

Community Recovery



Cover images, clockwise from top: Residents from Dungog's Alison Court return home after floods in April 2015 destroyed apartments (photo: Kristine O'Sullivan); Homeowners take stock of damage after a house fire. Red Cross Emergency Services officers help count the cost. (photo: Conor Ashleigh, Australian Red Cross); Department of Fire and Emergency Services (WA) meets with residents in Northcliffe in 2015 (photo: Kyle Nowak, DFES).

AUSTRALIAN DISASTER RESILIENCE
HANDBOOK COLLECTION

Community Recovery

Handbook 2



Australian Government
Department of Home Affairs

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Australian Disaster Resilience Handbook Collection

The Australian Disaster Resilience Handbook Collection provides guidance on national principles and practices for disaster resilience.

The Handbook Collection:

- provides an authoritative and trusted source of knowledge about disaster resilience principles in Australia
- aligns national disaster resilience strategy and policy with practice, by guiding and supporting jurisdictions, agencies and other organisations and individuals in their implementation and adoption
- highlights and promotes the adoption of good practice in building disaster resilience in Australia
- builds interoperability between jurisdictions, agencies, businesses and communities by promoting use of a common language and coordinated, nationally agreed principles.

The Handbook Collection is developed and reviewed by national consultative committees representing a range of state and territory agencies, governments, organisations and individuals involved in disaster resilience. The collection is sponsored by the Australian Government Department of Home Affairs.

Access to the collection and further details are available at the Australian Disaster Resilience Knowledge Hub (the 'Knowledge Hub') www.knowledge.aidr.org.au.

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Handbook 6 National Strategy for Disaster Resilience: Community Engagement Framework

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Handbook 14 Incident Management in Australia

Handbook 15 Safe and Healthy Crowded Places

Handbook 16 Public Information and Warnings

Australian Emergency Management Manual Series

The current Australian Emergency Management Manual Series contains 46 publications. The manuals have not been reviewed since 2011 or earlier. The Manual Series is undergoing a review which will see relevant manuals move into the Handbook Collection or other collections or be archived. Current and past manual editions will remain available on the Knowledge Hub.

Acknowledgements

This handbook was made possible through the support of a broad cross-section of the disaster resilience sector in Australia and overseas. AIDR thanks representatives from community, government, emergency services, not-for-profit organisations and other associations for their contributions.

In particular, AIDR thanks Anne Leadbeater, Director of the Leadbeater Group Pty Ltd, for authoring the handbook.

AIDR also acknowledges the efforts of the steering committee and working group established to support the development of this handbook.

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AIDR acknowledges the valuable input of the following individuals and groups:

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Jurisdictional arrangements for community recovery



Commonwealth

<https://www.homeaffairs.gov.au/>



Australian Capital Territory

<http://esa.act.gov.au/emergency-management/emergency-arrangements/>



New South Wales

<https://www.emergency.nsw.gov.au/Pages/for-the-community/for-the-community.aspx>



Northern Territory

www.securent.nt.gov.au



Queensland

<https://www.qld.gov.au/community/disasters-emergencies/recovery-after-disaster>



South Australia

<http://www.dpc.sa.gov.au/what-we-do/services-for-government/security-and-emergency-management/state-emergency-management-plan>



Tasmania

<http://www.dpac.tas.gov.au/divisions/osem>



Victoria

<https://www.emv.vic.gov.au/>



Western Australia

<https://www.oem.wa.gov.au/>

About this handbook

Purpose

This handbook aims to provide a comprehensive guide to community recovery in Australia. It is intended for use by planners, managers and those involved in working with communities to design and deliver recovery processes, services, programs and activities.

The first edition of this handbook, the *Australian Emergency Manual Recovery*, was developed in 1996. Over the past two decades, many structural changes have occurred in the governance systems and policy development arenas of emergency management and recovery management. This handbook has been updated to reflect those changes.

The term 'recovery worker' is a generic description. Recovery workers may be practitioners from organisations and disciplines in any and every field who are involved in delivering services to the community in non-disaster times, and who may become recovery workers following a disaster. The issues confronted by individuals and communities, and the knowledge and skills needed to navigate the post-disaster community environment, are considerable. There is a need for shared understanding that can aid discourse among practitioners, policy makers and administrators.

The goals of this handbook are:

- to explore key concepts, theories and practice frameworks in evidence in Australia
- to contribute towards a common language to enable sector-wide discourse
- to provide concepts, knowledge and resources for practitioners
- to increase confidence, autonomy, innovation, critique and reflective practice for those assisting communities in recovery.

Many of the essential components of the original publications have been incorporated into this handbook. It has been updated in terms of policy, procedures and professional practice developments, and also considers community resilience and sustainability considerations.

Who is this handbook for?

This handbook is intended to guide and assist all organisations that help communities before, during and after a disaster. These include Commonwealth and state government departments, emergency management agencies, local governments, non-government organisations, community groups and the emergent groups that form in response to a disaster.

Within these organisations, the handbook is most likely to be used by those individuals who develop policies, capabilities, emergency management plans and other documents that incorporate disaster recovery within their own jurisdictions, agencies, organisations, and communities.

The handbook may also be of value to educators, planners, businesses and the private sector that provide support to communities impacted by disaster.

It is expected that international organisations involved in disaster recovery and resilience will also use the handbook.

Using the handbook

This 2018 revision of the *Community Recovery Handbook*, coordinated by AIDR, has again drawn upon expertise across jurisdictions, the emergency management sector, community, government and non-government organisations. This revision recognises the complexity of disaster recovery and human behaviour, influences of technology and social media, and consideration of recovery planning for all hazards.

This handbook has four parts:

- Part One: Introduction—introduces the handbook and the broad context of recovery including definitions of 'disaster' and 'recovery' and the identification of key stakeholders.
- Part Two: Policies and principles—outlines the *National Strategy for Disaster Resilience* and *National*

Principles for Disaster Recovery and describes foundational concepts for recovery in relation to each of the recovery principles.

- Part Three: Planning for recovery—explores the implications and effects of disasters and provides general guidance on recovery structures and phases, services, resource management and related issues.
- Part Four: Recovery environments—examines in more detail, the impact of disaster and strategies to support recovery in the social, built, economic and natural environments.
- Toolkits: These companion documents are not a part of the handbook but form supplementary material available online to support people's use and application of this handbook.

This handbook can be read as a whole, or sections can be read, according to the reader's need, on a stand-alone basis or in conjunction with other sections. It has been produced to complement existing arrangements and to provide overarching theory and models of good practice for all recovery partners in Australia.

The handbook recognises that there are variations in legislative powers, arrangements and terminology across jurisdictions. It should therefore be used in conjunction with applicable state or territory legislation, plans, guidelines and local arrangements, as well as other handbooks in the Australian Disaster Resilience Handbook Collection.

Disasters and emergencies: Several terms to describe the event that requires recovery are used interchangeably in the text, depending on context. These include 'disaster', 'emergency', 'hazard', 'hazard impact' (the impact of, for example, a flood or a bushfire), 'event' and 'incident'.

This handbook is available on the Australian Disaster Resilience Knowledge Hub at www.knowledge.aidr.org.au.

Community Recovery Handbook companion documents

These companion documents are not a part of the handbook but form supplementary material available online to support people's use and application of the *Community Recovery Handbook*. These companion documents will be updated to ensure currency as arrangements and experiences change over time.

Community recovery checklists



Toolkit 2-1

Community recovery further resources



Toolkit 2-2

Community recovery case studies



Toolkit 2-3



Part 1 Introduction to community recovery

1.1 What is a disaster?

The *National Strategy for Disaster Resilience* (2011) defines a disaster as:

A serious disruption to community life which threatens or causes death or injury in that community and/or damage to property which is beyond the day-to-day capacity of the prescribed statutory authorities and which requires special mobilisation and organisation of resources other than those normally available to those authorities.

National Strategy for Disaster Resilience 2011.

Disasters and emergencies are the result of an interaction between a hazard and a vulnerable population that disrupts lives and communities. For those working in recovery, an understanding of the cause of an emergency will be important in terms of understanding the context but is likely to be less important than dealing with the consequences, with the primary concern for the recovery manager to provide for the needs of the community.

Even with sophisticated predictive tools and warnings, emergencies are still largely unpredictable and chaotic in their nature and impacts. Added to this, human nature is such that people commonly do not expect to be affected by an emergency and, as a result, tend not plan for this eventuality.

Therefore, small or large emergencies usually have two elements in common: they are unexpected and they disrupt individuals, households, livelihoods and communities.

1.1.1 EMERGENCY MANAGEMENT

Emergency management is defined as:

A range of measures to manage risks to communities and the environment; and involves the organisation and management of resources for dealing with all aspects of emergencies. Emergency management involves the plans, structures and arrangements which are established to bring together the normal endeavours of government, voluntary and private agencies in a comprehensive and coordinated way to deal with the whole spectrum of emergency needs including prevention, response and recovery.

National Strategy for Disaster Resilience 2011.

The primary goal of the Australian emergency management systems is to mitigate the effects of

emergencies and disasters before, during and after the emergency or disaster.

Emergency management is applied across all phases of emergencies including prevention, preparedness, response and recovery (PPRR). These four phases are neither sequential nor mutually exclusive: in practice each element has components of the other three and may, at least in part, be operational simultaneously. Work in one stage of the process is likely to have flow-on effects for another stage, so that better preparedness and response is likely to lead to better recovery. Each PPRR element should be integrated through planning programs and management processes.

Planning for prevention, preparedness, response and recovery activities should support individuals and communities to be resilient to disasters, and to foster an environment that encourages innovation and adaptation, and the self-reliance to withstand and recover from disasters (COAG 2011).

Emergency management and, indeed, recovery have been extended from their historical sphere of natural events to include events relating to technological and essential services failures, pandemic, influenza, exotic animal diseases, insect infestations, acts of violence and terrorism. This extension of responsibilities reinforces the need for flexibility of disaster planning and emergency management systems.

1.1.2 THE CHANGING NATURE OF DISASTERS

In 2002 the Council of Australian Governments (COAG) recommended that a natural disaster be defined as follows:

A natural disaster is a serious disruption to a community or region caused by the impact of a naturally occurring, rapid onset event that threatens or causes death, injury or damage to property or the environment and which requires significant and coordinated multi-agency and community response. Such serious disruption can be caused by any one, or a combination of the following natural hazards: bushfire; earthquake; flood; storm; cyclone; storm surge; landslide; tsunami; meteorite strike; or tornado.

COAG 2002.

Most of the work undertaken by recovery agencies will focus on communities who have suffered a natural disaster. These may be 'communities of place' or 'communities of interest'. It is, however, important to note that there are other types of emergencies, which are not natural disasters, but which provide emerging challenges within the Australian context.

These include:

- climate change
- terrorism
- crimes of extreme violence
- exotic plant and/or animal diseases
- human pandemics
- infrastructure failure.

Climate change

Variations in climatic conditions and changing demographics within Australia will create new challenges regarding disaster recovery. Some communities may become more vulnerable, with potential impacts on health and wellbeing, infrastructure and economy.

It is predicted that the impacts of a changing climate will include:

- an increase in the scale and number of extreme weather events, including drought and heatwaves
- an increased potential for property damage and more disruptions of critical infrastructure.

Changes to winds may have potential consequences for the agricultural and energy sectors and building codes (Commonwealth Scientific and Industrial Research Organisation [CSIRO] 2015). These changes may challenge the prevailing theories about how we manage recovery. Practices that worked in the past may not work in the future.

Changing climate conditions, combined with changing demographics, could result in more intense and more frequent disaster impacts on communities (World Meteorological Organisation [WMO] 2016). For example, in Victoria in January 2009, it is estimated that 374 people died as a result of extreme heat—more than double the number that died in the ‘Black Saturday’ bushfires in the following week (Australian Bureau of Statistics [ABS] 2010).

Terrorism

A terrorist act is defined under the Australian *Criminal Code Act 1995* as an act or threat intended to advance a political, ideological or religious cause by coercing or intimidating an Australian or foreign government or the public, by:

- causing serious harm to people or property
- creating a serious risk to the health and safety to the public
- seriously disrupting trade, critical infrastructure or electronic systems.

The September 11 attacks in the United States in 2001 resulted in an increased sense of vulnerability to the likelihood of terrorist attacks in Australia. Governments have invested heavily in national security measures, developed anti-terrorism laws and encouraged protective security awareness in both public and private sectors.

The 2002 Bali bombings brought the reality of terrorism to Australia with significant loss of life and far-reaching psychosocial impacts on survivors, their families and the bereaved. Events such as the 2002 bombings in Bali and the 2005 London bombings highlighted the phenomenon of ‘home-grown’ terrorism. Notions of multiculturalism and the accepted tradition of racial and religious tolerance in Australia were challenged.

The impacts of terrorist incidents may be different to other disasters, and may result in greater psychosocial impacts upon a geographically dispersed population. The ideological nature of terrorist acts may also have additional consequences such as a reduction in social cohesion. Additionally, discussion continues about whether the consequences of terrorism and its implications for recovery vary significantly from other disasters. Notwithstanding this, a terrorist attack will result in a criminal investigation element, which may have consequences for recovery and will need to be considered by recovery managers and practitioners.

Crimes of extreme violence

In addition to natural disasters, there is a need to consider and plan for recovery from crimes of extreme violence. Recent Australian examples include the Lindt Café siege in Sydney in December 2014 which resulted in the death of two hostages, and the Bourke Street car attack in Melbourne in January 2017, resulting in the loss of six lives and 25 people hospitalised for their injuries.

Recovery considerations in events such as these are particularly complex, given the large numbers of people directly and indirectly affected, and the fact that they are geographically dispersed, even though they have been impacted by the same event. The unpredictable and heinous nature of crimes of extreme violence are likely to lead to significant psychosocial implications for those affected, and the broader community.

Biosecurity

Biosecurity emergencies relating to pest insects, animal or plant diseases can have devastating economic, environmental and psychosocial consequences for the individuals and communities affected.

The outbreak of foot and mouth disease in the United Kingdom in 2000 had significant economic and psychological impacts upon primary producers, as well as on the community networks and livelihoods of those dependent upon them. The outbreak of equine influenza in Queensland and New South Wales in 2007 severely disrupted the Spring Racing Carnival in both states, with the Australian Horse Industry Council estimating the financial impact at \$550 million. More recently, 2017 has seen occurrences of the Hendra virus in horses in Queensland, where the disease was first identified in 1994, and incidences of anthrax in sheep and cattle in Queensland and Victoria.

Some animal diseases have the potential to infect humans. The emergence of zoonotic diseases can have a

major impact by creating fear and uncertainty within the general population and undermining business confidence, to an extent that may be disproportional to the impact of the actual illness.

Human pandemics

The world has experienced many pandemics throughout history, such as cholera, typhus, smallpox, measles, tuberculosis, leprosy, malaria, yellow fever and human immunodeficiency virus (HIV/AIDS). There have also been many influenza-related pandemics, including the Pandemic H1N1 influenza in 2009 also referred to as Human Swine Influenza. The emergence of the highly contagious H1N1 was a significant public health concern for Australia and the rest of the world. In response to this outbreak, Australia activated, tested and refined its national and state/territory influenza pandemic preparedness plans.

There is no certainty when the next influenza pandemic will occur or how severe it will be. Currently there are influenza viruses with pandemic potential circulating widely in animals. These viruses occasionally infect humans and the potential for a pandemic arises when the virus adapts, enabling rapid transmission between humans.

Like H1N1, a new pandemic could be relatively mild. Alternatively, a highly pathogenic virus could emerge, resulting in serious and widespread illness and leading to a large number of deaths and to the disruption of the normal functioning of society for a prolonged period (Commonwealth of Australia 2009).

Infrastructure failures

Our way of life is heavily dependent upon infrastructure and the supply of essential services such as electricity, water, fuel, gas and telecommunications. Many of these services are interlinked and are vulnerable to natural disasters, extreme weather and to human impacts such as cyberattacks and widespread technology failure. Loss or damage to one or more infrastructure systems can have wide-ranging consequences.

While Australia has experienced loss of electricity and gas for extended periods as well as fuel shortages, a widespread and extended loss of telecommunications and access to the internet has not been experienced. Such an event would have significant impact on business, on the ability to undertake transactions and manage information, and on safety and security.

In summary, it is not possible to protect communities from all hazards, particularly in light of climate change predictions, and there will continue to be a need for recovery activities for physical, social, emotional, psychological, economic, financial, and built and natural environment restoration. The dynamic nature of emergencies and their wide-ranging consequences to communities illustrate the complexity of community recovery and importance of well-planned and effective programs and initiatives.

1.2 What is recovery?

According to the United Nations Office for Disaster Risk Reduction (UNISDR), recovery is:

The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and 'build back better', to avoid or reduce future disaster risk.

UNISDR 2017.

Recovery is the process of coming to terms with the impacts of a disaster and managing the disruptions and changes caused, which can result, for some people, in a new way of living. Being 'recovered' is being able to lead a life that individuals and communities value living, even if it is different to the life they were leading before the disaster event.

The impacts of disasters on affected individuals and communities can be profound, long lasting and life changing. Therefore, recovery is a long-term, multi-layered social and developmental process that is more than simply the replacement of what has been destroyed and the rehabilitation of those affected. At its centre, recovery is the complex process of individuals and communities who have been impacted by a disaster event working to resolve the impacts that the event has had on the trajectory of their lives. Recovery provides an opportunity to improve aspects beyond previous conditions by enhancing social infrastructure, natural and built environments, and economies.

Planning for recovery is integral to preparing for emergencies, and is not simply a post-emergency consideration. Recovery planning should occur well in advance of any emergency and concurrently with planning for response. Some elements of recovery will continue until well after the affected community is able to manage on its own.

The manner in which recovery processes are undertaken is critical to their success. Recovery is best achieved when the affected community can exercise a high degree of self-determination and to contribute actively to the planning and implementation of recovery activities. Well-designed communication plans are also critical to the success of an affected community's recovery outcomes.

1.2.1 THE AFFECTED COMMUNITY

Disasters affect communities in many ways, including disruption to normal routines, physical harm and social disruption. In planning for recovery, it can be useful to look at communities as distinct types (Ministry for Civil Defence and Emergency Management [CDEM] 2010):

- communities of place—a reference to a particular geographical area or areas
- communities of interest—a reference to a group or groups of people sharing similar interests, affiliations, religious or cultural backgrounds,
- communities of impact (in the case of recovery)—as a way of describing a group of people who have been affected by a disaster but who have no other affiliations or connections
- particular suburbs or areas, particular communities such as retirement villages or employees of a particular business closed by the disaster—the affected community, however, may comprise geographically dispersed populations linked only by a tourist destination or by a particular sub-group of a community with a shared interest (such as horse owners and workers during the equine influenza pandemic)
- repatriated persons or groups from overseas
- socially isolated, neglected or marginalised members of the community
- 'virtual communities' comprising people who are solely or primarily connected via social media or the internet
- individuals, groups and organisations that suffer the secondary effects of disaster—these include neighbours, friends, relatives of those directly affected (whether local or elsewhere), or those linked through businesses or community and social services organisations. This group may also include the transition workforce provided by response, rescue, relief and recovery workers.

