increased housing demand, or
- increase in premiums or a moratorium on insurance policies.

In an emergency where people are displaced from their homes, housing and associated services will be a priority. A collaborative effort between affected residents, insurers, local government, central government agencies, developers and the construction sector (including builders and tradespeople) is required.

Residential housing strongly overlaps with the social environment as it is fundamental to people's wellbeing, safety, security, self-sufficiency and ability to focus on other basic necessities.

It also overlaps significantly with the economic environment, as it will impact the affected residents' financial security. For example, ongoing payment of mortgages plus payment of additional rent for temporary accommodation where financial assistance is no longer available, increases or loss of insurance, or the cost of replacing furniture or other assets.

More information



Commercial and industry property

More information about shelter and accommodation arrangements following emergencies, including temporary accommodation is available in the *Welfare Services in an Emergency Director's Guideline [DGL 11/15]* at www.civildefence.govt.nz.

Commercial property includes any building where natural resources, goods, services or money are either developed, sold, exchanged or stored⁶². Examples include banks, carparks, fire stations, libraries, offices, restaurants and storage facilities. Industrial property includes any building where people use material and physical effort to extract or convert natural resources, produce goods or energy from natural or converted resources, repair goods

⁶² *Building Regulations 1992*, Schedule 1 The building code, clause A1-Classified Uses, section 5.0.1

PART A: Section 7 Recovery Environments

or store goods⁶³. Examples include agricultural buildings, factories, power stations or warehouses.

Emergencies can impact the ability of businesses to operate from their premises; for example, due to destruction or damage to the property itself, contaminated debris (e.g. asbestos), health hazards (e.g. biochemical contamination) or loss of access or essential services.

This not only has consequences for the affected businesses, but also for the communities that are reliant on them. For example:

- employment
- banking and finance
- supply chains such as food and fuel
- waste management
- tourism or passing trade, and
- the service sector, e.g. cafes, supermarkets, restaurants.

Emergencies can have consequences for the local economy as businesses may not be able to operate out of their premises and may need to relocate, either temporarily or permanently. Or, if they are a large employer in the area, reduced operations or closure will have consequences for individuals and families that are reliant on regular income.

Some businesses may contribute to the wider New Zealand economy, for instance, a major manufacturing or processing plant or distribution centre. Any impacts on their ability to operate will have far wider economic consequences than the area directly affected by the event.

Recovery efforts will need collaboration between local authorities, central government, CDEM Groups, businesses, industries, insurers and the construction sector to support rebuilding or repair of commercial and industrial properties.

Essential services infrastructure

Essential services infrastructure supports health and community services and education. It includes infrastructure and property of hospitals, health care facilities, childcare, schools, polytechnics and universities.

Infrastructure and property could be impacted through loss of buildings or access, or damage to supporting infrastructure (e.g. infrastructure that delivers lifeline utilities into the building), meaning the services that are provided from them can no longer operate.

Consequences of these impacts can include:

- the need to relocate people residing in facilities, some of which may have special or complex needs (e.g. hospital patients or aged persons)
- severely restricted services (e.g. urgent hospital care only), and

⁶³ *Building Regulations 1992*, Schedule 1 The building code, clause A1-Classified Uses, section 6.0.1

- disruption of education with the potential cascading consequence of caregivers not being able to work due to children being out of school or needing to travel greater distances to education facilities.

Addressing the consequences of damage to essential services infrastructure is a collaborative effort between the local authorities, businesses, industries, insurers, lifeline utilities, health and disability service providers, education providers, the Ministry of Health and, potentially, developers. Consideration also needs to be given to building future resilience into these services to mitigate future risk and to allowing for changes to the community that rely on these services; for example, changes in population density or demographics.

Rural infrastructure

Rural infrastructure supports daily lives and businesses in rural communities. It can include water infrastructure, farm buildings, productive land, factory and storage infrastructure, fencing, tracks, housing for seasonal staff, pasture and crops, machinery and horticulture, tourism and aquaculture structures.

Rural infrastructure could be impacted by loss or damage. Impacted buildings or land may also pose a health and safety risk.

Consequences of these impacts can include:

- loss of income or a reduced income — damage to infrastructure directly affects income and, given the generally large investment, seasonal nature and delay in return for the primary sectors, often the impact is significant and long-lasting
- disruption to operations (e.g. inability to milk dairy cows due to loss of power to milking sheds)
- damage to essential machinery or plant (e.g. damaged machinery may cause loss or disrupt harvesting of crops, forestry and aquaculture)
- loss of internal access tracks (e.g. animals may not be able to access grazing water, milking sheds or yards — they may have to walk further causing animal welfare issues such as lameness)
- loss of power causing outages in fences — damaged fences can cause wandering stock, animal welfare and biosecurity concerns, and potential road accidents, and
- disruption to roads and lifelines, which can disrupt ease of daily life, and social networks (e.g. loss of access to schools, doctors and other services).

Public buildings and assets

Public buildings and assets as well as marae are an important contributor to community wellbeing. They can include public libraries, sport or cultural club buildings, swimming pools, marae, community halls, war memorials, landmark sites, heritage-listed buildings, places of worship, entertainment venues or other significant community sites.

These provide spaces for the community to come together and feel a sense of social connectedness. This may be through arts, sports, dance or other social activities.

PART A: Section 7 Recovery Environments

Heritage buildings and structures, with a legacy of historic significance, help provide the link with the past and are likely to hold special meaning to the community. They are considered a high priority in recovery. During response or early stages of recovery there may be a need or desire to demolish these buildings as they may present a life-safety risk. However, the social value the community places on these sites means it may be more appropriate to isolate the sites, protecting the public while addressing the damage to the building or buildings.

Consequences of impacts to these facilities can include:

- loss of social and community group gathering places (e.g. community groups that used a hall are no longer able to meet)
- loss of education facilities (e.g. no childrens' swimming lessons due to a damaged pool), or
- loss of sense of community, culture or heritage.

Lifeline utilities

Lifeline utilities are critical for supporting recovery efforts.

Lifeline utilities include infrastructure and network operators in:

- energy (including electricity, gas and petroleum)
- transport (including road, rail, ports and airports)
- water (including potable, waste and storm water), and
- telecommunications (including broadcasting).

Lifeline utilities could be impacted in many ways such as through loss of infrastructure (e.g. destruction of a power plant or downed power lines), damage (e.g. slip over a railway line), being severed (e.g. destruction of a bridge) or from lack of personnel due to personal disruption.

Consequences of impacts to lifeline utilities can include:

- sanitation systems not operating leading to health issues
- loss of water reticulation impacting humans, livestock and processing facilities that rely on clean water to continue operations
- impacts on animal welfare from, for example, loss of water reticulation, milking and electric fences securing livestock
- firefighting being compromised due to lack of water
- businesses dependent on a lifeline not being able to operate
- recovery activities being stalled or disrupted
- loss or reduced availability of goods, including perishable goods
- difficulties accessing communities, both for individuals wanting to leave an area but also for recovery workers getting into an area due to loss of transport infrastructure
- difficulties accessing or evacuating animals and providing for their care
- difficulties delivering services and supplies

- difficulties accessing health services and education
- disruption to fast-moving consumer goods or raw materials
- disruption of communication and information technology systems, and
- decreased security and safety (e.g. lack of lighting, security systems or traffic signals).

More information



More information about lifeline utilities is available in the *Lifeline Utilities and Civil Defence Emergency Management Groups Director's Guideline [DGL 16/14]* at www.civildefence.govt.nz.

Other considerations in the built environment

Other considerations for recovery in the built environment include:

- significant demand on land use planning, consent and infrastructure delivery (e.g. Waimakariri District Council experienced the equivalent of nine years of growth in three years following the 2010–2011 Canterbury Earthquake Sequence)
- waste management of building debris (e.g. Whakatāne District Council established a new waste management process for dealing with the waste caused by the Whakatāne District floods in 2017)
- having to provide temporary services while permanent solutions are found
- potentially complex insurance claim processes or limited insurance coverage, slowing rebuild and repair
- complex remediation issues such as land damage not foreseen before the emergency, leading to delays in reinstating buildings and infrastructure
- public health concerns such as sewerage, sewage-contaminated ground and asbestos contamination
- the health and safety of people working and accessing buildings, including home owners gathering belongings and volunteers assisting with clean-up
- having to provide services for feeding and housing companion animals, and
- including rural communities and businesses, including rural residential and lifestyle blocks.