When identifying disaster-affected communities or parts of a community, it is also important not to be restrictive in how affected communities are defined. Caution needs to be exercised so that the process does not alienate people who, although not appearing to be obviously affected, may be experiencing consequences from the disaster. These people may include those who have witnessed an event, helped others affected, become distressed by hearing information about the emergency or felt they were at potential risk of the emergency (even if that risk did not eventuate).

Following a disaster, an understanding of who is affected enables planning of recovery activities. The affected community may consist of:

- groups/people directly affected by the disaster in terms of injury, death, and loss of people they know, possessions or accommodation—this includes those evacuated and/or displaced, emotionally affected, or those financially affected through loss of employment or livelihood (people may also be affected by a combination of these consequences, or by the cumulative experiences and effects of previous disasters)
- people forced to leave their homes to take up residence, temporarily or permanently, in another area—these people may still experience distress and trauma relating to the disaster, sometimes long after the event, despite no longer living in the area
- groups with additional or complex needs—this may include Indigenous people
- populations, people with particular cultural, language or spiritual needs, people with physical or intellectual disabilities, the aged and infirm, and people with little personal or family support

It is also important for recovery managers to acknowledge that a geographic location may not be the most appropriate way to define an affected community. For example:

- The geographic site of the event may not be the location where affected people are from, for example the Bourke St Mall incident (Melbourne), Lindt Café Siege (Sydney), or the 2004 Indian Ocean tsunami where many of the people present at the site of the emergency lived elsewhere.
- While the geographic location of the event may be where one part of the affected community lives, there may be many other people who are impacted who do not live in the location (e.g. bereaved family members or friends, business owners, absentee property owners).
- In some disaster events, housing stock will be destroyed, meaning that people who have been affected may need to relocate temporarily or permanently.

Recovery managers need to think about how they will communicate with and include all affected community members in recovery plans and activities. Care should be taken with attempts to differentiate between the 'affected' and 'unaffected'. There is very little to be gained by creating further divisions in communities following disaster events, and strong evidence that deep rifts and conflict can occur when divisions are created or exacerbated by well-meaning but poorly planned recovery systems. (Australian Red Cross, *Communicating in Recovery* 2010).

The effects of a disaster on an impacted community are compounded by the nature of the disaster and of the community itself, as well as complex considerations such as human behaviour and relationships and the evolving needs of recovery. In working with the affected community, suggestions for recovery managers include:

- Be as inclusive as possible in identifying and assessing the 'affected' community.
- Recognise that significant impacts can be experienced by those not considered 'directly affected'.
- Remember that not everyone who is affected will live in the same area.
- Understand that people will not all respond or react in the same way.
- Plan collaboratively with the community.
- Tailor and adapt plans to meet changing community needs.
- Identify and work through community leaders.
- Reinforce shared responsibility between all sectors of the community.

See also Section 2.4.1 Understanding the context and Section 2.4.3 Community-led recovery.

1.2.2 KEY AGENCIES

All levels of government, along with non-government, community, corporate and philanthropic agencies, and community groups involved in the recovery effort have a responsibility to work closely and collaboratively with the impacted community to provide a range of recovery activities, programs and services. The aim of emergency recovery is to achieve outcomes that are owned by the affected individuals and community and supported by all involved agencies.

In many areas across Australia local governments are recognised and supported as the key lead agencies in recovery. State and territory departments and agencies are responsible for providing broader community safety and emergency-related services such as policing, social welfare and psychosocial recovery services, social housing, education, health and ambulance provision, agriculture planning and policy, land use planning, land use planning policy, building control policy and emergency management policy.

States and territories and the Australian Government have shared interests and specific responsibilities in the provision of timely and coordinated services to people affected by disasters. The Australian Government facilitates the development of nationally consistent approaches to recovery policy, planning and practice. The Australian Government supports the states and territories through cost sharing arrangements to alleviate the financial burden associated with the provision of emergency relief and recovery services and activities. The Australian Government may also provide direct assistance through the payment of financial assistance to affected individuals and through alleviating measures, such as freezing income tax liabilities and the provision of counselling and other support services.

The Australian Government is also responsible for the deployment of Australian Defence Force resources and personnel to assist in disaster recovery.

The corporate sector can also play an integral role in recovery planning and management. It is embedded in the affected community in the form of electricity providers, insurance companies, the banking sector, telecommunications, local media, retail outlets, private health providers, private education providers, major employers and so on. Ideally, these providers are engaged in recovery plans and processes to support whole-of-community recovery.

A range of non-government organisations, including community and social service organisations as well as not-for-profit and local community groups, faith organisations and service clubs are also integral to effective recovery. They contribute to initial and longer-term recovery activities, development of policy and practice, and particularly in the provision of a range of services for affected communities (e.g. Victorian Council of Social Service, Rotary, Lions, community/ neighbourhood houses).

See also Section 2.4.4 Coordination and Collaboration (Key stakeholders—who is involved in recovery?).

1.2.3 RECOVERY ROLES

Providing support for the disaster-impacted community and coordination of recovery activities is likely to be undertaken by recovery workers. The term 'recovery worker' is a generic description and practitioners from any and every field involved in working with and for the community in non-disaster times may become recovery workers after a disaster. Recovery workers can include members of local community groups, service providers and community organisations, as well as those involved in self-initiated or spontaneous recovery activities.

Similarly, the term 'recovery manager' refers to any number of roles in the recovery environment. Some of these include taskforce leaders (if a taskforce

or authority has been implemented), and managers and policy advisors from different agencies involved in the coordination of the recovery effort (including managers tasked with implementing recovery services and activities). Recovery managers manage the recovery process on behalf of the nominated Recovery Coordinator, the lead recovery agency, taskforce or authority.

The nature of recovery work

Disaster recovery work is carried out in an environment that is characterised by:

- its unpredictable, emergency nature
- the need to provide services in an uncertain and rapidly changing environment
- application of skills to unanticipated or unprecedented challenges
- high levels of both acute and ongoing stress
- exposure to direct, indirect or vicarious trauma
- a highly charged personal work environment and potentially challenging inter-agency relationships
- exposure to intense emotions, and
- strong scrutiny of work performance (often by politicians, community members and the media).

For more information on recovery roles, see Section 3.5.2 Resource management (Human Resources). Sample position descriptions for recovery workers and team leaders are available in Toolkit 2-1 Community recovery checklists – Checklists 1 and 2.



Part 2 Policies and principles that support community recovery

2.1 Disaster recovery and emergency management

Disaster recovery is part of emergency management, which also includes the broader components of prevention, preparedness and response. Figure 1 illustrates the non-linear nature of the prevention (mitigation), preparedness, response and recovery (PPRR) comprehensive approach to emergency management.

It highlights the importance of recovery in all four phases of emergency management—i.e. the need to consider and plan for recovery during preparedness and mitigation as well as response. (For more information, see Part 3: Planning for recovery). It also identifies the importance of recovery as a critical interface with the impacted community in the response phase through activities such as evacuations, establishment of relief centres, provision of temporary accommodation and psychological first aid.

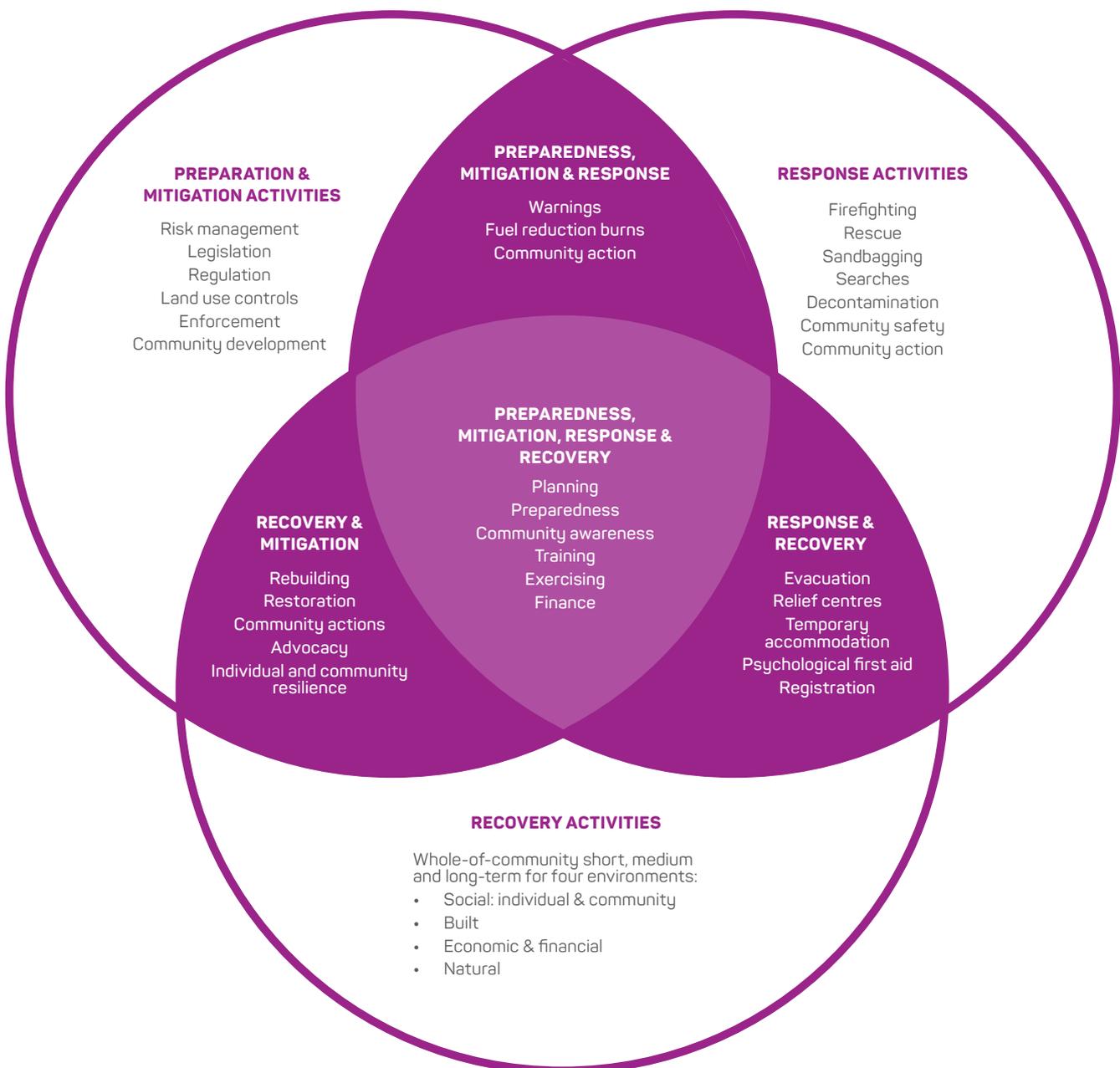


Figure 1 Programs and activities supporting disaster prevention, preparedness, response and recovery (some terminology may differ across states/territories and nationally)

2.2 National Strategy for Disaster Resilience

The *National Strategy for Disaster Resilience*, which was adopted by the Council of Australian Governments (COAG) in February 2011, recognises that a national, coordinated and cooperative effort is needed to enhance Australia's capacity to prepare for, withstand and recover from disasters. It identifies disaster resilience as a shared responsibility for individuals, households, businesses, communities and governments, and its purpose is to provide high-level guidance on disaster management for federal, state, territory and local governments, business and community leaders and the not-for-profit sector.

In relation to disaster recovery, the strategy observes that:

To build a resilient nation, a renewed focus on recovery arrangements is needed. All organisations need to better understand their roles, and must be prepared to ensure delivery of recovery services. The large investment in response capabilities over the years has not been matched by the investment in planning for recovery. Lessons learned have tended to focus on how the response to an event may have been better managed; a resilient community must also evaluate recovery efforts and capabilities.

National Strategy for Disaster Resilience 2011.

Priority outcomes (COAG 2011) identified within the strategy include:

- Prevention, preparedness, response and recovery activities are delivered through partnerships between all agencies, organisations and communities. These activities are public and occur before, during and after a disaster.
- Emergency management arrangements are sound, well understood and rehearsed and involve diverse stakeholders, including members of the community.
- Decisionmakers adopt policies and practices that support and recognise emergency services and the importance of volunteering in our communities.
- Local planning for the response to and recovery from disasters will take account of community vulnerabilities and incorporate disaster risk reduction measures.
- Recovery strategies are developed in partnership with communities and account for long-term local needs and provide support and tools to manage their exposure to future disasters.
- Recovery strategies recognise the assistance the community is likely to provide in the immediate recovery phase, and allow for the identification,

facilitation and coordination of the community resources.

- Local resilience-based planning arrangements encourage and foster self-reliance tailored to community conditions.
- Post-disaster assessments involving all stakeholders are routinely undertaken to consider the effectiveness of prevention and preparedness activities and response and recovery operations. Findings from significant events are broadly shared and incorporated into improved disaster resilience planning.

2.3 National Principles for Disaster Recovery

Disaster recovery is part of a spectrum of emergency management, which includes the broader components of prevention, preparedness and response. Planning for recovery is integral to emergency preparation, and mitigation actions may often be initiated as part of recovery. Disaster recovery includes physical, environmental and economic elements, as well as psychosocial wellbeing.

Disaster recovery can provide an opportunity to improve local conditions by enhancing social and natural environments, infrastructure and economies. The outcomes of a coordinated and well managed recovery can contribute to a more resilient community.

To facilitate a comprehensive and consistent approach to recovery, the Community Services Ministers' Advisory Council endorsed national principles for disaster recovery in 2009 (replacing those endorsed in 1986). The *National Principles for Disaster Recovery* (COAG 2011), were further refined in 2018 by the new custodian, the Social Recovery Reference Group (Australia and New Zealand) (SRRG 2018). The principles (Figure 2) identify that successful recovery relies on:

- Understanding the community context.
- Recognising the complex and dynamic nature of emergencies and communities.
- Using community-led approaches that are responsive, flexible, engaging communities and empowering them to move forward.
- A planned, coordinated and adaptive approach based on continuing assessment of impacts and needs.
- Effective communication with affected communities and other stakeholders.
- Recognising, supporting and building on community, individual and organisational capacity.

SUCCESSFUL RECOVERY

- understand the **context**:

Successful recovery is based on an understanding of the community context, with each community having its own history, values and dynamics.

- recognise **complexity**:

Successful recovery is responsive to the complex and dynamic nature of both emergencies and the community.

- use **community-led** approaches:

Successful recovery is community-centred, responsive and flexible, engaging with community and supporting them to move forward.

- **coordinate** all activities:

Successful recovery requires a planned, coordinated and adaptive approach, between community and partner agencies, based on continuing assessment of impacts and needs.

- **communicate** effectively:

Successful recovery is built on effective communication between the affected community and other partners.

- acknowledge and build **capacity**:

Successful recovery recognises, supports and builds on individual, community and organisational capacity and resilience.

Figure 2 Extract from the National Principles for Disaster Recovery
Source: Social Recovery Reference Group 2018



Figure 3 The national principles for disaster recovery
Source: Social Recovery Reference Group 2018

The relationship between the six principles is shown in Figure 3. Although all are equal in ensuring effective recovery, an understanding of complexity and context are considered foundational.

2.4 Applying the National Principles

Disaster recovery involves a variety of organisations and individuals across government, non-government organisations and the community. The principles are intended to be adopted and used at national, jurisdictional, regional and local levels. They are guidelines of good practice and should underpin planning and operations within local emergency management frameworks.

In this section, the *National Principles for Disaster Recovery* are expanded to incorporate the related elements of recovery.

2.4.1 UNDERSTANDING THE CONTEXT

Successful recovery is based on an understanding of the community context, with each community having its own history, values and dynamics. Recovery should:

- acknowledge existing strengths and capacity, including past experiences
- appreciate the risks and stressors faced by the community
- be respectful of and sensitive to the culture and diversity of the community
- support those who may be facing vulnerability
- recognise the importance of the environment to people and to their recovery
- be acknowledged as requiring a long-term, sustained effort as needed by the community, and
- acknowledge the impact upon the community may extend beyond the geographical boundaries where the disaster occurred.

Considerations in relation to context

Disaster type

Disasters can be broadly categorised into three groups—natural, technological and malevolent—although caution should be exercised in applying these three groupings too rigidly as there may be considerable overlap between the three. The type of disaster can range from a single household event to a much larger event.

Scale

The term ‘disaster’ tends to be applied to a large-scale, overwhelming event. However, an emergency (which may be an unfolding disaster or a single incident) may be small but can have profound compounding and/or long-term effects.

Rapid versus slow onset

Disasters generally tend to be rapid onset. However, some hazards may be slow onset; for example, riverine flooding that commences in one jurisdiction and moves through another. In other instances, such as drought, or human and animal diseases, the onset of the event may be less defined, requiring declarations of disaster to be based on clinical or scientific evidence and/or criteria.

Geographic focus

Emergencies are likely to have a geographic context; that is, they may be confined to or defined by a certain geographic area. Even though flooding can be widespread, or bushfires (such as the ‘Ash Wednesday’ fires in 1983) can spread over more than one state, natural disaster impacts tend to be described geographically. Drought, exotic animal diseases and human diseases often represent a risk of a comparatively wide area of impact but remain geographically focused if quickly and effectively contained.

Depending on the specific circumstances, technological disasters and malevolent disasters may have a wide area of impact. Key infrastructure, which is dependent on technology, may serve large and dispersed sections of the population, while examples such as the 2002 Bali bombings and the shootings in Port Arthur (1996) occurred in places that were tourist destinations with the people affected coming from many different places. This can present different challenges for the management of recovery, particularly in defining who is affected and how they can be assisted, with a number of jurisdictions involved in providing support.

Within the agriculture, aquaculture and horticulture sectors, emergencies (such as equine influenza, a sudden change in water quality or temperature, or citrus canker) can have significant flow-on effects for local and regional communities and the national economy.

In a disaster in which there is significant bereavement or dislocation of populations, the impacts are less likely to be geographically defined. For example, families who are bereaved may reside in other localities and may not feel connected to the place where the disaster occurred. This is a particularly important consideration when keeping people informed about services, as well as developing remembrance activities. In communities where displaced people are resettled there is also a sense of disconnection—from losing touch with people they know and the disruption of normal routines, as well as the feeling of imposing on (or not feeling welcome in) their new, temporary home.

The Australian community and societal context

An understanding of the Australian community context in which disasters occur and disaster recovery operates can be derived from data on demographic trends and other sources of information for social planning.

Important considerations for recovery managers are the composition of the population in a given area impacted by a disaster and broader demographic trends. Community and individual resilience to unexpected dangers may vary according to these characteristics. In some areas of Australia, increasing threats such as those associated with climate change may compound existing vulnerabilities.

Some demographic trends that may impact on the vulnerability of communities in disasters include:

- an ageing population
- population movement
- Aboriginal and Torres Strait Islander communities
- culturally and linguistically diverse communities
- changing patterns of employment, workforce participation and volunteerism
- household composition.

Ageing population

Australia's ageing population presents a number of challenges. As people live longer there are increasing numbers of single-person households. Increasing age also generally brings with it deteriorating health and mobility, which can lead to an increase in isolation. In addition, a more mobile population sees families moving further afield for employment or lifestyle reasons, as well as younger people moving away from their rural and regional communities, which may result in weaker family and community supports. Further, as people live longer, their social networks may contract as family members, life partners and friends die.

A trend towards having children later in life, reduced housing affordability and participation in higher education may contribute to children continuing to live in the family home into adulthood. The term 'sandwich generation' describes the pressures experienced by the generation of Australians who, facing their own retirement, may be caring for an ageing parent as well as continuing to have parenting and financial responsibilities for adult children. A shift towards working longer and retiring later reduces accessibility to skilled and available volunteers.

Population movement

Population shifts can increase the pressures on local communities, governments and environments. Lifestyle changes, including shifting employment patterns associated with growth in certain sectors (such as mining and resources) and reduced opportunities in other areas, together with the rise of casual and part-time employment, can lead to a population that is more dispersed and less well connected to its local community and formal and informal support structures.

There has also been an increasing trend of 'tree/sea changers'—people moving from an urban environment to the peri-urban fringe, e.g. the Adelaide Hills, or Blue Mountains, or to rural and regional communities. This can result in higher numbers of people with less experience

or knowledge of the location and the local community and therefore the disaster risks they may be exposed to, such as bushfire, storms, storm surge or flood. They will also potentially have fewer or less developed social links to others in the community.

Homeless people, overseas tourists and other travellers, such as the growing group of 'grey nomads', may lack social networks and their needs in recovery should not be overlooked.

Aboriginal and Torres Strait Islander communities

Aboriginal and Torres Strait Islander (Indigenous) communities have their own beliefs and values around disaster events, how to respond to them and how to manage the reactions of others in their communities. How community members who have perished are dealt with has particular potency. Recovery and coronial processes and media reporting, including the approach to naming and identifying victims, requires consultation and diplomacy to protect the community from further trauma. It is important that the needs and wishes of Indigenous communities are thoroughly canvassed and understood and a concerted effort is made to work with the community to support these needs.

Recovery managers should be aware of and respect the cultural and spiritual world views that shape many communities' views of the disaster (for example, Indigenous communities across the Top End have powerful Dreaming stories about cyclones and floods (Berendt & Berendt 1988). It will be important to ensure that all traditional elders, community leaders and family/skin groups are represented in the recovery consultation and engagement process, rather than relying only on elected or appointed officials (even if they are Indigenous). It will be critical to identify people with a comprehensive knowledge of the community and to seek their advice early in the recovery, recognising that these people are not always readily identifiable, particularly to government.

Indigenous people living in rural and remote areas may regularly move between different communities and family groups. While some may not see themselves as belonging to a geographically defined location, others may identify very strongly with their land and country, so that any time spent off their land, even in the case of an emergency, can cause deep community distress.

Culturally and linguistically diverse (CALD) communities

Non-English-speaking people may be especially vulnerable to prolonged impacts following a disaster because of their inability to communicate well with emergency and relief workers, and their difficulty accessing information that helps them to make sense of the event and its aftermath. Different cultures approach and react to disasters in different ways. This can potentially cause tensions in the broader community if these reactions are not understood by others. It may mean that minority groups in the community can feel

left out, marginalised and misunderstood if they do not understand or cannot relate to the recovery processes put in place by the government and other organisations. They may also feel unable to express and manage their grief or distress in their usual ways. Refugees and asylum seekers can be particularly vulnerable, especially if they have suffered extreme hardship and trauma in their countries of origin.

Recovery managers should be aware of the different cultural groups in their communities and should ensure that appropriate recovery services are made available to meet their needs. However, it is also important for emergency management agencies to be cognisant that many of these communities demonstrate great resilience because they often possess a range of experiences and skills in dealing with emergencies—so recovery managers should draw on the community’s competencies during community recovery.

Changing patterns of employment, workforce participation and volunteerism

Australia faces the ongoing challenge of ensuring a recovery workforce, both paid and volunteer, that has the right skills and capacity to develop and deliver relevant and accessible services. This task is made more complex because there is no discrete recovery workforce. Indeed, successful recovery relies on a community-led approach that builds on existing community strengths and local service capacity.

Australia depends on volunteers. Changing demographics present special challenges in terms of growing, maintaining and supporting an adequate volunteer workforce to fill recovery roles. The nature of volunteering is also changing—people are less likely to commit to one organisation for a lifetime and are more likely to be ‘cause-driven’ (once they have fulfilled their need to help, they move to another cause). This shift drives the emerging phenomenon of spontaneous volunteers; that is, people who are motivated to assist when a high-profile disaster event occurs. Refer to *Communities responding to disasters: Planning for spontaneous volunteers* (AIDR 2017).

Household composition

Other groups and sections of the community that are not usually considered vulnerable need to be considered in planning and delivering recovery services; e.g. carers of young children and older people, single parents, people living alone and people with disabilities (whether living alone, in supported accommodation arrangements or with their families).

Although household composition may contribute to vulnerability, it can also be a source of strength and resilience to aid recovery. Larger families or Indigenous families (in which it is common for the extended family to be members of the same household) can support each other, pool resources and assist with the very old and young.

The changing nature of society

Within Western society a number of shifts have influenced our resilience and shaped expectations in relation to disaster management. These shifts, which have delivered high standards of living, community safety and increased life expectancy for most Australians (relative to many overseas countries), include:

- advances in technology and public health
- a relatively stable political environment
- law and order
- economic prosperity.

As a result, most middle-class individuals expect to grow old and die of natural causes despite the increased incidence and severity of disasters in the developed world, including Australia.

These advances and subsequent reductions of risks have led, in part, to a common expectation that the government will protect individuals from death and injury from disasters or other unexpected causes. Although this is an important job for government, an over-reliance on governments and a tendency to attribute blame to external factors is not sustainable, and may inhibit peoples’ self-reliance and resilience to disasters.

The advent of the digital age and electronic media also shapes public perceptions of disasters and expectations of assistance. This may help or hinder community-led recovery as real-time images and continuous commentary are available across the internet, and particularly via social media. While raising awareness may generate much-needed resources, the level of media attention may not accurately reflect the effects of a disaster or the recovery needs of the people who have been affected.

People living on low incomes

In 2013-14 just over four million people in Australia lived in low income households (Australian Council of Social Service [ACOSS] 2016) and in 2015 around two million people experienced high financial stress (National Australia Bank [NAB] 2015). The capacity of people living on low incomes to recover from an emergency is severely inhibited by their lack of financial resilience, and risks such as natural disasters are one of the main events that can tip people into poverty (Collins 2013). Recovery planning needs to ensure that the particular challenges and needs of these groups are understood and addressed.

It needs to be acknowledged that people who are experiencing socio-economic disadvantages prior to a disaster may experience an exacerbation of their levels of disadvantage following a disaster.

Groups and people with specific needs

Following an emergency or disaster, the affected community comprises individuals, groups and organisations with differing strengths and needs. Some

may be directly affected by the event in terms of injury, death, loss of possessions and accommodation, some may be evacuated, some may be emotionally affected, and some may be financially affected through loss of employment or livelihood. There may be groups with special needs such as the aged, people with physical or intellectual disabilities, people from different language groups, or people who lack personal or family support.

Directly affected groups may include:

- people living, visiting or working in particular suburbs or geographical areas
- particular communities such as caravan parks or retirement villages
- employees of a particular business closed by the event
- organisations that may be directly affected, including community, service, sporting and recreation groups, associations and clubs
- ethnic, cultural and religious organisations.

There may be a range of specific target populations and special needs groups within communities. While many of these groups and individuals will be resilient and self-reliant in ordinary circumstances, they may become vulnerable as a result of any failure to consider and plan for their recovery needs. This section highlights some of these groups, but every community is different, and these groups and individuals must be identified through knowledge of the community and a needs assessment process.

Gender-specific approaches

Some initiatives are categorised by gender in recognition of the different needs of women, men, and people of diverse gender and sexual identities.

The *Sendai Framework for Disaster Risk Reduction 2015-2030* ... states that a gender perspective should be integrated into all disaster policies and practices, and that women's leadership should be promoted and facilitated. Emergency management positions are overwhelmingly held by men, which creates a limited awareness of the impact of gender discrimination within communities. It is well recognised that specific vulnerabilities exist for women, men and everyone of diverse gender and sexual identities, including LGBTI people.

National GEM Guidelines 2016.

Specific gender-based vulnerabilities emerge from expectations of men to 'protect and provide' and of women to sacrifice their own needs, safety and economic security for the good of the family (Parkinson 2015). Examples of how this plays out include different risk perceptions in decisions about staying or evacuating in a disaster. This directly influences how men and women behave in a disaster, how they are at risk, and

ultimately, affected by it. For many people of diverse gender and sexual identities, the loss of community and infrastructure holds greater risks for discrimination and threat (see the work of Dominey-Howes, *et al.*, *National GEM Guidelines*, 2016, p. 7). In emergency management planning, relief and recovery, inclusion of women and people of diverse gender and sexual identities will result in awareness of specific needs and attention to how information is conveyed to all groups.

Men

Men are often expected to cope and remain stoic in times of disaster and in the aftermath. As a result, many men fear the repercussions of asking for assistance (Zara, *et al.*, 2015).

“ Men spoke of the pressure for men to recover quickly, and keep working without speaking of their trauma. The image of not coping was censured with the media's focus on 'heroes' and communities that supported each other 'in the true Australian spirit'. This led to men being reluctant to seek help. It was also common for men to self-medicate in ways that were harmful to themselves and others, including the use of drugs or alcohol. Such coping mechanism isolated them from support services and social networks.

Gender and Emergency Management Guidelines Literature Review 2016.

Efforts to normalise men's help-seeking for psychological or emotional problems can sit alongside encouragement to make use of naturally occurring support networks. Examples of these types of social recovery activities for men include:

- men's sheds, which encourage men to work on projects that will have real and practical benefits for themselves and their community and at the same time provide opportunities to talk over their issues with others, seek advice and get help
- tool libraries, which are a practical and tangible way for men to receive assistance with tools that have been lost or damaged during an emergency
- locally organised events relevant to the men in an area affected by an emergency, such as sporting and leisure activities and other outdoor pursuits.

It is equally important to note that many men will not feel comfortable in traditional 'male' contexts, preferring for

example, artistic groups, walking groups, or book/film groups.

Research indicates that men who take an active role in recovery and reconstruction group activities will recover more effectively after disasters (Zara, *et al.* 2015). Survivors of the Victorian 'Black Saturday' bushfires (Zara, *et al.* 2015) found the post-disaster period to be overwhelming in relation to the practical work involved in re-establishing lives (in addition to emotional and psychological stressors). Return to work should ideally be gradual and part-time. This not only allows women and men time for other essential tasks, but shared parenting can be encouraged. Women's careers and economic security are disproportionately threatened after disasters, so consideration of what women need to continue in their previous roles should be prioritised.

Women

Women are disproportionately affected by disaster through poverty and inequality rather than biology (Enarson 2012). Women are vulnerable, such as through the mistaken idea that women and children will be protected and out of harm's way; through the caring role assigned to women; through lack of autonomy in decision-making; and exclusion from bushfire survival education (Parkinson 2015).

For many women, sharing their experiences is one of the most important aspects of personal recovery. Programs that focus on ways in which women can interact, learn and share experiences are vital and may include:

- rural womens' networks
- locally organised events relevant to the women in an area affected by an emergency, such as pampering weekends, gardening groups, women's health information sessions
- support groups that facilitate the sharing of stories and experiences.

Non-traditional women's activities will engage other women and can have the important benefit of skilling women in emergency survival. For example, chainsaw sculpture, welding and blacksmithing to make furniture or candlesticks will teach women about generators, chainsaw use, etc.

In the aftermath of disasters, it is critical to offer childcare close to where parents are engaged in events such as those above, as well as considering the timing and location of events to maximise accessibility.

Research in Australia and internationally indicates that men benefit disproportionately from post-disaster reconstruction work. Where possible, local women should be employed as well as local men.

People of diverse gender and sexual identities

Leading Australian researchers in the disaster experience of people of diverse gender and sexual identities (see Dominey-Howes, Gorman-Murray and McKinnon) find that participating in planning for disasters

or being caught up in a disaster often exposes people of diverse gender and sexual identities to the judgement of others, and definitions of 'family' may exclude them. Consequently, LGBTI people (Lesbian, Gay, Bisexual, Transgender, Intersex) may miss out on provision of disaster-related services. As noted in the Gender and Emergency Management Literature Review (GAD Pod 2016):

“ Disaster impacts are heightened for LGBTI people, as the destruction of home is the destruction of the safe place away from judgement (McKinnon et al., 2016b). The usual procedures to secure residences and rehouse those affected by disaster are accompanied by additional privacy concerns and risk or experience of discrimination ... Dominey-Howes et al. (2016) recommend that representatives of LGBTI organisations be included in emergency management consultations, noting that this fits with the ethos of the National Strategy for Disaster Resilience.

Children and young people

Children and young people have very different needs to adults in emergency planning and require targeted and specialised interventions to ensure they have the best opportunity to achieve a successful recovery (Victorian Council of Social Services [VCOSS] 2013). Because of children's varying stages of physical, emotional and cognitive development, their capacity and needs will also be variable and will likely evolve and change over time.

National research undertaken in 2013 (Save the Children Australia 2013) found that:

There is currently no standard practice in emergency management planning for the unique needs of children in Australia. This lack of standard planning leaves children even more vulnerable in the aftermath of emergencies.

Save the Children Australia 2013.

The specific needs of children and youth to be considered in recovery planning and management include:

- recognition of children and young people as distinct groups in emergency management plans, to ensure

that actions and activities can be developed to address their specific needs

- understanding that children of all ages, including very young babies can be impacted. Research has also found that even children born after a disaster event can be impacted by growing up in disaster affected families and communities
- engaging with experts in paediatric and youth disciplines, such as youth workers, psychologists, maternal and child health nurses, teachers and childcare workers, to ensure that plans include activities that are appropriate for children and young people at different stages of their development, with a key focus on re-establishing and maintaining safety and stability
- working with schools and education providers to communicate with, mobilise and engage children, young people and their families
- formally engaging directly with young people to create an avenue for them to advocate for their needs in emergency management plans and activities
- ensuring that evacuation centres can meet the needs of babies, pre-schoolers and primary aged children, families with young children and adolescents, including medical or psychological needs and the provision of child-friendly spaces (Stuart *et al.* 2014)
- plans to support and protect unaccompanied children and the reunification of families
- meeting the needs of children and young people with disabilities
- early recovery and longer-term recovery, including the importance of children and young people being involved in decisions that will affect them (Victorian Department of Human Services [DHS] 2013).

It should be noted that ensuring children feel 'safe' does not mean treating them as passive victims or avoiding talking about disaster risk or recovery processes with them. Educating children about local hazards and the measures that can be taken to reduce their impacts can be an empowering experience for children who are at risk of, or have experienced a disaster event. Children who receive disaster resilience education that supports them to understand and participate in disaster risk management in their households, schools and communities have been shown to feel calmer and less anxious about disaster risk. This education can be provided both formally and informally, and in age-appropriate ways.

In a post-disaster context, it is critical that disaster resilience education is tailored to the local context and the needs and concerns of local children and youth. Decisions about educational objectives and teaching and learning activities should be made by educators, parents and emergency managers at the local level. A student-centred, rights-based approach also requires that children and youth are included in decision-making about the educational objectives and activities of their own disaster resilience education.

The importance of family and community support in helping children and young people overcome the impact of their experiences cannot be overstated. However, parenting after a disaster can be particularly challenging, as identified in the University of Melbourne research project, *Beyond Bushfires* (Gibbs *et al.* 2016):

Parents spoke of parenting situations they never expected to face. Finding ways to manage the trauma reactions experienced by their children often required new understandings, skills or strategies. Valued aspects of parenting, like patience and tolerance or having the answers in difficult times, were compromised by demands of rebuilding and recovery that were competing for their time and energy as well as parents' own trauma responses. While changes to parenting were often accompanied by feelings of loss, sadness, and at times helplessness, there were also positives in the opportunities to model recovery and resilience for their children.

Beyond Bushfires Final Report 2016.

A key focus is to ensure that children and young people of all ages feel safe, stable and secure, and that they are involved in recovery decisions and activities in age appropriate ways (Gibbs *et al.* 2016). Parent information sessions that provide advice and information to parents on ways meet their own emotional and mental health needs, to support their children, and to manage changed family dynamics can be beneficial.

Education departments are generally responsible for the management and coordination of school activities that specifically address recovery of children and youth. Local schools are key community organisations that can provide support to the younger members of the community and following a disaster there will need to be an increased emphasis on wellbeing over educational outcomes, necessitating the need for kindness and flexibility over an extended period of time.

The long-term and sometimes delayed impacts of trauma on children are not always recognised by those responsible for their care and learning. Engaging with schools and education facilities to gauge the level of impact on the young people in a community and involving these key stakeholders in development of plans and activities ensures that young people are cared for after a disaster.

It may be useful to:

- establish an information exchange with schools, kindergartens and childcare centres to engage with the knowledge and experience of teachers and parents and to best support the needs of children
- provide information via newsletters and social media to explain the activities and supports that are available and the possible effects on younger children

- provide resources that are age appropriate for use in school classroom activities, kindergarten/childcare and playgroups and, if required, projects targeted to specific age groups.

Support for children and youth is needed both during and after school. Involving school holiday programs and mobile playgrounds in recovery activities has been beneficial in previous events.

Recovery managers and practitioners must be aware of and comply with the legislation and regulations for working with children that apply within their jurisdiction. This should include induction for all staff and volunteers on their responsibilities and ensuring that the required checks and verifications are undertaken.

See also Section 2.4.2 Recognising complexity (Children and adolescents).

Other references/resources

Australian Red Cross (2010), *Helping children and young people cope with Crisis: information for parents and caregivers* provides comprehensive information about the ways that children and young people are likely to experience and respond to emergencies and advice and strategies to support them.