Who is involved?

As the built environment incorporates a broad range of human-made assets, there are a wide variety of individuals, agencies and organisations that can be involved in the recovery. Some examples include the following.

- Local authority Building Inspectors, Environmental Health Officers, Animal Control Officers, Land Use Planning, Urban Designers and Three Waters and Roading teams
- engineers, architects and tradespeople

PART A: Section 7 Recovery Environments

- Ministry of Business, Innovation and Employment
- Ministry for Primary Industries
- Ministry of Education
- Housing New Zealand
- Ministry of Health and District Health Boards
- Fonterra
- New Zealand Transport Agency
- telephone/communication operators
- Insurance Council, EQC, insurers and reinsurers
- Lifeline utilities
- Rural Support Trust, and
- local Business and Property Councils.

7.5 Economic environment

A vibrant economy is vital to a sustainable community. However, when there are economic impacts from an emergency, economic recovery often relies on recovery in other environments and is also a driver of recovery in other environments. This is because economic drivers are often elements of other environments such as tourism, roading, infrastructure and a capable community able to return to work. Economic consequences are also often the result of impacts in other environments, such as infrastructure damage in the built environment, psychosocial impacts in the social environment or damage to the natural environment, demonstrating how all areas of a community and all recovery environments are interconnected.

What is the economic environment?

The economic environment broadly includes the production, distribution and consumption of goods and services, and financial assets that have a direct role in supporting incomes and material living conditions⁶⁴. It incorporates individuals and households, businesses and enterprises of all sizes, infrastructure, and government. It also incorporates economic activity in the primary sector.

These can be categorised as:

- individuals and households
- business and enterprise, and
- Government.

⁶⁴ Incorporating elements of financial capital. New Zealand Treasury. 2018. *The Treasury Approach to the Living Standards Framework*. <https://treasury.govt.nz/sites/default/files/2018-02/tp-approach-to-lsf.pdf>

When considering consequences on the economic environment, it is important to consider tangible and intangible impacts as well as direct and indirect impacts.

Tangible impacts Tangible impacts are the loss of things that have a monetary or replacement value such as buildings or landfills.

Intangible impacts Intangible impacts are the loss of things that cannot be bought or sold but which still have an economic consequence.

For example, ill-health caused by stress following an emergency is not something that can be bought or sold, but economic consequences of ill-health can include loss of income or medical costs for the government.

For businesses, there may be a loss of confidence, affecting investment, or an inability to retain or attract experienced and skilled staff.

Direct economic impacts Direct economic impacts result from physical destruction or damage caused by the emergency itself⁶⁵.
Direct economic impacts are often the easiest to plan for and identify after an emergency.

Indirect economic impacts Indirect economic impacts are due to the consequences of the damage or destruction⁶⁶. During recovery, attention is often focused on the more visible, easily identified direct impacts of an emergency. However, this can lead to indirect economic impacts being overlooked. For example, transport disruption can lead to business closure due to a lack of trade, or the loss of childcare meaning employees are unable to go to work.

Donated goods after an emergency can also cause indirect economic impacts on local businesses. For example, if a large amount of clothing is donated, business may be taken away from local clothing and second-hand businesses or there may be disposal costs.

Positive impacts Not all economic consequences caused by an emergency are negative. Some economic impacts may create an opportunity for new businesses to emerge or for some businesses to grow to meet demand.

Following the Canterbury earthquake sequence in 2010–2011, building activity increased by 150 percent in 2016 from its pre-quake levels, compared to an increase of about 20 percent for the rest of New Zealand⁶⁷.

New activity or businesses may fill a gap left by businesses or activity that has been impacted or closed due to an emergency. New activity needs to be monitored to identify if any unintended consequences arise that impact on other environments. An example is an increase in people coming into an area to support a rebuild. These additional people can place extra demand on local housing, potentially driving up housing rental costs, which may

⁶⁵ Australian Institute of Disaster Resilience. 2018. *Australian Disaster Resilience Community Recovery Handbook*

⁶⁶ Australian Institute of Disaster Resilience. 2018. *Australian Disaster Resilience Community Recovery Handbook*

⁶⁷ Reserve Bank of New Zealand. 2016. *The Canterbury rebuild five years on from the Christchurch earthquake*. Bulletin, 79(3). <https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Bulletins/2016/2016feb79-3.pdf>

PART A: Section 7 Recovery Environments

affect local families who were already struggling with the cost of living. This could lead to a higher demand for assistance from agencies supporting recovery in the social environment.

Individuals and households

Direct costs to individuals and households are through the loss or damage to property and assets, including:

- structures (roofs, walls, entire buildings)
- contents (furniture, floor coverings), and
- external structures (access ways/driveways, retaining walls, swimming pools, gardens).

Indirect costs include:

- additional costs (e.g. alternative accommodation, transport, drying-out, storage, medical, childcare)
- clean-up and debris removal costs
- insurance excesses
- planning and building consent fees, and
- loss of income.

At the microeconomic level, recovery involves restoring and/or protecting the incomes of individuals and families/whānau. This will mean finding ways to maintain employment security, salary and wage payments, access to bank accounts, and insurance and benefit payments. It may also mean:

- exploring opportunities for improving the livelihoods of community members in an altered economic environment
- providing ongoing advice and support to community members who must change (or who choose to change) their livelihoods as a result of the emergency, and
- offering financial assistance, where applicable e.g. emergency accommodation subsidy from the Ministry of Social Development

Business and enterprise

Shocks and stressors, including emergencies, can have an effect on the presence or operation of industries or sectors in local communities and regions. Primary industries are particularly vulnerable to hazards such as high winds, flooding, wildfire, biosecurity incursions (including the need to de-stock), snow and drought. All industries and sectors rely on transport, power, water, communications networks and supply chains, which may be disrupted by emergencies.

Businesses, particularly small businesses, can be vulnerable after an emergency. This can then affect the local, regional or national economy. Businesses can suffer direct costs associated with:

- infrastructure loss or damage (e.g. structural damage to shops, factories, plant, sheds, warehouses, hotels), and
- asset loss or damage (e.g. farm equipment, food, product stock, crops, pasture, livestock, forestry, motor vehicles, fences, fixtures and fittings, furniture, office equipment).

Indirect costs that can affect businesses include:

- costs associated with the loss of production in manufacturing, agriculture and service sectors
- impacts on income/trade/sales/value-add;
- increased costs, e.g. freight and input costs
- loss or disruption of supply chain networks
- increased work/demand
- virtual business interruption
- associated costs of traffic delays and extra transport operating costs
- loss of computer-controlled systems and data, and
- loss of lifeline utilities.

Businesses also play a key role in supporting recovery, as they are the vehicle of many recovery activities such as rebuilding. A vibrant economic environment is not just necessary for economic recovery but also for recovery in other environments. Recovery in the economic environment involves retaining, restoring and/or enhancing optimum trading conditions, and leveraging or building on local business capacity to renew and revitalise the local and regional economies.

This will mean:

- prioritising business interests across recovery activities
- prioritising the restoration of systems that support business operations (e.g. mobile networks, internet, roads) or finding alternative solutions for businesses while outages persist
- involving local businesses in the delivery of welfare services to the community, such as providing accommodation and household goods and services, and
- connecting businesses to expert and ongoing assistance, such as financial and technical advice and support.

In readiness, all businesses should be encouraged and supported to develop business continuity plans and review these regularly.

More information



See [Contributing More: Improving the role of business in recovery](#) published by Resilient New Zealand for lessons on business resilience.

Government

There are likely to be significant financial consequences for local, regional and central government. This can particularly be a burden for small local authorities, and needs to be prepared for during readiness.

Direct costs for local and regional government include:

- costs associated with damage to roads, bridges, public facilities, schools, parks, recreational areas and waterways

PART A: Section 7 Recovery Environments

- loss of ratepayer base
- costs of engaging extra resources and/or backfilling staff, and
- project management and maintenance costs of infrastructure rebuilding.

There are many indirect costs for central government that are hard to quantify, but also need to be recognised. These include:

- increased demand on government services, e.g. health and welfare services
- loss of tax/rate revenue
- loss or reduction in exports due to supply disruption
- loss of business continuity and, in some cases, permanent loss of local industry
- costs of engaging extra resources and/or backfilling positions, and
- costs of commissioning inquiries and implementing recommendations.

Who is involved?