Save the Children Australia (2013), *Don't leave me alone. Protecting Children in Australian Disasters and Emergencies: Government Report Card on Emergency Management Planning* examines the levels of planning and preparedness in relation to children and young people nationally, including research findings and recommendations.

Australian Child and Adolescent Trauma, Loss and Grief Network - Australian National University College of Health and Medicine provides resources targeted to children and young people.

Department of Health and Human Services Victoria (2013), *Emergency management planning for children and young people: Planning guide for local government* provides advice on developing and reviewing local area emergency management plans to include the unique needs of children and young people.

Disaster Resilient Australia-New Zealand School Education Network (DRANZSEN) is a national disaster resilience education initiative of the Australian Institute for Disaster Resilience (AIDR).

Disaster Resilience Education: A Practice Framework for Australian Emergency Agencies is a contemporary guide to child-centred disaster risk reduction based on research developed by the Bushfire and Natural Hazards CRC.

Phoenix Australia, the Centre for Posttraumatic Mental Health have a range of booklets and fact sheets including

resources specifically targeted to support children and young people in recovery.

People with disabilities

People with disabilities may have particular needs in recovery, especially where they are reliant on supports and services that are likely to be disrupted by the disaster. Access to personal care, assisted transport, regular medical services and therapies may be unavailable, at least in the early relief and recovery phase. Evacuation and/or relocation from the disaster area may also pose specific challenges for people with a disability.

It is recommended as a key aspect of preparedness planning that those who rely on services to support them with their disability develop a plan for the likely effects of a disaster, and/or disruption to service provision. This could be driven by the individual and their family or support network, or by disability services. Recovery managers should consider how individuals with a disability, their families or support networks, and disability service providers can be engaged in the emergency planning processes. They should also consider how disability support services can be reinstated as quickly as possible, either from a centralised point within the affected area, or through collaboration with service providers in other areas.

Business owners and operators, primary producers

Local business owners and operators, farmers and people whose livelihoods are connected to or rely upon the area impacted by disaster will have specific needs and challenges. In the early stages, restricted access to the affected area for themselves, their staff and customers can result in significant financial implications, even where the business itself may be largely unaffected. Lack of access to electricity, water, telecommunications, transport and supplies can compound the disruption caused by the emergency, as can the unavailability of staff who may have been personally affected. Donated goods and grants, and the provision of external labour (whether paid or unpaid) can also have a negative impact on the economic recovery of the community.

Very often, business people will also be local residents and thus, they can experience a 'double' impact if both their home and business have been damaged or destroyed. Farmers and primary producers may also be faced with the distressing task of dealing with dead and injured livestock.

An important consideration for recovery planning is to develop a clear understanding about the key local industries and businesses and their potential capacities and needs in relation to disaster recovery. Engagement with local peak bodies, industry associations, chambers of commerce and local government economic development teams will be beneficial in ensuring the needs of local businesses are understood and addressed.

See also Section 4.3 Recovery of the economic environment.

People who are temporarily separated from, or have lost, their companion animals or pets, or who have animal welfare responsibilities

Companion animals can help people to maintain their social, emotional and physical wellbeing and can be significant partners in many people's lives. Contemporary research shows that companion animals (including pets) can also contribute to the recovery and maintenance of both physical and mental health. People with assistance animals need special consideration, as separating them from their animal unnecessarily will not only disadvantage them but stands contrary to the *Disability Discrimination Act 1992*.

Similarly, those who have responsibilities for livestock and domestic or native animals will have particular needs and considerations, both in the early stages following an emergency or disaster and in longer-term recovery.

Recovery managers should:

- recognise that restoring animal-owner links in the aftermath of evacuation is an important aspect of social recovery and return to normalcy
- recognise that the grief from loss of companion animals, domestic animals and livestock can be as equally powerful for some people as other losses, and this should be recognised in access to services and remembrance activities
- work with local authorities (local councils) and animal welfare agencies (for example, the RSPCA)
- take the opportunity to use volunteer support to coordinate animal welfare-related activities.

Relief and recovery plans should recognise that people who have pets and animals in the hazard impact area are likely to want to evacuate these animals, in some cases to evacuation centres. Some people may choose to remain in place to care for these animals rather than leaving without them.

While the focus of recovery is on the protection and support of people, animals are important to people and need to be considered in planning. While individuals are likely to make their own decisions about their pets and animals, they may be constrained by their capacity to move their pets or animals, and an appropriate location to move their pets or animals to. It will be important to consider these issues in the emergency planning stage.

For further information about the management of pets, companion animals, assistance animals and livestock see the Bushfire Natural Hazards Cooperative Research Centre Project, *Managing Animals in Disasters*.

Family violence

Family violence includes violent or threatening behaviour, or any other form of behaviour that coerces or controls a family member or causes that family member to be fearful. (Australian Government Department of Human Services 2018).

'Family violence' is a broader term than domestic violence, as it refers not only to violence between intimate partners but also to violence between family members, for example, elder abuse and adolescent violence against parents. In Indigenous communities, family violence is often the preferred term as it encapsulates the broader issue of violence within extended families, kinship networks and community relationships, as well as intergenerational issues (Our Watch 2015).

However, it should be noted that family violence is a highly gendered crime, with the majority of perpetrators being male and the majority of affected family members being female (Our Watch 2018).

Family and domestic violence is behaviour that is violent, threatening, coercive, controlling or intended to cause the family or household member to be fearful. It can include:

- physical, verbal, emotional, sexual or psychological abuse
- neglect
- financial abuse
- stalking
- harm to an animal or property
- restricting spiritual or cultural participation
- exposing children to the effects of these behaviours.

Family and domestic violence can affect anyone. It can impact all types of relationships, such as:

- past or current intimate relationships, including people who are dating or living together, regardless of their gender or sexuality
- relationships involving carers, where care is provided to older people, people with a disability or a medical condition
- relatives and guardians
- Aboriginal and Torres Strait Islander concepts of family, including extended family, and other culturally recognised family groups.

People (mostly women and children) affected by family and domestic violence may live in fear for themselves

and their family, even when they have left a violent relationship.

Family violence increases after disasters

Family violence is an issue which has been largely unrecognised by emergency management arrangements and guidelines. Family violence is always unacceptable and is a crime in all states and territories in Australia. The *Gender and Disaster Literature Review* notes (GAD Pod 2016):

“ Australian research has indicated that domestic violence increased following the 2009 bushfires, and further, that women’s voices were effectively silenced. This was evidenced by the failure to collect statistics about violent incidents, or to properly characterise incidents as domestic violence, the tendency to neglect the issue in recovery and reconstruction operations, and inadequate responses to women seeking help by legal, community and health professionals. After a disaster, women’s right to live free from violence is compromised ... Sympathies tend to lie with the ‘heroic’ men who fought in the fire, leading to an expectation that women will sacrifice their health for their partners and the community.

This expectation meant that response and support professionals, when stretched thinly, tended to overlook indicators of domestic violence, or were reluctant to classify the community heroes as perpetrators. Women gave accounts of being told to ‘give it some time’, that ‘he’s not himself’, and that ‘things will settle down’ by those meant to be supporting them in the emergency services, including trauma counsellors. This research found that domestic violence workers are not included in recovery,

yet case workers are rarely trained in identifying domestic violence or, historically, not reported this as a need of survivors. As a result, women and children do not have or know of the support services available to them.

Research indicates that family violence increases after disasters in four main ways (Parkinson 2017):

- There is an increase in new violence—that is, partners who haven’t been violent before the emergency become violent.
- There is an intensification of pre-existing violence—that is, partners who have been violent before becoming more violent.
- The common reluctance of women to report violence against them is intensified after a disaster, as empathy sits with men who were ‘heroes’ or who may be suffering as a result of their disaster experience.
- There is a reduction in normal supports—for example, people subject to family violence who may have been able to seek assistance from neighbours, family and friends may no longer be able to do so, because of displacement or changes to housing.

In addition, existing family violence services may have their facilities or capacity impacted by the disaster event, often resulting in less formal support being available (Sety 2012). Disaster risk is heightened for many women who lived with a violent partner before a disaster through their lack of autonomy in decision-making and/or lack of access to resources such as money or a car. Where women have previously separated from a violent partner, they could be exposed to renewed violence. Intervention orders may be unenforceable in evacuation and relief centres (GAD Pod 2016b).

Understanding why family violence increases after disasters

Pinpointing exactly why family violence increases after a disaster is difficult. Rather than focusing on the cause, it is more important to act on the knowledge that family violence increases after disaster (Bain 2014). (For a discussion on ‘cause’, see Parkinson 2017)

Some emergency management practices can inadvertently exacerbate some of the issues faced by women experiencing family violence. Rigid arrangements regarding grant payments, temporary housing options and evacuation services often do not take family violence into consideration. Additionally, the way emergencies are managed in Australia are inherently gendered, which may exacerbate the issues surrounding family violence (Parkinson & Zara 2011).

Family violence should be considered in every stage from planning to reconstruction, so that women are encouraged to report, men are accountable even in a difficult post-disaster context, and that data is collected,

referrals are made and the expertise of family violence specialists is included.¹

Considerations for recovery managers

- It is beneficial to speak about and engage with the potential for family violence in recovery. Outcomes for the community will be stronger where family violence is recognised, where community partners and service providers work to prevent violence and to educate the community and provide appropriate supports.
- Include family violence experts and service providers in recovery planning committees—they will be able to help design services that don't exacerbate the risk of family violence and can assist with integrating family violence support services into other recovery services.
- Ensure that local family violence services are part of emergency planning committees—they will be able to advise and guide emergency responders so that they don't exacerbate the risk of family violence
- Some groups in the community may find it more difficult than others to access services (e.g. LGBTI community), so this needs to be considered in both emergency and recovery planning.
- This is an area where many people in emergency management feel 'unqualified'. Consider providing or supporting education and information services for the recovery workforce.

Other references/resources

The *National Gender and Emergency Management Guidelines* (and accompanying *Literature Review* and *Action Checklist*) provide information, guidelines and resources to support the recovery of individuals of all gender identities.

2.4.2 RECOGNISING COMPLEXITY

Successful recovery is responsive to the complex and dynamic nature of both emergencies and the community. Recovery should recognise that:

- disasters lead to a range of effects and impacts that require a variety of approaches; they can also leave long-term legacies
- information on impacts is limited at first and changes over time

¹ Domestic violence is essentially one of men's violence against women. It is both gendered and asymmetrical (UN, 1993; VicHealth, 2011) For example, women's violence is often in self-defence or retaliation, and 'does not equate to men's in terms of frequency, severity, consequences and the victim's sense of safety and well-being' (Dobash & Dobash, 2004, p. 324). From Parkinson, D. (2015) *Women's experience of violence in the aftermath of the Black Saturday bushfires*. A Thesis Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy. Clayton: School of Social Sciences, Faculty of Arts, Monash University. <http://arrow.monash.edu.au/hdl/1959.1/1162205>.

- affected individuals and the community have diverse needs, wants and expectations, which can evolve rapidly
- responsive and flexible action is crucial to address immediate needs
- existing community knowledge and values may challenge the assumptions of those outside of the community
- conflicting knowledge, values and priorities among individuals, the community and organisations may create tensions
- emergencies create stressful environments where grief or blame may also affect those involved
- over time, appropriate support for individuals and communities, from within and outside, can cultivate hope and individual and collective growth.

Pre-existing or prior experience of disaster

Disaster recovery is an inherently complex environment comprising an evolving emergency situation together with significant uncertainty and critical outcomes, and sometimes including injury or loss of life. This complexity may be further compounded where a community has a pre-existing or prior experience of disaster, for example, a community that experiences bushfires, followed soon after by floods, or an area impacted by consecutive cyclones. In these circumstances, the impact of the previous event and the way it was managed can have an important bearing on the community's expectations and the way they respond to the current emergency.

In some circumstances, prior experience of disaster may increase the resilience of the community, through the existence of relationships and networks that carry through from one event to the next. In other instances, where, for example, recovery has been poorly managed, the legacy of the community's prior experience may be a sense of being overwhelmed and exhausted, reduced levels of trust and community cohesion, or negative relationships with, and perceptions of, recovery agencies, programs and services. Previous experience of disaster that is less severe than anticipated can even result in a false sense of security about how manageable the current event may prove to be.

Predictable human behaviour

All emergencies cause a range of stressors on the individual resulting in a broad range of responses.

Typically, these are 'normal' responses to an abnormal event that has touched the lives of an individual, a family or a community. These usually resolve over time and without the need for additional support. Stress responses are normal: survival and preservation strategies such as fight, flight, rescue and attachment have evolved to enable our species to continue.

Immediately following an emergency, people primarily seek practical assistance and reassurance in an emotionally supportive manner. Emotional and

psychological responses to trauma may be displayed across a number of domains including:

- biological; for example, fatigue, exhaustion, headaches or general aches and pains
- psychological; for example, inability to make decisions, emotional distress, states of high arousal, reliving the events, irritability
- behavioural; for example, avoidance of reminders, increased time spent at work, use of alcohol and other substances
- social; for example, being intolerant of others, social withdrawal and breakdown of relationships.

These reactions may radiate through all elements in a person's life. Effects may also be experienced by workers (including volunteers who work with the affected people), and these effects may be immediately observable or may not become apparent until sometime after the emergency.

People affected by events, and who have been subjected to severe stress, are usually capable of functioning effectively. Some of their reactions to stress may show as emotional strain. This is usually transitory—it is to be expected and does not imply mental illness.

Figure 4 shows some of the common reactions, experiences and emotions that may be experienced by individuals and communities following disasters and before they feel they are able to get 'back on their feet'. The timeframes in the figure are notional and may vary depending on a range of factors as outlined in Section 2.4.1 Understanding the context.

It is important to note that individual responses will vary and that the cycle is not necessarily a single or linear one, but may alter, extend, diminish or re-occur at different times throughout the recovery process.

Friends, family and local recovery support services can all assist in reducing the frustrations and amount of time people spend in the 'trough of disillusionment' or limit the depth of that trough.

If disaster-affected people understand the types of experiences and emotions they may experience throughout their recovery process, they can establish a stronger understanding that what they are experiencing is not unusual but is a typical response to a post-disaster situation. Understanding this may also help people to more strongly understand the transient nature of these experiences, and that they will get through and recover from a disaster.

Recovery myths

There are a range of common myths that exist in relation to what is important and helpful to communities following a disaster. These myths are often compounded and reinforced by the highly stressful, complex and emotionally charged environment of disaster recovery. Based on experience and evidence from previous emergencies, Table 1 provides examples of common recovery myths and a more balanced approach to what is useful to recovering communities.

Duration of the disaster and the recovery

Disasters vary in their scale and intensity, as well as their level of impact. While a single house fire may not qualify as a disaster in the broader sense, its impacts will likely be perceived as disastrous by the people who live there. Similarly, the duration of a disaster will have a particular effect on those impacted, including the length of time spent 'anticipating' the event—as in the case of a slow-moving flood or fire—as well as the length of time people's lives are disrupted by the emergency's

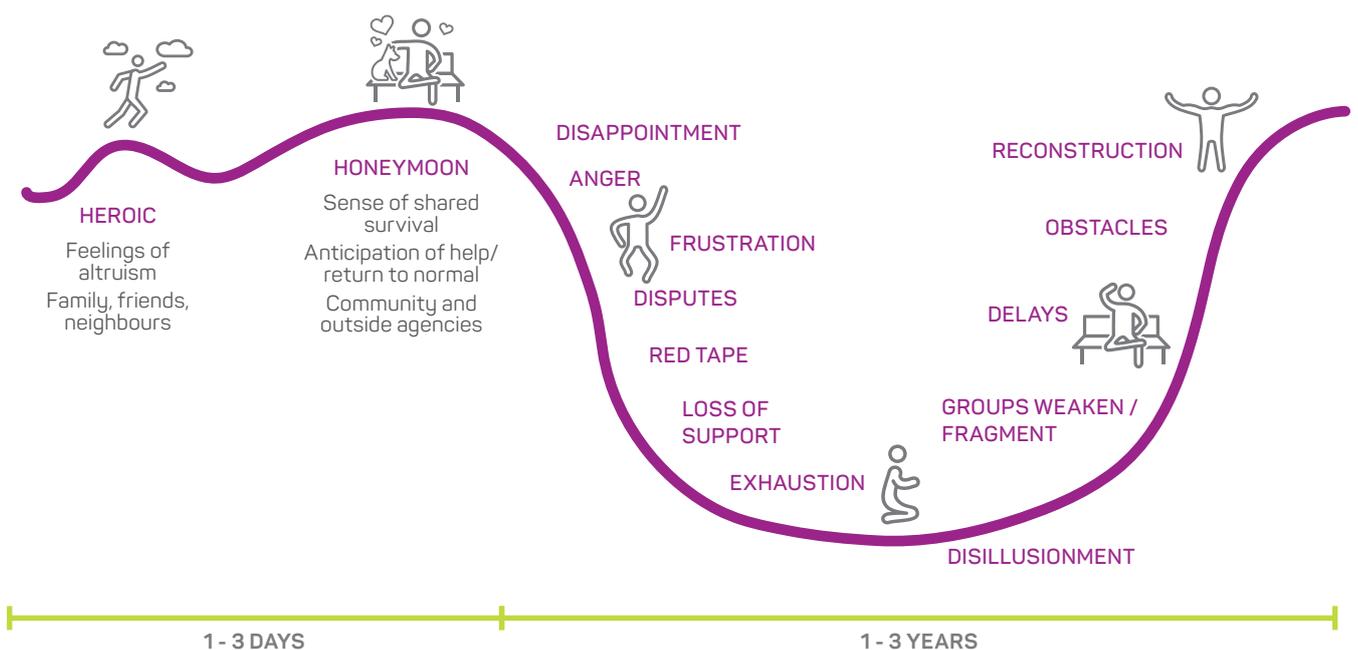


Figure 4 Different phases that individuals and communities might experience post disaster
Adapted from Cohen and Ahearn 1980 and DeWolfe 2000

Table 1 Overview of common myths and assumptions of what disaster-affected people need compared to social recovery activities and services typically provided
Source: Sally McKay