Economic recovery involves leveraging local, regional and sector-wide expertise (e.g. industry leaders, interest groups, employee representatives and economic development teams or departments in local authorities). It also involves exploring opportunities for innovation and new partnerships both within and between sectors.

7.6 Natural environment

The natural environment helps sustain community and individual health and wellbeing, the primary sector and industry, and is central to many amenity and cultural values. Recovery of the built and economic environments rely heavily on the natural environment (e.g. for suitable land to rebuild and for physical and natural resources). Recovery of the natural environment is also critical for social recovery given peoples' connection to it.

Recovery activities themselves can impact the natural environment; for example, burning wood debris following a large flood releases particulates into the air. These need to be taken into account alongside other priorities when considering recovery options.

Rebuilding during recovery will invariably have an impact on the natural environment. The need to fast-track the regeneration of the built environment should be balanced with allowing time to properly assess environmental impacts. Considerations may also need to give effect to environmental legislation (e.g. the *Resource Management Act 1991*) and may include emergency works.

It is important that the right balance is found for each community — this discussion can be started during pre-emergency planning. There may also be benefits and opportunities that can come from finding ecologically friendly, innovative and sustainable solutions.

Real world example

An Australian study into bushfire recovery found that people who reported feeling connected to the natural environment had better psychosocial outcomes⁶⁸.

What is the natural environment?

The natural environment incorporates ecosystems and their constituent parts that support life and human activity, including natural and physical resources, the qualities and characteristics of areas and features, and their amenity values. It includes natural ecosystems such as estuaries and marine habitats, and also man-made natural spaces such as parks and reserves and recreational tracks.

Amenity value

Many elements of the natural environment have great significance or amenity value for communities. Amenity value describes aspects of our physical environment that have some form of recreational, cultural or social importance. Places with an amenity value include:

- parks, public gardens, waterways, ecological reserves, Māori Customary and Māori Freehold land, Māori land⁶⁹, and scenic tracks and lookouts, and
- swimming pools, sports grounds, bike or skate parks and other places for recreation.

The amenity value of something may be in addition to the physical or ecological value it has. This could be for a variety of reasons, including:

- there is an association with a community's collective identity, history or tīpuna
- it provides a way of getting exercise, socialising or enjoying the outdoors
- it provides protection to vulnerable landscapes, e.g. sand dunes or wetlands
- it provides an educational resource, or
- it contributes to the local economy via employment or tourism.

When considering consequences to the natural environment, it is important to consider components that might have an amenity value that supports the overall resilience of the community.

Natural environment consequences

To describe consequences in the natural environment following an emergency, it is helpful to break down the natural environment into four elements:

⁶⁸ Gibbs L, Bryant R, Harms L, Forbes D, Block K, Gallagher HC, Ireton G, Richardson J, Pattison P, MacDougall C, Lusher D, Baker E, Kellett C, Pirrone A, Molyneaux R, Kosta L, Brady K, Lok M, Van Kessel G, Waters E. 2016. Beyond Bushfires: Community Resilience and Recovery Final Report. University of Melbourne, Victoria, Australia. https://mspgh.unimelb.edu.au/_data/assets/pdf_file/0008/3043187/Beyond-Bushfires-Final-Report-2016.pdf

⁶⁹ Including Customary and Māori Freehold Land, General Land Owned by Māori, Crown Land Reserved for Māori, treaty settlement reserves, mahinga kai and fishing rights areas.

PART A: Section 7 Recovery Environments

- air
- water
- land and soil, and
- plants and animals

Air

Impacts to air quality can be a result of particulates, chemicals or biological aerosols.

Consequences can include:

- immediate health effects (e.g. asthma)
- long-term health effects (residual pollution)
- wind erosion denuding landscapes
- death from reduced air quality (e.g. smoke), and
- contamination of waterways, crops and livestock.

Further air contamination (or secondary contamination as a result of air contamination) and exposure of people and animals should be minimised where possible.

Water including surface, ground, marine and artificial storage

Emergencies can impact water resources both in terms of the quality of the water and the quantity available.

Water quality can be affected by biological, particulate or chemical contamination, and water quantity can be affected by changes in water flow or storage capacity.

Consequences as a result of impacts on water quality or quantity include:

- loss of drinking water, leading to health effects
- loss of livestock and crops from lack of water
- loss of recreational water areas
- reduced production and manufacturing, and
- loss of useable land from a changed water course.

Planning and management of water use has increasingly been focused on sustainability by safeguarding water quality and ecosystems while meeting the social and economic needs of communities.

Real world example

Following the Whakatāne District floods in 2017, the Local Authority Recovery Office undertook an analysis of erosion that had occurred around waterways. This analysis quantified the extent of erosion and was used to determine the economic impact on the primary sector, as well as informed future planning of housing and land survey activity.

Land and soil including rocks, soil and landscapes

Land and soil can be impacted in many ways, including:

- erosion
- deposition
- contamination

- compaction, and
- damaged landforms and landscapes.

This can result in consequences that include:

- reduced productivity of farmland
- loss of land from erosion
- loss of aquatic habitats
- increased risk of future events (e.g. flooding and rockfall)
- loss of geographically significant areas or landforms, and
- loss of recreational areas (e.g. walking tracks and infrastructure).

Recovery provides an opportunity to consider how land use can support reduction of risk from future hazards and build resilience, particularly around coastlines and in areas prone to flooding.

Managing land use is a central function of local authorities, and an equally critical element of recovery planning. Making development ecologically sustainable and resilient is a key priority in both business-as-usual and recovery contexts.

Plants and animals

Biodiverse environments are those where variety exists and thrives — within species, between species and between ecosystems. As the impacts of human development are examined, both globally and locally, more emphasis is being placed on biodiversity as a cornerstone of sustainability and resilience.

Plants and animals can be impacted in many ways, including:

- biosecurity incursion
- loss of habitat
- disease
- pollination, and
- loss of species and populations.

The resultant consequences can include:

- disturbed, destruction or contamination of marine habitats reducing species population and affecting fisheries (e.g. sea-grass damage from sediment deposition or uplifted seabed exposing sub-tidal habitat)
- loss of habitats for bird life reducing horticulture productivity due to reduced pollination
- loss of nationally significant species
- reduced horticultural productivity due to increased concentration of pests, and
- damage to forestry plantations causing downstream damage or the need for immediate processing.

PART A: Section 7 Recovery Environments

Recovery involves considering interactions within and between whole ecosystems, rather than focusing on a single species. While action is often needed to protect vulnerable species (such as New Zealand's native birds), a holistic suite of measures may be necessary to:

- maintain and improve air, water, soil and landscape quality, and
- actively support various species to recover and thrive.

Real world example

Damage and destruction to the marine environment around Kaikōura following the November 2016 earthquake and tsunami caused cascading consequences for the economic and social environments. Access to Kaikōura Harbour was severely restricted due to the seabed being uplifted, meaning tourist operators were unable to operate for an extended period of time. This affected the tourism industry, one of the largest sources of income for the region. 20% of the pāua habitat was also destroyed impacting commercial pāua fishers.

Wāhi tapu

Wāhi tapu are places or sites sacred to Māori in the traditional, spiritual, religious, ritual or mythological sense⁷⁰. A wide range of places may be considered wāhi tapu, including urupā (burial grounds) or places associated with ancestors, tīpuna, or traditional or historic activity. Wāhi tapu often include features of the natural environment, such as particular streams, hills or tracts of forest.

A participatory approach is essential for evaluating the importance of particular places and deciding how measures for wāhi tapu can be incorporated into recovery planning and management.

Waste management

Waste management must also be considered in the natural environment. Waste can be created from the emergency itself, such as silt deposition during flooding, or can be the result of recovery activities such as building demolition.

Activities in the early stages of recovery must address the immediate and long-term adverse consequences of the emergency on waste systems and sources of contamination or pollution.

Any action taken across all of the recovery environments must also consider long-term implications for the health of communities and the environment.

Regarding waste management, the actions to consider include the following:

- assessing damage to waste systems, and identifying sources of contamination or pollution
- avoiding or limiting exposure of people, animals, ecosystems or the landscape to contamination or pollution
- examining environmental impacts for planned recovery activities, or those that are already being undertaken, and

⁷⁰ *Heritage New Zealand Pouhere Taonga Act 2014* s6

- maintaining or finding alternative solutions for waste systems, while minimising further impact on the environment.

Considering ways to make waste systems more ecologically friendly and find practical solutions for reducing contamination or harmful emissions from industry.