Myths and assumptions about needs (unsubstantiated)	Actual needs Based on experience and evidence from previous emergencies, recovery services should address a range of needs of affected individuals and communities to:
People need protecting from reality Too much information is unhelpful	<p>Provide timely, accurate, honest and authentic information (including what can and cannot be known or controlled)</p> <ul style="list-style-type: none"> through a variety of community communication channels, which can include social media, broad media, newsletters, community and spiritual leaders, places where communities ordinarily congregate, sporting and community groups. <p>Information can be provided about:</p> <ul style="list-style-type: none"> the extent of impact of the emergency what is happening and being done by agencies future disaster risk mitigation, such as cleaning up hazards, planning for mould and rot after floods, self-care techniques potential health and sanitation issues potential longer-term emerging issues and likely future effects and how to mitigate the relief and recovery activities and services that exist and how to access them, such as evacuation centres, recovery one stop shops and outreach services
	<p>Reconnect people with their families, friends and community networks</p> <ul style="list-style-type: none"> through registering through Register. Find. Reunite. call centre numbers, evacuation or relief centres by assisting with repatriation for interstate and international emergencies, and registration through outreach visits by minimising the duration of isolation experienced as a result of the emergency (timely reconnection of affected people to existing community networks) by minimising dislocation of community members by assisting people to stay as close to their affected properties as possible by providing access to relevant local community services, as well as the new relief and recovery activities and services by providing choices through a coordinated service system and referral to appropriate services as required
Disaster-affected people need someone to 'make it better' Disaster-affected people cannot look after themselves	<p>Empower people to manage their own recovery and to access practical assistance</p> <ul style="list-style-type: none"> by providing ongoing access to basic needs through local distribution of material aid or cash grants, water, food, clothing, personal requirements, requirements for pets, livestock needs by maintaining safety and ongoing access to emergency and transitional shelter through assistance in interim and longer-term accommodation requirements through ready access to recovery activities and services through access to grants and financial assistance through cash programming, personal hardship grants, income support, emergency appeals through employment programs, such as clean-up programs through legal services, insurance, financial counselling, building advice, primary industry or business assistance by engaging with local community leaders and groups and supporting them to lead and drive the recovery process

<p>Counselling is required for disaster-affected people</p> <p>Everyone will have post-traumatic stress disorder (PTSD)</p>	<p>Provide engagement and emotional support at individual, family and community levels</p>	<ul style="list-style-type: none"> through empathetic listening and establishing what individuals want and need through calm engagement (to lower states of anxiety) through openness, honesty, sensitivity through non-judgmental assistance by developing greater understanding about human responses to emergencies and techniques for self and family care by recognising and acknowledging the impact on individuals and communities through psychosocial support—group and community activities can include ceremonies, neighbourhood barbeques, school activities, community recovery planning forums, spiritual events, social sporting events, planning for remembrance activities, virtual forums: all these types of social engagement provide opportunities for people to tell their experiences, address the issues arising from the disaster, build a greater sense of future safety; they suit community needs and stages of healing through special programs for children and young people
<p>Our town is different because we will all pull together</p>	<p>Recognise the expected phases of recovery and support the community to move through them</p>	<ul style="list-style-type: none"> understand that most communities will experience a ‘honeymoon’ phase in the earliest stages of recovery where community connection and sense of cohesion will be high. this will likely change as the scale of loss and the complexity of recovery begins to impact it is normal for all communities, even those with strong social capital to experience periods of conflict and fatigue recognise that individuals and communities will recover at different times – people are different and there will be many variations of experience as well as pre-existing conditions and challenges that will impact on the pace of recovery
<p>Donating goods is the most effective way of helping the community</p>	<p>Recommend that people wishing to assist make monetary donations rather than providing other forms of aid</p>	<ul style="list-style-type: none"> cash grants empower people affected by a disaster to choose how they support their own recovery they are easily targeted to meet immediate needs they are likely to stimulate the local economy monetary donations may also be eligible for tax deductions
<p>All disaster affected persons should be grateful for any/all help they are offered</p>	<p>Support people to access the help that is useful for them at their particular stage of recovery</p>	<ul style="list-style-type: none"> trust people to know what they need and when understand that some offers of assistance, however well-intentioned, may not be helpful or appropriately timed advocate for impacted people to be able to say ‘no’ or ‘not now’ in relation to offers of assistance
<p>Affected people and communities need to go back to ‘normal’ quickly</p> <p>Disaster-affected communities never recover</p>	<p>Assist people to maintain a balance, come to terms with their reality and move forward into a new, changed reality</p>	<p>Recovery services can encompass raising community awareness and promote tolerance, community education and community development initiatives that address a range of issues such as:</p> <ul style="list-style-type: none"> preparedness and disaster risk reduction activities that assist in building community resiliency towards future disasters and develop future protection actions recognition that recovery is a long-term (years), complex and exhausting process for affected individuals, and that their world views may change in small or large ways education and advice during the reconstruction phase regarding ways to improve resilience of buildings and infrastructure to withstand future disasters health promotion activities livelihoods programs that assist in re-establishing household income and/or developing new, more sustainable financial opportunities adaptive change processes that support future socioeconomic opportunities.

aftermath. In some cases, people are unable to return to their homes and businesses for days, and even weeks. The longer-term nature of this dislocation and disruption can have a compounding effect on the people who experience it.

Generally, the phases and overall duration of recovery take much longer than many people anticipate, often by months and even years (Bryant *et al.*, 2017; McFarlane & Van Hooff 2009). Expectations in relation to timeframes can be further reinforced by the media's reporting of the recovery process as well as ambitious promises made by politicians about how fast the recovery will progress. In reality, recovery is a complex, multi-faceted experience requiring detailed engagement and negotiation with a wide range of stakeholders. It takes time and should progress at a pace that is right for impacted individuals and communities.

Relocation

The complexity of a disaster can also be influenced by whether people are able to return permanently to their homes once the initial impacts have been managed. In some experiences, such as the 2010 Canterbury earthquakes in New Zealand, large areas of Christchurch were deemed uninhabitable, resulting in households from those areas needing to permanently relocate to other locations. This can result in a loss of friendships and relationships, routines and community networks at the very time when these things would be of most benefit.

While the choice to relocate can be agonising, for some people it is helpful to step away from the post disaster context and to move to somewhere that feels safer. Research shows that those who stay feel more connected to community which supports their wellbeing, while those who move away benefit from the reduced stressors of post disaster disruptions (Gibbs *et al.* 2016).

The politics of disasters

The environment of disaster recovery is inherently political and the elements of the disaster experience and its longer-term aftermath impact on the understanding, interpretation and ultimately the experience of disaster of all those involved. Recovery planners must consider this social and political context of disaster when planning and implementing any response (Eyre 2006 p. 12).

Relational aspects including the formal political environment, organisational politics and the way the media and communities talk about and frame the experience (social discourse) can all influence recovery management structures. Echterling and Wylie (1999) discuss the implications of this for the management of disasters and this has particular relevance for recovery. The framing of issues takes place through the media, social media, politics, local community conversations (wherever they may be) and other communications, and this influences how issues arising after a disaster are dealt with.

Elected representatives, whether federal or state politicians, or local government councillors, can play

an important part in assisting the recovery of the community. In fact it is their duty as community representatives to do so. However, their success is directly related to the quality of information and advice with which they are provided, to enable good decision making and credible dissemination. The information needs of elected representatives cover all aspects of recovery. Well-informed elected representatives can enhance the likely success of public meetings and media briefings. They can also engender confidence in the recovery processes and that the community can overcome the effects of the disaster.

Elected representatives will need and expect as much information as possible and as soon as possible. This creates demands on organisations working in a multi-agency environment, particularly regarding the sharing of information with other organisations. Concerns include which communications are authorised for internal or external distribution, as well as timely processing and approvals through internal organisational hierarchies. Awareness of information privacy and security provisions is also critical. In addition, decisions from elected representatives may be announced and then need to be implemented within short timeframes (which may have strategic and community recovery process implications that need to be managed).

It is important to note that elected representatives, at every level, will likely feel considerable pressure to act quickly to alleviate the effects of the disaster on those impacted. However, the need for timely resolution of urgent recovery issues needs to be balanced against the strategic importance of decisions made in the recovery phase that will have long-ranging implications for the community. Commitments and decisions made in haste, with a lack of genuine community consultation and input can result in recovery outcomes that are unsustainable or at odds with community priorities, thereby undermining community-led recovery.

Donations and appeals

The Australian community has, historically, come to the aid of people affected by disasters through monetary donations to public appeal funds and the donation of goods and services. Although this generosity cannot be assured in the future, and should not be relied upon in contingency planning, experience has shown that there is a need for procedural guidance in relation to the collection, governance and distribution of public appeal funds and donations.

Local authorities, non-government organisations or the media may initiate public appeals in a coordinated, or uncoordinated manner. State and territories often have in place arrangements for the collection and distribution of appeal funds, which may be undertaken with philanthropic/charitable partners. Informal financial assistance may also emanate from such groups.

Similarly, community appeal funds can evolve (such as a mayoral fund appeal or funds coordinated by religious, regional, philanthropic, community foundations or humanitarian agencies for large-scale emergencies).

There is a critical need for consistency and transparency in relation to the distribution of appeal proceeds or donated goods.

For more information, see Section 2.4.4 Coordination and collaboration (Financial assistance—public appeal funds).

Health and wellbeing

Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity (World Health Organisation [WHO] 1948 in IFRC & International Federation Reference Centre for Psychosocial Support 2009). It is an inalienable right of all people without any regard to race, religion, colour, nationality, sex or origin.

While the number of deaths and immediate serious injuries following a disaster are often reported, the longer-term health impacts of disasters are often undocumented in relation to the disaster event.

People affected by the disaster may require a wide range of health services, and people with pre-existing health needs may require additional support from service providers. This level of servicing can be difficult if medical staff and infrastructure have also been impacted by the disaster.

Physical health impacts

The specific ways that physical health can be impacted after a disaster are countless, but can be broadly grouped into four main categories of physical health impacts:

- Injuries and illness as a result of the hazard
 - e.g. burns, smoke inhalation, chemical exposure
 - in the case of pandemics or outbreaks, an illness may be the hazard itself
- Changes to the environment as a result of the disaster
 - e.g. mould in buildings, asbestos, injury or illness caused by debris, dust
 - people doing physical tasks to which they may not be well suited, such as clearing blocks and debris
- Physical symptoms of psychological stress
 - e.g. headaches, issues with digestive, cardiovascular, endocrine systems
 - exacerbation of pre-existing injuries due to stress
- Disruptions to and reductions in health care supports or services as a result of the disaster
 - e.g. health facilities being damaged or destroyed
 - local health practitioners being killed, injured or relocating as a result of disaster

- supply chains being interrupted because of the disaster
- social supports that assist with health access being impacted – e.g. the neighbour that used to drive you to your medical appointments was killed, injured or relocated
- increased demand on health services.

The physical health impacts following a disaster may be long-term. In addition to the health burden, there is also often a social and economic cost of this issue, including:

- degraded quality of life
- decreased workforce participation
- increased reliance on health services.

Psychosocial impacts

Psychosocial impacts can be broad and may be a result of how a disaster affects people's emotional, spiritual, financial, cultural, psychological and social needs as part of a community.

A dynamic relationship exists between psychological and social relationship/infrastructure effects, each continually interacting with and influencing the other. The psychological and the social interactions are described in detail below in terms of individual and community reactions and interactions.

Psychosocial impacts on individuals

Most people show great resilience in the aftermath of a disaster and the majority of the disaster-affected population will continue to conduct their lives without significant health problems. Van Ommeren (2006) estimated that, after an emergency, more than 80 per cent of the broader population conduct their lives without experiencing prolonged distress or developing significant mental health problems. However, a significant minority will experience mental health impacts that extend for years after the events (Bryant *et al.* 2017) and most will experience a range of mild to moderate signs and symptoms, particularly in the early days (Table 2). Recovery workers need to be attuned to the mental health needs of individuals in the disaster affected community, as mental health pressures vary at different stages of the recovery journey.

In the more severe cases of trauma, such as the death of a family member or loss of home and/or pre-existing conditions, people may require higher levels of support for a longer period of time and may benefit from clinical services. These situations in a minority of cases may lead to serious mental health issues, including post-traumatic stress disorder and anxiety (Hawe 2009).

Common reactions to an emergency or disaster

The emotional impact of traumatic events is very real. Strong feelings may arise when the experience is talked about. Increased worry may interfere with day-to-day living and the experience may leave people shaken and

worried about the future. However, most people return to their 'usual functioning level' given time and the support of family and friends.

Table 2 Summary of WHO predictions of the prevalence of psychosocial problems after an emergency
Source: DHS 2009 p. 5 (adapted from van Ommeren 2006)

Psychosocial problem	Before emergency—12-month prevalence	After emergency—12-month prevalence
Severe mental disorder (e.g. psychosis, severe depression, severe disabling anxiety disorder)	2–3%	3–4%
Mild or moderate mental disorder (e.g. mild and moderate depression or anxiety)	10%	20% (reduces to 15% with natural recovery)
Moderate or severe psychological/social distress (no formal disorder but severe distress)	No estimate	Large percentage (reduces due to natural recovery)
Mild psychological/social distress	No estimate	Small percentage (increases over time)

Everyone's reactions will differ. However, Table 3 shows some of the typical reactions that people exposed to a traumatic event may experience. It is worth noting that men may respond differently to women. Men may find it harder to acknowledge psychological issues and to ask for support. They may be more likely to experience problems such as anger and substance abuse (Zara & Parkinson 2013). Women may be more vulnerable to anxiety and depression but are also more likely to be able to use support networks and health services more effectively.

See Section 2.4.1 Understanding the context (Gender-specific approaches) for more information about the different ways men and women experience disasters.

Children and adolescents

Children and adolescents, although not necessarily more vulnerable than any other group, may, relative to their developmental age, have distinctly different and/or unique experiences of disasters.

The very young are overwhelmingly dependent on carers for their safety, security, stability and wellbeing. Therefore, the needs of parents/carers of young children and infants cannot usually be considered separately to that of the child. Children are less able to communicate through use of language and the most reliable means of assessing their recovery needs is usually through listening carefully to parents and caregivers, observing behaviour and seeking expert guidance wherever possible.

Children may react to trauma by reverting to an earlier stage of development, may become excessively 'clingy' or may 'act out' strong emotional responses in uncharacteristic behaviours such as crying, fighting, sleep disturbance and withdrawal. Adolescents, although physically mature, may have difficulty dealing with the strong feelings that may occur after witnessing or experiencing death, injury and destruction and the disruption to everyday life that a disaster may bring. They may be more likely to withdraw or become silent, isolated and moody (which might be seen as an exacerbation of pre-disaster behaviour). Depending on the assessment of recovery needs following disasters, recovery workers and managers may need to factor in the provision of specialist child and adolescent services as part of a suite of recovery measures.

In the case of orphans or children separated from their carers (that is, unaccompanied children or children without next of kin), considerations for child safety are of paramount concern and need to be planned for and immediately actioned.

For more information on children and young people in recovery, see Phoenix Australia: Centre for Posttraumatic Mental Health.

Table 3 Typical reactions that people exposed to a traumatic event may experience

<p>Emotional responses</p>	<p>Shock (disbelief at what has happened; numbness—the event may seem unreal or like a dream; no understanding of what has happened).</p> <p>Fear (of harm/injury or death to self and close others; of a similar event happening again; awareness of personal vulnerability; panicky feelings; other apparently unrelated fears).</p> <p>Anger (at ‘who caused it’ or ‘allowed it to happen’; outrage at what has happened; at the injustice and senselessness of it all; generalised anger and irritability; ‘why me?’).</p> <p>Helplessness (crises show us how powerless we are at times, as well as how strong).</p> <p>Irritability (frequent swings in mood).</p> <p>Depression (about the event, past events or loss of personal effects; guilt about how you behaved).</p> <p>Sadness (about human destruction and losses of every kind; for loss of the belief that our world is safe and predictable).</p> <p>Shame (for having been exposed as helpless, emotional and needing others; for not having reacted as one would have wished).</p> <p>Guilt (that some have not lost as much as others; about behaviour required for survival).</p> <p>People may also have difficulty feeling happy, lose pleasure derived from familiar activities and have difficulty experiencing loving feelings.</p> <p>Other possible responses include frustration, playing it down, terror, grief/sense of loss, confusion, bewilderment, insecurity, crying, anxiety, disempowerment, feeling inadequate, dependence, withdrawal, apathy, lethargy, compassion, uncertainty, humility, euphoria, detachment, empathy, avoidance, panic, odd humour, uncertainty, hypersensitivity, disbelief/denial, self-blame, blaming others, embarrassment, highly charged, feeling isolated/abandoned, hope.</p>
<p>Cognitive responses</p>	<p>Tension (more easily startled; general nervousness—physical or mental).</p> <p>Sleep disturbances (unable to sleep; thoughts that keep the person awake; reliving the event).</p> <p>Dreams and nightmares (of the event or other frightening events).</p> <p>Memories and feelings (interfere with concentration, daily life; flashbacks; attempts to shut them out which lead to deadening of feelings and thoughts).</p> <p>Other possible responses include difficulty concentrating, memory impairment, disorientation, confusion, preoccupation/worry, indecisiveness, intrusive or irrational thoughts, absentmindedness, unwanted memories, poor problem-solving ability, reality distortion, revert to ‘native’ language, slow reactions, impaired decision-making ability, poor attention span.</p>
<p>Physical responses</p>	<p>Tiredness, palpitations (racing heartbeat), tremors, breathing difficulties, headaches, tense muscles, aches and pains, loss of sexual interest, nausea, diarrhoea or constipation, changes in sleep patterns (insomnia, nightmares), impaired immune response (colds, flu), fatigue/exhaustion, shortness of breath/hyperventilation, gastrointestinal problems, chest pain, numbness, tingling, changes in appetite, anxiety attack, startle response (jumpy), agitation, dizziness, sudden onset of the female cycle, lethargy, vulnerability to illness.</p>
<p>Behavioural responses</p>	<p>Social withdrawal (a need/wish to be alone).</p> <p>Other possible responses include avoidance, loss of interest in usual activities, increased smoking, alcohol and other drug use.</p>
<p>Delayed effects</p>	<p>Any of these may occur after months or years of adjustment.</p>

Psychosocial impacts on social relationships/ infrastructure

Following a disaster people may become disconnected from their usual support systems, and survivors with shared experiences may form new groups and friendships. These relationships may only be for survival purposes and may not be maintained in the medium to longer-term. Strains in previous relationships may also become apparent.

In an emergency event, those affected tend to identify themselves as part of a group and are often portrayed as such by the media. In emergencies with a social dimension, there is a tendency at first to detach from the existing social framework, as personal survival is the dominant concern. When the danger is past, there is a tendency to form an emotionally charged, cohesive social unit devoted to immediate needs.

This cohesive social unit may only last a few weeks at most and is followed by a tendency for conflict and antagonism to develop between the stakeholders, because of emerging differences between them. This fragments the community's recovery and may leave some people isolated (Gordon, 2004[b]). Therefore, a major principle of the recovery strategy must be to support and enhance local services and community networks.

Department of Human Services (DHS) 2005.

As well as good feelings of giving and receiving, there may be conflict, anger and jealousy. Individuals may feel that too little or the wrong things are offered. They may perceive inequities in the support provided or may feel that they are unable to give as much of themselves as expected by others. Changes may occur in the way families, friends and the community relate to and need each other.

A key response to social issues is the provision of accurate, up-to-date information, not only about the events of the disaster, but about what people can expect to experience in the immediate aftermath and during the recovery period.

In addition to information, it is important to work with social attitudes to ensure maintenance of a constructive environment. Although there is a tendency to rank the severity of the impact, the reality is that emergencies have complex and varied consequences for people's lives. Recovery can only be based on recognition of the actual consequences. Therefore, it is important to encourage community members to address their recovery needs, look forward to and plan for the future, and recognise that acceptance of tragedy is a basis for healing (and blame can circumvent this).

Psychosocial—secondary impacts

There are potentially two sources of psychosocial impacts:

- the emergency event itself, with its trauma and loss
- the response and recovery process, with its potential disruption, depersonalisation and disorientation.

The response and recovery processes can be made worse or better depending on how they are managed. For the most part, people manage well, but frustration may accumulate when challenges are faced, such as encountering misinformation, red tape and bureaucratic tangles while seeking recovery support. Feelings of anger and helplessness may result.

Dealing with relief agencies (particularly government agencies), loss of job, loss of community status, or a changed socio-cultural mix in the community are all experiences that may occur following a disaster and may actually be more significant, over time, than exposure to the disaster agent itself.

Flynn 1999.

Psychosocial impacts on emergency response, relief and recovery workers

In some cases, response, relief and recovery workers live in the affected community and may be dealing simultaneously with their own personal losses and uncertainty about the safety of their families, homes and livelihoods. Whether workers live in the affected community or arrive in the community to provide support after the crisis, they are affected by the aftermath of the event and the impact of that event on the local community.

Demands on workers responding to an emergency event are often driven by the needs of the community after the event. Some impacts on workers include:

- very long working hours—often seven days a week for many weeks
- work pressure—stressful situations and responsibilities
- relationship changes with the community—loss of esteem/respect of communities
- tension between the role 'on the ground' and the expectations and requirements of the organisation
- shared trauma and the emotional pain of implementing policy
- going beyond the bounds of normal work to offer emotional support to the community
- added financial stress for volunteer organisations (Productivity Commission 2002).

For more information on human resource issues specific to the disaster context see Section 3.4 Planning and programming.

Implications for mental health

The focus of this section has been on the impacts on individuals, families and the community in the spectrum of normal, adaptive responses to the stresses of disaster recovery.

As noted above, a small proportion of the population may experience more serious adjustment problems with potential for the development of mental health disorders. Some of these are described below. In the context of disasters, the provision of community recovery interventions is designed to aid the prevention of a greater prevalence of mental health disorders.

More detailed information for mental health practitioners may be found in state and territory support documents.

Mental health problems and disorders

Mental health problems and mental disorders refer to the spectrum of cognitive, emotional and behavioural disorders that interfere with the lives and productivity of people at school, at work and at home, and impact upon their interpersonal relationships.

DHAC & AIHW 1999.

A mental health disorder implies 'the existence of a clinically recognisable set of symptoms or behaviour associated in most cases with distress and with interference with personal functions' (WHO 1992, cited in DHAC & AIHW 1999 p. 7).

Common mental health problems include:

- depression—characterised by a sad or depressed mood, a loss of interest in normal activities, poor motivation and lack of energy: it is usually accompanied by disturbed sleep and poor appetite; in more severe cases, suicidal thoughts may be present
- anxiety—characterised by fear that something bad will happen, and often by worry about areas such as safety, health and money: these disorders are usually accompanied by physical symptoms (being tense, on edge, heart racing etc.) and the person will often avoid activities that they find upsetting
- substance use disorders—characterised by excessive use of alcohol or other drugs, which interferes with the person's social relationships and ability to carry out normal roles
- post-traumatic stress disorder—one of the anxiety disorders, it is often mentioned in the context of

trauma and disaster, but is probably no more common than depression: it is characterised by memories (often in the form of images, smells or other sensations) that haunt the person (and are associated with high arousal, being jumpy, on edge, disturbed sleep, being irritable) and efforts to avoid reminders, and a general numbing of emotional responsiveness.

For more information on mental health and psychological first aid see Section 4.1.6 Social environment recovery—categories (Psychological First Aid).

Other references/resources

NSW Health, Disaster Mental Health Manual 2012, NSW Health and University of Western Sydney

Post-traumatic growth

Post-traumatic growth refers to people's positive experiences after traumatic events—appreciation of life, new possibilities, personal strength, relating to others and spiritual change (Gibbs, *et al.* 2016). While much of the focus on recovery after disaster is on minimising or mitigating the negative outcomes, research has also demonstrated that:

... the psychological and social impacts on those affected by major emergencies are many and varied. As well as including grief, trauma, stress and other forms of loss-related reactions, the evidence suggests that people are generally resilient and demonstrate the ability to adapt, adjust and recover after such events. The ability to cope is related to a range of pre-disaster, within-disaster, and post-disaster risk factors.

Eyre 2006.

At a community level, bonds between people can be strengthened by sharing an intense experience together. The experience of this event may help in the future with coping with the everyday stresses of life. It can also be a turning point where people re-evaluate the value of life and appreciate the little things often overlooked. People who have been through disasters should be encouraged to identify the positive aspects of their experience for themselves and for those who are close to them.

2.4.3 COMMUNITY-LED RECOVERY

Successful recovery is community-centred, responsive and flexible, engages with community and supports them to move forward. Recovery should:

- assist and enable individuals, families and the community to actively participate in their own recovery
- recognise that individuals and the community may need different levels of support at various times
- be guided by the communities' priorities
- channel effort through pre-identified and existing community assets, including local knowledge, existing community strengths and resilience
- build collaborative partnerships between the community and those involved in the recovery process
- recognise that new community leaders often emerge during and after a disaster, who may not hold formal positions of authority
- recognise that different communities may choose different paths to recovery.

The affected community, following an emergency or disaster, comprises various individuals, groups and organisations with differing needs. Some are directly affected by the event in terms of injury, death, or loss of possessions and accommodation, some are evacuated, some are emotionally affected, and some are financially affected through loss of employment or livelihood. There will be groups with other special needs, such as people with physical or intellectual disabilities, people with language needs, the elderly, or people who lack personal or family support. Groups that may be directly affected may comprise particular suburbs or areas, particular communities such as caravan parks or retirement villages, and owners and employees of particular businesses closed by the event. Organisations that may be directly affected include community, social service, sporting and recreation, ethnic, cultural and religious organisations.

There are also individuals, groups and organisations who suffer the secondary effects of the event and whose information needs may be as great as those directly affected. In particular, there are friends, relatives and neighbours of people directly affected, whether they are affected as individuals or as part of a group or organisation.

Outside the immediately affected community, there may also be a need to communicate with the broader community, on issues such as access to affected areas, information on support and donations, and perhaps information about how to manage similar emergencies.

Information that is gathered and disseminated without taking account of these many factors is likely to miss the needs (or be interpreted as uncaring or overlooking the needs) of those affected and is unlikely to be seen as helpful or credible.

Communities managing their own recovery

Community members are the first responders during an emergency, and take actions to save and protect themselves, their families and their communities. As part of this response, disaster-affected communities

spontaneously begin their own recovery processes. It is the role of formal recovery agencies to provide structured support, communication and coordination to assist these efforts.

Disaster-affected people, households and communities understand their needs better than any of the professional, government, non-government or corporate supporters. They have the right to make their own choices about their own recovery. It is well recognised that the processes used by government and other key recovery agencies to interact with and support communities are critical and can impact either positively or negatively on the capacity of individuals and groups to manage their own recovery process.

Individuals and communities have inherent strengths, assets and resources, which should be actively engaged within the emergency and recovery phase.

Because trauma emanates from profound powerlessness, interventions should emphasize empowerment, meaning they need to emphasize strengths, mobilize the community's capabilities, and help the community to become self-sufficient.

Harvey 1996, cited in Norris *et al.* 2008.

Supporting self-help and strengthening the resources, capacity and resiliency already present within individuals and communities are the keys to successful recovery. Empowering communities to create their own solutions can improve overall social cohesion and this is critical to sustainable recovery outcomes.

The term 'community-led' emphasises a community-driven approach that strives to achieve strong community participation and leadership in all levels of planning, implementation and evaluation of recovery processes. Community-led social recovery processes fundamentally aim to support self-help and strengthen the resources, capacity and resilience already present within individuals and communities.

Achieving community-led recovery may be challenging when:

- local, trusted community leaders have died or left the area because of the disaster
- communities of interest with diverse competing needs are involved
- affected individuals are widely dispersed
- marginalised or minority groups are excluded from community decision-making processes
- some people are more vulnerable than others to the impacts of a disaster.

Effective community engagement and strong facilitation processes are required to ensure communities can determine their own needs and shape the recovery programs and activities.

Sustainable communities: resilience and vulnerability

Communities are combinations of open-ended groupings which can be defined by organising cultural beliefs and practices and are constantly open to change (Masolo in Gordon 2004b p. 10).

Even relatively straightforward communities, such as those in a town or geographic area, contain multiple social groups, and these groups may differ in significant ways (Pooley, Cohen & O'Connor 2006). Groups may differ in terms of their socioeconomic status, their degree of geographic isolation or their vulnerability to psychological trauma. These group differences may mean that different groups within the one society can be more or less resilient to a disaster (Buckle, Mars & Smale 2000; Maguire & Hagan 2007).

Community sustainability provides a framework for whole-of-community recovery, with a focus on sustainable development. Sustainable communities are participatory, empowering, collaborative and, although vulnerable in particular contexts or aspects, they may also be resilient (Pooley, Cohen & O'Connor 2006).

Sustainable community recovery

Smith and Wenger (2006) suggest conditions to consider in designing, implementing and reflecting on sustainable community recovery in the United States. Adapting their thoughts to the Australian context, the design of

recovery programs, and the success or otherwise of implementation of strategies, depends on:

- pre-disaster community-level variables, such as local capacity, previous disaster experience, nature and extent of relationships within and beyond the community, the condition of critical infrastructure and housing, and the level of local participation in collective action
- characteristics of the disaster, such as intensity, scope, speed of onset and duration of impact
- facilitators of sustainable disaster recovery, such as ability to leverage resources, self-reliance and self-determination, pre- and post-disaster recovery planning, identification of local needs, program flexibility, state and Commonwealth capability and commitment
- impediments to sustainable disaster recovery, such as viewing disaster recovery programs as an entitlement, over-reliance on recovery programs, narrowly defined recovery programs, and low capability and commitment.

Integrating disaster recovery and long-term development

After an emergency, an affected community needs to face a new reality, and decide about its needs and priorities. It will be important to consider the community values, aspirations, development plans and patterns of local leadership that existed before the emergency

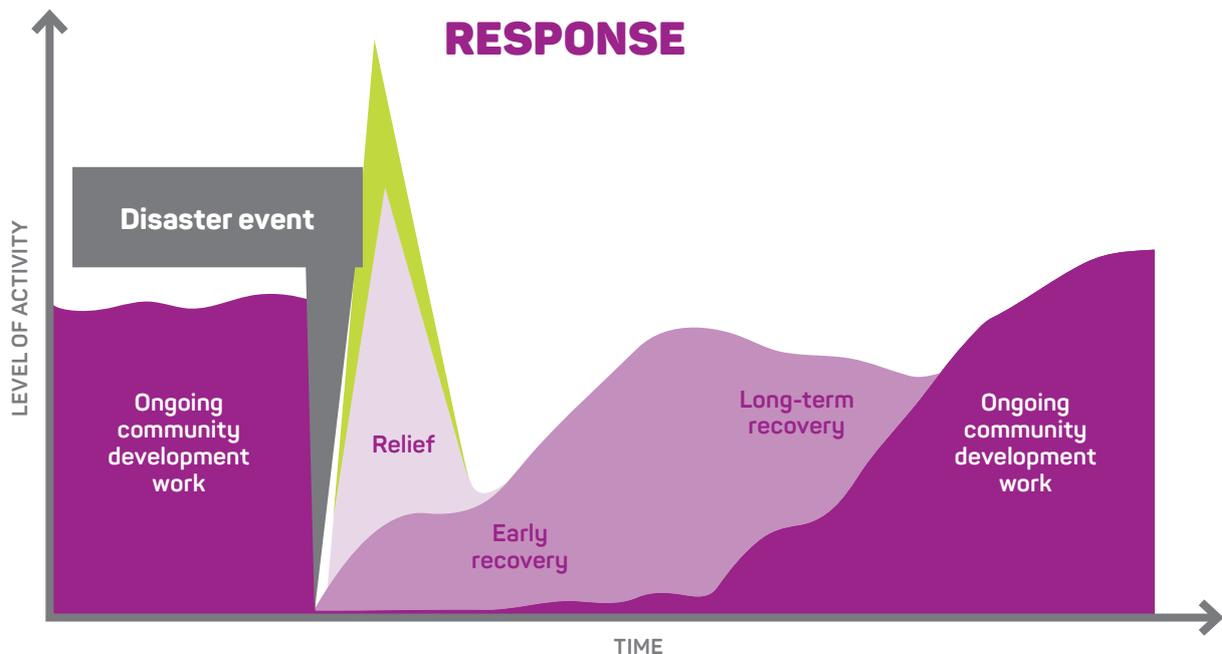


Figure 5 Effect of disaster on ongoing community development and interface with relief and recovery
Source: Sally McKay

and to support the community to integrate these into recovery processes. This integration ensures that the longer-term recovery process leads to ongoing and sustainable development.

The consequences of a rapid onset disaster on development within a community is shown in Figure 5, which illustrates how a disaster can entirely disrupt a community's developmental process. It also shows the relationships between pre-existing development work, relief, early recovery, long-term recovery and ongoing developmental work.

Community development in recovery

The *National Principles for Disaster Recovery* advocate a community-led approach to empower individuals and communities to manage their own recovery. Community development is a method of working with people. It starts from the needs and aspirations of individuals and groups and moves to articulate and organise action around those needs and aspirations—placing them at the forefront.

Community development is a long-term value based process which aims to address imbalances in power and bring about change founded on social justice, equality and inclusion.

The process enables people to organise and work together to:

- identify their own needs and aspirations
- take action to exert influence on the decisions which affect their lives
- improve the quality of their own lives, the communities in which they live and societies of which they are a part.

LLUK & Alliance SSC 2011.

In the immediate phases of relief and early recovery, recovery agencies can make proactive decisions about supporting anticipated community needs. These decisions are based on knowledge and experiences from previous disasters and engagement with existing community-based emergency management plans, coupled with a sound understanding about the consequences of the disaster upon the community and its capacity to meet its own needs.

As individuals, groups and the community reconnect, communicate and become more aware of the emerging consequences of the disaster, they are able to collectively plan for their recovery needs. Recovery agencies should facilitate and support individuals, groups and communities to identify, prioritise and implement their own recovery process. This involves identifying and implementing existing community-based emergency management plans and structures, working with and engaging communities on issues of local concern, and developing localised community recovery plans and projects.

Recovery planning built upon community development fundamentally aims to support self-help and strengthen the resources, capacity and resilience already present within individuals and communities.

Community development recovery processes apply to the four integrated recovery environments (social, built, economic and natural environments). Depending on the type of event and the impacted community, the four environments will be affected to different degrees. Recovery processes should strive, wherever possible, to increase social capital, stimulate livelihoods and economies, rebuild resilient infrastructure, strengthen institutions, and invest in the health and wellbeing of communities.

Community development processes within disaster recovery can be different from the ongoing work in 'ordinary' times. In particular, disaster recovery processes may require a more proactive approach than in other developmental settings.

As the recovery process progresses, the community will become increasingly able to lead its own recovery. Processes that are 'government-supported and community-led', provide a foundation or framework within which communities can work with government and non-government agencies and other recovery stakeholders. A community development approach should be integrated into structural recovery arrangements and pre-event planning. Effective ways to ensure a community development approach is integrated (and thereby facilitate sustainable recovery outcomes) may include explicitly recognising it in pre-event planning and the terms of reference for post-event recovery committees; planning for how and when community participation will be built into decision-making and governance processes; and, employing skilled community development workers as key elements of the recovery team.

Key opportunities for community development workers in recovery include:

- providing opportunities for disaster-affected people to 'have their say' and enable people to have power to influence (when they may feel powerless following the impact of an emergency)
- working 'with' people rather than 'doing things to' or 'for' them
- supporting people to come to terms with their different life circumstances and move forward into a new, changed reality, which may provide new adaptive socioeconomic and disaster preparedness opportunities.

To maximise the potential of community development in recovery, it is vital to appoint relevant personnel as early as possible in the recovery process. When appointed early, community development workers are more readily able to form effective partnerships and working relationships with the affected community. The closer their appointment to the time of the disaster, the more readily they are accepted within the community. Conversely, for those appointed a number of weeks after

a disaster, it has proven far more difficult to establish the necessary rapport. However, this can be addressed if community development officers are integrated with the community recovery committee prior to commencing community development duties.

Based on generic community development principles and the *National Principles for Disaster Recovery*, it is most effective for community development workers to be employed by the agency as close as possible to the affected community. Generally, this will be either the local government responsible for the affected area or a non-government organisation with a relevant service delivery role in the affected community. Their existing networks and relationships, knowledge of and insight into the local community, as well as high levels of trust, provide them with a strong starting point for recovery work.

Funding and employment of community development workers through non-government organisations or social service organisations has proven particularly successful in situations where a worker has been employed to manage or facilitate a specific project, or to work with a particular sector or the disaster-affected community (for example, employment of a project worker by an industry group to address the needs of workers in that particular industry).

In general terms, the employment of community development workers should follow established best practice in human resource management. However, the rapidly changing and politically sensitive environment often generated by a disaster can put pressure on human resource and recovery management personnel to quickly appoint suitable people to the role.

Importantly, it is not only community development workers that do community development work. In recovery, environment officers do community development work and operational staff also feed in to the community development process when working with affected residents.

A template of a role description for a community development worker is provided in Toolkit 2-1 Community recovery checklists – Checklist 3 Community development worker role statement.

Community engagement

Community development approaches are facilitated by community engagement. Community engagement is a generic term for any process or interaction with stakeholders, community groups or individuals. It can include one-way communication or information delivery, consultation, involvement in decision making, and empowered action in informal groups and/or formal partnerships.

The public participation spectrum developed by the International Association of Public Participation (IAP2)

shows the increasing level of impact of different forms of public participation.