Real world example

Following the Whakatāne District floods in 2017, Whakatāne District Council had to design new processes for disposing of waste produced from the clearing out of flood-affected houses. The existing business-as-usual process was not robust enough to deal with the quantities of waste in an efficient manner

A severe weather event in March 2019 caused erosion along the Fox River on the West Coast of the South Island, which resulted in rubbish from an old landfill being deposited in the river and along the coast. A substantial clean-up effort was needed to remove the rubbish and, in July 2019, options for permanently securing the landfill were still being considered, including complete removal of all the rubbish to another site.

Who is involved?

Recovery in the natural environment is the result of collaboration between communities, iwi, environmental experts and specialist agencies, and environmental teams or departments from local authorities.

7.7 Other environments

The four recovery environments incorporate all aspects of a community, ensuring all aspects are considered when identifying consequences of an emergency.

The intent of recovery environments is to provide a framework to identify and consider all possible and actual, and direct and indirect consequences of an emergency so that these can be addressed.

The way recovery is supported and managed is determined by the consequences of the recovery, not simply based on the four environments. Refer to *Consequence matrix* in Section 10.4 in Part C and Section 12.4 in Part C for more information on how to support and manage a recovery.

Depending on the desires of the community, additional environments may be adopted to highlight or focus on particular aspects of the community and ensure consequences in these areas are not overlooked. Examples of these environments include cultural and rural.

PART A: Section 7 Recovery Environments

Cultural

Cultural aspects and values should be considered in all environments and not isolated to an individual environment. For example historical buildings in the built environment, and sport activities and the facilities that allow for them in the social, natural and built environment. Māori cultural values should be considered in all recovery environments when identifying consequences of an emergency. Refer to *Māori and recovery* in [Section 2.1](#) for more information.

However, the cultural environment may be used to more easily consider specific cultural, social or amenity values aspects of a community. It could be the character of a suburb (e.g. the Art Deco character of Napier's central business district); the arts; historical buildings and places; and cultural, community and sport events and activities.

Rural

Consequences on the rural environment may have unique challenges that may benefit from being identified/considered as a separate environment when identifying consequences. The rural environment is predominantly focused on the primary industries/producers sector.

If a rural environment is used to assist identification of consequences, careful consideration needs to be given as to whether consequences for lifestyle blocks and rural residential occupiers, Māori land and households living in remote areas are incorporated in this environment or if they are considered to be in another.

Appendix A Referenced Resources

This appendix provides the online location of documents and resources referred to in this document for easy reference. They are listed in alphabetical order by the document name.

A *Australian Disaster Resilience Community Recovery Handbook*

Australian Institute for Disaster Resilience

<https://knowledge.aidr.org.au/media/5634/community-recovery-handbook.pdf>

B *Beyond Bushfires: Community Resilience and Recovery Final Report 2010-2016.*

Gibbs L, Bryant R, Harms L, Forbes D, Block K, Gallagher HC, Ireton G, Richardson J, Pattison P, MacDougall C, Lusher D, Baker E, Kellett C, Pirrone A, Molyneaux R, Kosta L, Brady K, Lok M, Van Kessel G, Waters E.

https://mspgh.unimelb.edu.au/_data/assets/pdf_file/0008/3043187/Beyond-Bushfires-Final-Report-2016.pdf

Building Regulations 1992, Schedule 1 The building code

<http://www.legislation.govt.nz/regulation/public/1992/0150/latest/DLM162576.html#DLM162576>

C *Civil Defence Emergency Management Act 2002*

<http://www.legislation.govt.nz/> search: emergency management

Contributing More – Improving the Role of Business in Recovery

Resilient New Zealand

<https://resilientnewzealand.co.nz/wp-content/uploads/2015/12/contributing-more-improving-the-role-of-business-in-recovery.pdf>

Coordinated Incident Management System (CIMS), 3rd edition.