Based on the public participation spectrum, best practice community engagement is underpinned by a set of principles, including:

- inclusiveness—the involvement of people potentially affected by, or interested in, projects or activities, including individuals and groups from culturally diverse backgrounds: engagement should be undertaken in ways that encourage people to participate and that seek to connect with those who are hardest to reach
- commitment—engagement should be genuine and aimed at identifying, understanding and engaging relevant communities, and should be undertaken as early as possible
- building relationships and mutual respect—development of trust through personal contact and keeping promises is a priority: effective relationships between government and non-government sectors, industry and community should be maintained by using a variety of communication channels, by acknowledging and respecting community capacity, values and interests, and by exploring these areas to find common ground
- integrity—genuine community engagement is a means through which the integrity of government and the democratic processes of government are maintained
- transparency and accountability—engagement should be undertaken in a transparent and flexible manner so that communities understand what they can influence and to what degree
- feedback and evaluation—engagement processes should inform participants of how their input contributed to decision making.

Recovery managers need to be clear when engaging with communities about the degree to which the community will have input (for example, whether community input will be considered and policy programs adjusted accordingly, or whether the community engagement process is only about informing the community of the practice to be adopted). Trust can be eroded if the community engagement methods used are inappropriate, or promise a level of involvement, resourcing, funding or decision making that is not delivered. It is important that engagement and consultation with communities continue over the longer term, as needs and circumstances change over time.

Other references/resources

Effective engagement: Building relationships with community and other stakeholders (Department of Environment, Land, Water and Planning 2015) offers practical planning advice that describes tools that are widely used in engagement activities.

Asset-based community development

Asset-based community development, or ABCD, (Kretzmann & McKnight 1993) refers to the practice of using and building on existing local networks and strengths in the community. In many instances effective outcomes will be achieved through engaging with and complementing the resources, local knowledge and experience already available within an affected community. Communities have a range of trusted community leaders, groups and networks, which can be used to implement a range of community development recovery activities. These groups understand the local community dynamics and are best placed to provide ongoing sustainable community recovery support.

Although an assets-based approach is the optimum way to implement a disaster recovery community development process, the local capacities to meet the immediate and ongoing recovery needs should be assessed, monitored and supported, as required. For example, local community-based emergency management planning groups may have pre-existing plans to help direct and support recovery activities, even though the capacity of individual members to facilitate their implementation may vary, depending on the impacts of the disaster.

Early assessment should be made of any need for, and likely benefit of, additional community development resources, which may be required when:

- the emergency has a demonstrated impact upon social infrastructure and networks and economic systems
- an affected area is experiencing or is likely to experience socioeconomic disadvantage as a result of the emergency
- the emergency has created a high degree of stress/distress within the community that will impact upon its health, wellbeing and socioeconomic recovery.

The decision to fund and employ community development workers is undertaken following a disaster when a community is usually experiencing significant consequences and the personnel within local community-based agencies and groups may have been affected.

The workload of local councils and other agencies, including community and social service organisations, will exponentially rise, and additional resources may be required for these agencies to maintain their usual levels of services, as well as to provide community development recovery support.

Additional resources such as community development workers can reinforce existing resources within communities and assist in preventing further breakdown in those services, thereby alleviating future long-term costs. Equally, the use of community development workers can alleviate the expected escalation of health and socioeconomic issues, including the continued loss of productivity and economic hardships.

Challenges for community development

Challenges involved in working with the community in disaster recovery include:

- engaging with communities when they are struggling with other serious issues relating to the disaster and recovery
- maintaining continuity throughout the long-term recovery process
- balancing government and community agendas, which may include politically-based recovery planning and prioritising of needs (occurring simultaneously and potentially not in line with local community planning and prioritising)
- ensuring productive communication and relationships between recovery stakeholders and disaster-affected communities
- engaging with CALD communities
- engaging and including marginalised individuals and community groups in decision-making processes
- keeping the balance (for example, weighing up individual versus collective community good) and balancing local interests with those of the wider region (e.g. in relation to funding allocations)
- managing conflict—unlike the response phase, where unilateral command generally applies, recovery is multilateral and leads naturally to disagreement and conflict because communities are not cohesive groups: there may be competing groups with exclusive practices
- dealing with inequity—communities can have pre-existing social and economic inequities that can be exacerbated and compounded by the effects of disaster
- including emergent groups in recovery processes—emergent groups can evolve to support and assist with recovery processes or, conversely, can be obstructive and detract from recovery efforts
- dealing with community culture—cultural shifts may be required (for example, a rural community's strong sense of independence can hinder the move to a position of interdependence)
- dealing with community expectations (for example, minimising delays, providing access to impacted areas, and meeting community expectations for timeliness)
- setting priorities (e.g. setting priorities for restoration of the local and regional economy, such as critical infrastructure assets)
- managing the imperative need of governments to potentially commence recovery work before being fully aware of the needs of communities or of local capacities, or without full knowledge of current recovery activities being undertaken by local government, non-government organisations and community groups
- managing unrealistic expectations of recovery timelines and processes

- ensuring effective practices and approaches for community engagement are implemented by all recovery stakeholders
- managing communication and keeping everyone informed
- supporting adaptive change.

Community development processes in managing conflict

In the aftermath of disasters, survivors with shared experiences may form new groups and friendships. However, these relationships may only be for survival purposes and may not be sustainable in the medium to long-term. Following this community fusing and bonding process, subsequent fragmentation can occur and can damage the community recovery process. Strains in previous relationships may also become apparent.

As well as good feelings of giving and receiving, there may be conflict, anger and jealousy. Examples of issues that can cause conflict include differing rates of repair, inadequate or no insurance, community expectations and opposing community values. Opposing values can include rebuilding versus environmental issues, country versus city, safety versus accessibility, and prioritising of needs (such as a focus on employment and the economy versus accommodation and shelter needs). Cash programming and allocation of funds can cause perceived inequity issues, and fundraising appeals that appear to duplicate purposes can create confusion within communities.

Despite these challenges, the principal finding from the *Beyond Bushfires* (Gibbs *et al.* 2016) study was that social ties matter and the sharing of information and resources and the provision of emotional support can result in more positive mental health recovery and resilience. It is important to work with social attitudes to ensure the maintenance of a constructive environment. Without sound community development and management practice, conflict can significantly damage or destroy the social infrastructure of a community.

Other references/resources

In his article, 'The social system as site of disaster impact and resource for recovery', disaster psychologist Dr Rob Gordon (2004a) discusses these issue in terms of 'social cleavage planes' or 'differentiation'.

Community development strategies to recover the social fabric include:

- rebonding
- community formation
- facilitation of social bonds through communication
- communication that normalises the disaster and its effects
- forming disaster-related social representations
- forming a common reality
- preserving differences and complexity
- preserving boundaries and identities

- facilitating reference groups
- facilitating social representations of post-disaster life
- integrating services.

See also the *Beyond Bushfires: Community Resilience and Recovery Final Report* November 2016, University of Melbourne, Victoria, Australia.

Adaptive change opportunities within community development

Recovery processes can support people to make adaptive changes—that is, to come to terms with their different life circumstances and to move forward into a new, changed reality, which may in time provide new opportunities.

Disaster recovery processes are often a time of strong reflection for individuals, families and communities when new choices and learning can occur. The sensations of disorientation and disequilibrium following a disaster can enhance individual and community abilities to address change and adopt new learning. Community development recovery programs that aim to support long-term sustainability can facilitate processes where individuals and communities can review their decisions and lifestyles and assess future directions.

People from outside the affected community may be the most suitable facilitators of adaptive change processes (because changes may be non-sustainable, may diminish access to certain socioeconomic opportunities, or may raise social, economic and disaster vulnerability issues). An external, neutral and suitably experienced/qualified and respected facilitator is unlikely to have vested interest in particular outcomes, and should therefore be able to support individuals, families, groups and the community to embrace the potentially difficult changes required to address issues of disaster resiliency, including social and economic vulnerability and sustainability.

Community resilience

Resilience encompasses all three of the following components in an ongoing process (Aguirre in Maguire and Hagan 2007 p. 17).

A resilient community:

- predicts and anticipates disasters
- absorbs, responds and recovers from the shock
- improvises and innovates in response to disasters.

Similarly, the National Research Council (Rose 2004 pp. 151–2) describes resilience factors based upon:

- resources and options for action that are typically available during non-disaster times (inherent)
- the ability to mobilise resources and create new options following disasters (adaptive).²

² This was adapted from Rose (2004), who was referring specifically to economic resilience, but the concepts of inherent and adaptive resilience can be applied much more broadly.

The importance of disaster resilience in Australia is evident in the National Strategy for Disaster Resilience, which observes:

Australians are renowned for their resilience to hardship, including the ability to innovate and adapt, the presence of a strong community spirit that supports those in need, and the self-reliance to withstand and recover from disasters.

National Strategy for Disaster Resilience 2011.

As previously noted, the strategy emphasises that achieving a higher level of disaster resilience is a shared responsibility for individuals, households, businesses and communities, as well as for governments and the non-government sector. Indeed, if all these sectors work together, they will be far more effective than the individual efforts of any one sector.

Characteristics of resilience

This section describes characteristics associated with individual, community and organisational resilience so that recovery workers can recognise and potentially use individual, community and organisational capacity in the recovery process.

Individual and community resilience

The resilience of individuals has an impact on their ability to recover from disaster. However, the concept of resilience has developed over time, beyond the notion of a trait that resides within the individual or the result of individual coping skills, to recognition that it arises from a dynamic interaction between the individual, their experiences and the socioenvironmental context of their everyday lives. As Unger *et al.* observe in their article on resilience among Canadian young people:

In the context of exposure to significant adversity, whether psychological, environmental, or both, resilience is both the capacity of individuals to navigate their way to health sustaining resources, including opportunities to experience feelings of wellbeing, and a condition of the individual's family, community and culture to provide these health resources and experience in culturally meaningful ways.

Unger et al. 2008

Individuals who are resilient generally have the following characteristics (all of which can be developed in people) (APA 2018):

- 'caring and supportive relationships within and outside the family. Relationships that create love and

trust, provide role models, and offer encouragement and reassurance ...'

- the 'capacity to make realistic plans and take steps to carry them out'
- 'a positive view of themselves and confidence in their strengths and abilities
- skills in communication and problem solving
- the capacity to manage strong feelings and impulses'.

It is important to note that people do not all react in the same way to traumatic and stressful life events. In addition:

... a person's culture might have an impact on how he or she communicates feelings and deals with adversity—for example, whether and how a person connects with significant others, including extended family members and community resources.

APA 2018.

Parallels can be drawn between the factors that influence personal resilience and those that influence a community's resilience.

Communities that are resilient typically have the following characteristics:

- trust
- social cohesion
- inclusivity
- supporting attitudes and values
- leadership
- a sense of community
- good communication and information
- collective efficacy
- community involvement
- social capital
- existing norms
- engagement with government.

Other elements that support a community's resilience include the sustainability of social and economic life, including the ability to withstand disruption.

The following assets need to be considered when assessing community resilience to disasters:

- human capital: labour power, health, social wellbeing, nutritional status, education, skills and knowledge
- social capital: those stocks of social trust, interconnectedness, norms, and social and economic networks that people can draw upon to solve common problems and support community functioning—social capital is mediated through networks and group membership (formal and informal)
- physical capital: houses, vehicles, equipment, infrastructure, information technology, communications, livestock, assets

- natural capital: access to land, water, wildlife, flora, forest
- financial capital: savings, tradeable commodities, access to regular income, insurance, net access to credit
- political capital: individual/group/community ability to influence policy and the processes of government—political capital is underpinned by the mutual communication between government and citizens, which allows citizens to participate in the formulation of policy and the provision of government services (ILO & FAO 2009).

Organisational resilience

Organisations are integral parts of communities. The availability of essential services (or supply chains, social services and other businesses) during and following an emergency or disaster depends on the ability of organisations to survive through a disruptive event. Enhancing organisational resilience is a critical step towards creating more resilient communities.

Building resilience through recovery

Building community resilience through the recovery process is a desirable outcome. Measuring this is a challenge, particularly given that resilience is not an end point, but an ongoing and incremental process. Achieving disaster resilience requires a long-term commitment to deliver sustained behavioural change and enduring partnerships.

A high level of community resilience towards disasters is determined largely by social factors which are based on strong interdependencies. At a practical level, community resilience is developed and maintained by partnerships—with all levels of government, non-government and corporate sectors—through support programs, services and resources provided both pre- and post-disaster.

A community's social capital and its leadership have been found to be the most effective elements in enhancing collective actions and disaster recovery in communities, notwithstanding socioeconomic and cultural contexts (Nakagawa & Shaw 2004). Social capital is defined as a function of trust, social norms, participation and social networks of individuals and groups.

Emergency management plans must recognise and build on a community's capacity for social resilience while at the same time identifying and addressing vulnerabilities.

Recovery planning begins with an understanding of the pre-existing state of the community, and the consequences of a disaster upon that community. Community and social service organisations and groups have unique knowledge of and insights into the strengths and vulnerabilities of their communities and can provide advice and information on recovery needs. To build greater community resilience, recovery processes need to:

- conscientiously address issues of resource inequities

- conscientiously address issues of socioeconomic vulnerabilities
- incorporate community resilience-building activities, including disaster risk reduction measures (for example, programs and activities that reduce individual and community risk and promote emergency preparedness).

They also need to:

- empower communities
- develop and support leadership
- resource community-led strategies.

Vulnerability

Understanding the vulnerabilities of communities is integral to managing emergency risks and implementing effective emergency planning, preparedness and recovery programs.

It is important to be aware of the assumptions we often make about 'vulnerable' individuals and groups and to challenge those assumptions if necessary (Buckle, Mars & Smale 2000). Potentially vulnerable groups, e.g. identified through assessment processes or community profiles, also have strengths, assets and capacities. Not only can they potentially support themselves during critical stages within disasters, but can provide assistance to others. Understanding the demographics of the local community prior to any event will assist in identifying those potentially most vulnerable in a disaster.

In the disaster context, the vulnerability of individuals, groups and communities is variable. A society's vulnerability to disasters should not be thought of as static or fixed. Just as resilience is not a discrete capability and can change (according to circumstance, location, past experience etc.), vulnerability factors are also fluid.

Vulnerability is defined as:

'the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist, and recover from the impact of a ... hazard'

Wisner *et al.* 2004.

Vulnerability is not necessarily a condition or attribute of age, disability, poverty, lack of education, health, geographic location or an inability to speak the predominant language such as English. It is a consequence or attribute of a life or lifestyle, and reflects whether the people affected can prevent and resist the potential damage of the disaster and whether, if damage does occur, they can recover successfully.

There are two main aspects to the notion of vulnerability in the disaster context (National Research Council of

the National Academies 2006) and these apply to the likelihood of people experiencing:

- negative impacts from a disaster (loss of life, property, livelihood)
- recovery-related difficulties; for example, problems with accessing services and inequity issues, as well as inappropriate or ineffective support.

Some individuals and groups are likely to be more susceptible to loss, or to have less resilience than other individuals and groups; however, lists of vulnerable people and groups are rarely helpful in that they do not explicitly indicate how or why these groups are vulnerable. Actual groups at risk will depend on the specific circumstances, such as location, community demographics, time of year, type of emergency, duration, etc., and how effectively pre and post-event emergency plans have considered their needs and circumstances.

2.4.4 COORDINATION AND COLLABORATION

Successful recovery requires a planned, coordinated and adaptive approach, between community and partner agencies, based on continuing assessment of impacts and need.

Recovery should:

- have clearly articulated and shared goals based on desired outcomes
- be flexible, taking into account changes in community needs or stakeholder expectations
- be guided by those with experience and expertise, using skilled, authentic and capable community leadership
- be at the pace desired by the community, and seek to collaborate and reconcile different interests and time frames
- reflect well-developed community planning and information gathering before, during and after a disaster
- have clear decision-making and reporting structures and sound governance, which are transparent and accessible to the community
- demonstrate an understanding of the roles, responsibilities and authority of organisations involved and coordinate across agencies to ensure minimal service provision disruption
- be part of an emergency management approach that integrates with response operations and contributes to future prevention and preparedness

Table 4 Key recovery stakeholders

Impacted community / communities	<ul style="list-style-type: none"> • Will not be a homogenous group - communities are made up of different groups and voices • Will have skills, experience and local knowledge that will benefit recovery • Recovery arrangements should have the community at the centre and be aimed at facilitating the community's ability to drive its own recovery processes and outcomes
Impacted individuals and families	<ul style="list-style-type: none"> • part of the recovering community • may live within the disaster-impacted area, or be geographically dispersed (as in the case of bereaved family members) • will have different experiences of the event and different recovery needs • recovery may be compounded by pre-existing issues such as illness, disability, financial insecurity, substance abuse, etc
Local government	<ul style="list-style-type: none"> • recovery role will vary, depending on legislation and emergency arrangements but generally responsible for municipal emergency management planning • the closest level of government to the community • local government provides a broad range of services to communities within and outside of disaster recovery • strong local knowledge and networks
State/Territory government	<ul style="list-style-type: none"> • will have a range of recovery responsibilities across the portfolios of government, e.g. health, education, infrastructure, economic development, etc • structure may include regional-level arrangements as well as state-level • a key coordinating role in disaster recovery
Commonwealth government	<ul style="list-style-type: none"> • provides leadership and collaborates with other levels of government in disaster research, policy making and support for disaster relief and community recovery • provides resources through the National Disaster Relief and Recovery Arrangements (NDRRA) when state and territory resources are insufficient

Schools, universities and other education providers	<ul style="list-style-type: none"> • an important community hub and point of contact with children, young people and their families • locally relevant knowledge, experience and community contacts • a resource about theoretical and evidence-informed approaches
Non-government organisations	<ul style="list-style-type: none"> • a key role in recovery through the provision of personal support, management of appeal funds, coordination of donated goods and volunteer efforts
Local community and social service organisations	<ul style="list-style-type: none"> • integral to community recovery and likely to be ‘first on scene’ in terms of establishing initial recovery activities • trusted, local providers of services such as community health, education, housing, drug/alcohol/family violence programs, youth and family services, etc. • local knowledge, skills and experience • remain in the community over a longer term • may be directly impacted, which can affect service provision, at least temporarily
Local community groups	<ul style="list-style-type: none"> • integral to community recovery and likely to be ‘first on scene’ in terms of establishing initial recovery activities • local knowledge, skills and experience • able to connect with and mobilise community capacity • may have pre-existing, community-designed plans for recovery • members may be directly impacted, which can affect the group’s functioning, at least temporarily
Emergent groups	<ul style="list-style-type: none"> • may be from within or outside of the impacted community • generally emergent groups form to provide assistance with one or more aspects of recovery • may include groups who expand their ordinary operations to include recovery activities, e.g. service clubs such as Rotary or Lions • can be a vital source of ‘surge capacity’ to help manage relief and recovery
Emergency services	<ul style="list-style-type: none"> • have legislated responsibilities for response and transition to relief and recovery • likely to be locally based within (and include members from) the impacted community • likely to continue to assist with recovery efforts, where possible, in a formal or informal capacity
Local businesses	<ul style="list-style-type: none"> • critical stakeholders in economic recovery • may also comprise impacted individuals and families • may be particularly vulnerable to the effects of recovery activities, e.g. restricted access to the community, donated goods.
Industry networks and associations	<ul style="list-style-type: none"> • valuable knowledge of local industry and businesses • able to offer support and advocacy for members • can advise on industry-specific recovery measures and initiatives, e.g. agriculture, horticulture, viticulture, manufacturing, tourism, freight, etc
Insurance companies and banks	<ul style="list-style-type: none"> • critical stakeholders in social and economic recovery • provision of information, assessments and processing claims of policyholders • provision of advice on recovery and re-establishment in relation to future insurability
Media	<ul style="list-style-type: none"> • critical stakeholder in dissemination of recovery information • key contributor to the way disaster and recovery is framed and understood
Utilities and statutory authorities	<ul style="list-style-type: none"> • critical stakeholders in the repair and reconnection of services such as water, power, telecommunications • may have a role in determining how reconstruction and recovery occurs in terms of land use and availability/connection to infrastructure services and utilities

- be inclusive, availing of and building upon relationships created before, during and after the emergency.