Officials' Committee for Domestic and External Security Coordination

<https://www.civildefence.govt.nz/resources/coordinated-incident-management-system-cims-third-edition>

E *Emergency Management (Information about health consequences from emergencies)*

Ministry of Health

<https://www.health.govt.nz/our-work/emergency-management>

Appendix A Referenced Resources

F *Factsheet: Local Transition Periods*

National Emergency Management Agency

<https://www.civildefence.govt.nz/assets/Uploads/publications/Local-Transition-Periods/Factsheet-local-transition-periods.pdf>

Forms for giving, extending or terminating a local transition period

<https://www.civildefence.govt.nz/assets/Uploads/publications/Local-Transition-Periods/Notice-of-transition-form-templates-updated-2017.docx>

Framework for Psychosocial Support in Emergencies 2016

Ministry of Health

<https://www.health.govt.nz/system/files/documents/publications/framework-psychosocial-support-emergencies-dec16-v2.pdf>

G *GAR Distilled. 2019 Global Assessment Report on Disaster Risk Reduction*

United Nations Office for Disaster Risk Reduction

<https://gar.unisdr.org/sites/default/files/gar19distilled.pdf>

H *He Waka Ora*

<https://hewakaora.nz/>

I *IAP2's Public Participation Spectrum*

International Association for Public Participation

https://www2.fgcu.edu/Provost/files/IAP_Public_Participation_Spectrum.pdf

Including culturally and linguistically diverse (CALD) communities [IS 12/13]

National Emergency Management Agency

<https://www.civildefence.govt.nz/assets/Uploads/publications/is-12-13-including-cald-communities.pdf>

L *Learning from Regional Recovery Events: A Practical Guide for Territorial Authorities and Local Recovery Managers*

Morris, B

<https://www.civildefence.govt.nz/assets/Uploads/CDEM-Resilience-Fund/Learning-from-regional-recovery-events.pdf>

- Local Government Act 2002*
<http://www.legislation.govt.nz/> search: local government
- N** National Civil Defence Emergency Management Plan Order 2015
<http://www.legislation.govt.nz/> search terms: emergency management
- National Disaster Recovery Framework, Second edition*
Federal Emergency Management Agency
https://www.fema.gov/media-library-data/1466014998123-4bec8550930f774269e0c5968b120ba2/National_Disaster_Recovery_Framework2nd.pdf
- National Disaster Resilience Strategy Rautaki ā-Motu Manawaroa Aitūā*
National Emergency Management Agency
<https://www.civildefence.govt.nz/assets/Uploads/publications/National-Disaster-Resilience-Strategy/National-Disaster-Resilience-Strategy-10-April-2019.pdf>
- Q** *Quick Guide: Giving notice of a transition period*
National Emergency Management Agency
<https://www.civildefence.govt.nz/assets/Uploads/publications/Local-Transition-Periods/Quick-Guide-to-giving-notice-of-local-transition-period.pdf>
- R** *The Canterbury rebuild five years on from the Christchurch earthquake*
Reserve Bank of New Zealand
<https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Bulletins/2016/2016feb79-3.pdf>
- Resource Management Act 1991*
<http://www.legislation.govt.nz/> search terms: resource management
- S** *Social Recovery 101: A Guide for Local Social Recovery: Waimakariri District Council's social recovery framework and lessons learnt from the Greater Christchurch Earthquakes*
Waimakariri District Council
https://www.waimakariri.govt.nz/_data/assets/pdf_file/0028/56881/Recovery-101_130918.pdf

Appendix A Referenced Resources

Strategic Planning for Recovery Director's Guideline [20/17]

National Emergency Management Agency

<https://www.civildefence.govt.nz/assets/Uploads/publications/Strategic-Planning-for-Recovery/Strategic-Planning-for-Recovery-DGL-20-17.pdf>

T *The Guide to the National Civil Defence Emergency Management Plan 2015*

Department of the Prime Minister and Cabinet

<https://www.civildefence.govt.nz/assets/guide-to-the-national-cdem-plan/Guide-to-the-National-CDEM-Plan-2015.pdf>

The Treasury Approach to the Living Standards Framework

New Zealand Treasury

<https://treasury.govt.nz/sites/default/files/2018-02/tp-approach-to-lsf.pdf>

U *Understanding Social Recovery*

Canterbury Earthquake Recovery Authority

<http://www.egrecoverylearning.org/assets/downloads/res101-understanding-social-recovery.pdf>

W *Welfare Services in an Emergency Director's Guideline [DGL 11/15]*

National Emergency Management Agency

<https://www.civildefence.govt.nz/assets/Welfare-Services-in-an-Emergency/Welfare-Services-in-an-Emergency-Directors-Guideline.pdf>