Key stakeholders - who is involved in recovery?

Recovery is a complex social process. Formal recovery guidelines vary from state to state, but almost always include the groups listed on page 39.

Each of these groups is vital to recovery and has a unique and important role to play. One of the most complex aspects of recovery is coordinating all the work that these groups will undertake, and supporting their different needs, priorities and outcomes. Often groups will see their specific needs as paramount, and opinions are likely to differ when establishing what the recovery priorities are.

Recovery plans and arrangements

Management of the impact of an event and the recovery process is concurrently conducted at the individual, household, community, local, regional, state, national and international level as appropriate to the event. Disasters that have a relatively small impact may result in the establishment of a local community recovery committee supported by recovery task groups made up of agencies and community representatives working in all or a few of the social, built, economic and natural environments. Disasters that are large have typically involved the establishment of taskforces or authorities at state/territory government level; with recovery task groups at that higher level (for management of social, built, economic and natural environment recovery) and community recovery committees (at local or regional level) with some form of community reference group or local community consultation groups.

Central to this is the recognition that local community participation is pivotal in the development and implementation of all recovery activities before and after an event.

Implementing effective recovery arrangements requires a well-coordinated approach across various levels of government in conjunction with the not-for-profit sector and the private sector. This section describes some of the structures that may be put into place in order to facilitate this coordination. The terms and descriptions used here are purposely broad and each disaster-affected community and coordinating body will need to work through the names, purpose, role and responsibility of any structure that emerges or is put in place.

Pre-event recovery structural arrangements

Recovery is an integrated part of the broad emergency management structures. Emergency management structures exist in every jurisdiction at local, regional, state, national and international levels.

Some communities have developed locally-based emergency planning committees or groups to proactively plan for emergencies within their area. Community based emergency management is a collaborative planning

and engagement approach that supports communities and organisations to develop safer, more resilient and sustainable communities. An ongoing process, it draws on collective local knowledge, expertise and resources to support people to work together and build on combined strengths. Collaborating to develop collective emergency management goals and solutions can help to build capacity and strengthen the relationships that will be drawn upon during good times and critical times of need, whether before, during and after an emergency (Emergency Management Victoria [EMV] 2016).

Emergency management structures need to accommodate and value the important and evolving work of existing community organisations and groups and programs that may emerge, and need to spontaneously undertake recovery work. They also need to include these groups in the pre-event emergency management structure. This is part of a comprehensive emergency risk management process.

Post-event recovery operational structures

Management of recovery services, information and resources should, whenever possible, occur at the local level—supported by specialist advice—and be based on a capacity building model. If the recovery needs exceed the capacity of the local level, regional, state, national and international support may be required.

Recovery is most effective when managed by either a recovery committee or an identified recovery coordinator (supported by a recovery committee). Recovery committees and coordinators assess the consequences of an event and coordinate the renewal, restoration and rehabilitation of the social, built, economic and natural environments of the affected community.

The first action is to develop a community recovery action plan to detail priorities, resources allocation and management. The recovery action plan provides the strategic direction and operational actions required to facilitate a successful recovery at all levels.

All events are dynamic and recovery structures should be based on needs reflected by the community.

Common management structures

Management structures that are commonly used in recovery are:

- recovery committees and sub committees
- recovery task groups or taskforce
- local community consultation groups.

Government, non-government and private industry involvement includes:

- national-level committees
- state/territory and local government committees
- interjurisdictional arrangements (for example, the Guidelines for Interstate Assistance (Community

Recovery) 2017, which was developed by the Social Recovery Reference Group]

- international arrangements
- public-private partnerships.

A range of not-for-profit organisations, community service providers and local organisations and groups are also integral to effective recovery, through contributing to the development of policy and practice, contributing local knowledge and experience, and particularly in the provision of a range of services throughout affected communities.

Recovery committees

A recovery committee is the strategic decision-making body for recovery. Recovery committees provide visible and strong leadership and have a key role in restoring confidence to the community through assessing the consequences of the emergency and coordinating activities to rebuild, restore and rehabilitate the social, built, economic and natural environments of the affected community. Importantly, recovery committees provide a mechanism for local leadership and community self-determination. As observed by Recovery Committee Chairs after the 2009 Victorian Bushfires (Victorian Bushfire Reconstruction and Recovery Authority [VBRRA] 2011):

Empowered local communities and local decision-making by local people should be a fundamental principle for any disaster recovery. There is ample research to support the view that locally led recovery is essential to a community's long-term recovery.

Lessons Learned by Community Recovery Committees of the Victorian Bushfires: Advice for Government 2011.

A recovery committee might comprise:

- members of the community
- personnel from agencies that are not specifically designated as members of emergency management committees
- local representatives of participating agencies (government, non-government and private sector) who have the ability to provide local knowledge and specific services or advice.

Tasks of the recovery committee may be to:

- help identify priorities, and guide decisions about resource allocation and management
- develop and maintain a recovery action plan/ community recovery plan with an agreed exit/ transition strategy for any participating agencies that are not located in the community or where their role is determined to be time limited

- monitor and coordinate the activities of agencies with responsibility for the delivery of services during recovery
- ensure that relevant stakeholders, especially the communities affected, are involved in the development and implementation of recovery objectives and strategies and are informed of progress made
- help to ensure equitable distribution of resources and manage competing priorities and agendas
- provide appropriate end-of-recovery reports to governments and other agencies
- ensure the recovery is in line with the national principles of disaster recovery and the relevant state/territory guidelines.

Many agencies that have committed resources to supporting community recovery after disaster will maintain a regular presence at recovery committee meetings. Out of necessity the membership of these committees can be large, the agenda high-level and the issues discussed, broad. The value of this type of meeting is to ensure that strategies are aligned, communication between organisations is effective, and as a mechanism to capture and address major issues facing the community.

However, given the breadth of issues, there can be some limitations of the recovery committee model in terms of coordinating the specific operational aspects of each of the recovery environments. In addition, there are also a range of community-based and not-for-profit organisations that have the ability to meaningfully contribute to recovery efforts but who may not be represented at the local recovery committee level.

To support their activities, recovery committees may form recovery task groups and community consultation/ recovery groups.

Recovery task groups or taskforce

Recovery sub-committees or task groups are groups of agencies with specific expertise in a particular recovery environment that are formed to provide specialised support and advice on particular operational or policy issues that require expertise and detailed consideration.

If the nature, size or complexity of the recovery operation is significant, recovery task groups may also be used to coordinate the activities of their member agencies, on behalf of the recovery committee.

Recovery task group membership is generally determined by the recovery committee or appropriate state/territory authority. Membership is flexible and can comprise representatives from:

- government
- non-government organisations
- businesses and community groups/individuals from the affected area.

Terms of reference are based on need at the time of the event, what emerges after the immediate crisis, the

context of the community and its needs, and anything else that the recovery committee determines is relevant.

Local community consultation groups

Local community consultation/recovery groups are usually established to enable members of the local community to meet and provide input and guidance to the recovery process.

Local community consultation groups might comprise:

- people affected by the event
- representatives from local organisations, and
- elected representatives of the community.

Local community consultation groups are usually facilitated and supported by the recovery coordinator or a member of the recovery committee.

The community consultation group:

- represents the community in the recovery process
- facilitates dialogue between the recovery committee/coordinator and the community so as to regularly advise on issues of concern
- works with the recovery committee/coordinator and task groups to tackle specific issues
- assists coordination of recovery initiatives undertaken in the community
- identifies people who may be vulnerable or marginalised. While they may be reluctant to be involved, it is important that their needs are considered. Community or social service organisations that work with vulnerable or marginalised people should be part of local community consultation/recovery groups.

Local and state/territory government committees

Local government plays a key role in recovery at the community level, based upon state/territory emergency management arrangements. The Australian Local Government Association also contributes at the national level to emergency management policy and planning, including recovery, as the national voice of local government.

The greater the impact of a disaster, the more support may be required, and so local recovery arrangements may be supported by regional, state or national agencies. Committees at the state and territory level guide and support recovery policy and planning, and also ensure resourcing of recovery activities. These committees generally comprise representatives of all levels of government and key agencies from the non-government sector, including those representing small business and social service organisations and community groups.

High-level management structures

One response to the breadth of the recovery process has been the emergence of new recovery management structures in the aftermath of specific events. In most instances these are high-level government structures ... While not a new phenomenon, these structures appear to be more prevalent as various jurisdictions promote a whole-of-government approach to recovery, particularly for large-scale events. These high-level structures are often able to focus the attention of government and the wider community on the issues of those affected by an emergency. They may also be able to influence decisions on a wide variety of issues, ranging from redevelopment of infrastructure to the development of tourism strategies in the areas affected.

The fact that these high-level management structures are generally not recognised in existing recovery arrangements can lead to a period of uncertainty, with a lack of clarity regarding responsibilities or relationships between these high-level structures and the normal recovery management system. It is critical that the affected community balances this approach with high-level involvement and ownership of the management of the recovery process. This may best be achieved through local leadership of any recovery process.

A further consideration in the use of taskforces and high-profile leadership of recovery is the impact of their withdrawal at the point perceived to be the end of the recovery process. This is a critical point in any recovery process and has proven to be smoothest when services have been provided through a framework of local involvement and utilisation of existing structures from the outset.

Coghlan 2004.

National-level committees

At the national level, committees exist to guide and support strategic recovery policy and planning. The Australia New Zealand Emergency Management Committee (ANZEMC) is the highest national level committee responsible for emergency management. ANZEMC oversees the national agenda in emergency management, including the development of national priorities, planning, policies and practice. The Community Outcomes and Recovery Subcommittee (CORS) is a subcommittee under ANZEMC that oversees recovery and community engagement planning, policy and projects, and planning at a national level. CORS comprises representatives from each of the state and territory governments, together with representation from the Australian Government and the Australian Red Cross (in an auxiliary role). This subcommittee plays a significant role in shaping the recovery agenda in Australia.

The Mitigation and Risk Subcommittee of ANZEMC (MaRS) informs national disaster risk reduction, risk management and risk measurement policies and capability. Both CORS and MaRS influence ANZEMC's national emergency management priorities.

Other committees that support recovery in Australia include the:

- Australian Government Disaster Recovery Committee
- Australian Government Disaster and Climate Resilience Reference Group—consisting of Australian Government agencies who are involved in emergency management
- Australian Health Protection Principal Committee—oversees national health emergencies and risks. This encompasses mass casualty incidents, acts of terrorism, and the health impacts of natural disasters
- Social Recovery Reference Group
- National Counter Terrorism Committee Recovery Policy Working Group
- National Biosecurity Committee—oversees Australia's biosecurity emergency preparedness, response and initial recovery arrangements.

Agreements for Commonwealth support during an emergency are currently provided in the *Australian Government Disaster Response Plan (COMDISPLAN)* and *Defence Assistance to the Civil Community (DACC)* arrangements. The Australian Defence Force has been used where disasters are large in scale and impact. Coordinated through the Department of Home Affairs Emergency Management Australia, deployment of the Australian Defence Force has occurred for disaster relief, humanitarian assistance and logistical support. Assistance provided under DACC provisions are managed using COMDISPLAN arrangements.

The provision of DACC assistance is underpinned by a set of principles that are considered each time a request is made to the Commonwealth, and is based on the Commonwealth being satisfied that the jurisdiction's resources and capability are likely to be inadequate and/or exhausted in response/ community recovery operations (that is, assistance under DACC is the exception, not the rule). Assistance under DACC is classified in six categories and is either for emergency (Categories 1–3) or non-emergency situations (Categories 4–6). Generally, any requests for Commonwealth assistance should focus on the outcome for which the jurisdiction is seeking assistance. The relevant Australian Government agency will identify the appropriate arrangement(s) that apply.

There are also plans in place for offshore events that impact Australian residents and that may require repatriation. The Australian Government (on the approval of Department of Foreign Affairs and Trade) will coordinate the repatriation of affected residents into a jurisdiction, using existing jurisdictional infrastructure, personnel and arrangements.

The plans outlining the arrangements for repatriation are the *Australian Government Plan for the Reception of Australian Citizens and Approved Foreign Nationals Evacuated from Overseas (AUSRECEPLAN)* and the *National Response Plan for Mass Casualty Incidents Involving Australians Overseas (OSMASSCASPLAN)*.

International arrangements

There are also plans in place for offshore events that affect Australian residents and require their repatriation. Existing structures are used at a state/territory level, with coordination and assistance from the Australian Government (involving different departments, depending on the event; for example, Department of Foreign Affairs and Trade). These events often involve dispersed communities and require methods of maintaining communication among affected people. Examples of events include the Bali bombings in 2002 and the 2004 Indian Ocean tsunami.

One arrangement is the *Australian Government Plan for the Reception of Australian Citizens and Approved Foreign Nationals Evacuated from Overseas (AUSRECEPLAN 2016)*. The AUSRECEPLAN outlines the arrangements for the reception into Australia of Australian citizens and permanent residents, and their immediate dependents, and approved foreign nationals evacuated from overseas.

The Bali bombings in 2002, in which 88 Australians were killed and many injured, were the catalyst for the development of arrangements such as the:

- *National Response Plan for Mass Casualty Incidents Involving Australians Overseas (OSMASSCASPLAN)*, which provides an agreed national framework for government-managed operations in response to mass casualty events involving Australians overseas
- *Australian Mass Casualty Burn Disaster Plan (AUSBURNPLAN)*, which details the response and recovery arrangements for an incident resulting in mass casualties with burns.

These national plans interface with state and territory emergency management plans and local recovery operational plans.

The Australian Humanitarian Partnership (AHP) is a five-year (2017–2021) partnership between the Australian Government and Australian NGOs. The AHP will deliver more effective, innovative and collaborative humanitarian assistance by allowing Australia to use the networks and access of Australian NGOs to respond to natural disasters and protracted crises in our region and beyond.

Public-private partnerships

Government is not the only provider of recovery services. Public-private partnerships are integral to recovery planning and management. The private sector plays a critical role in building and sustaining community resilience. It is embedded in the affected community in the form of electricity providers, insurance companies,

the banking sector, telecommunications, local media, retail outlets, private physical and mental health providers, private education providers, major employers and so on. It is important to engage these providers to support whole-of-community recovery, and to ensure that communities can have realistic expectations of the work to be undertaken and timelines for restoring essential services and/or the provision of access to temporary service, such as telecommunications.

Financial assistance—public appeal funds

Thought should be given to the scale and impact of a disaster and other forms of available assistance prior to initiating public appeals. In recent years, some communities have become fatigued by numerous post-disaster appeals. Any appeal should support nationally agreed principles of disaster resilience and community recovery—including the empowerment of disaster-affected communities and the promotion of their long-term sustainable and holistic recovery from disasters, whilst operating within a charitable context.

It is recommended that communities wishing to assist people affected by a disaster make monetary donations rather than providing other forms of aid. Cash grants empower people affected by a disaster event to choose how they support their own recovery; they are easily targeted to meet immediate needs; and they are likely to stimulate the local economy. Monetary donations may also be eligible for tax deductions (refer to the Australian Tax Office's website for further information).

Other references/resources

Running Australian Disaster Relief Funds – Australian Taxation Office guidance www.ato.gov.au/non-profit/gifts-and-fundraising/in-detail/running-australian-disaster-relief-funds/

Australian Charities and Not-for-profits Commission (background on how charities work to support disaster relief) www.acnc.gov.au

National guidelines for managing donated goods www.dcsi.sa.gov.au/_data/assets/pdf_file/0004/1894/national-guidelines-for-managing-donated-goods.pdf

2.4.5 EFFECTIVE COMMUNICATION

Successful recovery is built on effective communication between the affected community and other partners. Recovery should:

- recognise that communication should be two-way, and that input and feedback should be encouraged
- ensure that information is accessible to audiences in diverse situations, addresses a variety of communication needs, and is provided through a range of communication channels and networks
- establish mechanisms for coordinated and consistent communications between all service providers, organisations and individuals and the community

- ensure that all communication is relevant, timely, clear, accurate, targeted, credible and consistent
- identify trusted sources of information and repeat key recovery messages to enable greater community confidence and receptivity.

Communicating in recovery

Good communication is a crucial foundation of recovery. There is much evidence to demonstrate that where communication is strong, recovery goes well. Conversely, there are also many examples of where poor communications have hampered recovery.

Recovery communications refers to the practice of sending, gathering, managing and evaluating information in the recovery stage following an emergency. Well-planned and well-executed public information campaigns are vital to community recovery. Recovery communication must be delivered in a compassionate and caring way given the rawness of emotions, post trauma (van Kessel, MacDougall & Gibbs 2015).

Communications in recovery should go beyond merely sending information, to forming a two-way dialogue with the community (see Figure 6). Effective communications provide a basis for important social processes such as bonding between individuals, groups and communities (Australian Red Cross 2010).

The social connectedness of communities is based on communication processes. During emergencies these communication channels can be limited, broken or disrupted. This may result in disaster-affected people receiving inaccurate or incomplete information, and feeling disconnected and isolated for extensive periods of time from their families and friends, existing community networks, and health and social services.

Employing effective communication is a key principle of disaster recovery, and is critical to facilitating community involvement and sustainable, evidence-based practice. Underpinning the delivery of all community-based recovery services is the need for an effective communications strategy and community engagement activities to facilitate two-way information flow. 'Communication' is the process and 'information' is the message being sent or received.

People will not tolerate being without the information they need. In the absence of accurate, trustworthy information they will actively seek it out through their own sources, and if they cannot obtain official information they will fill the gap with rumour and speculation. The informal community information systems should be recognised and catered for so that they do not confuse the situation and distort what is made available. These channels are a vital means of communicating with the community, and often people who do not trust or have access to official channels will rely on them for what they need. Rumours and speculation should be actively managed and understood as an important indicator of the community's need for information.

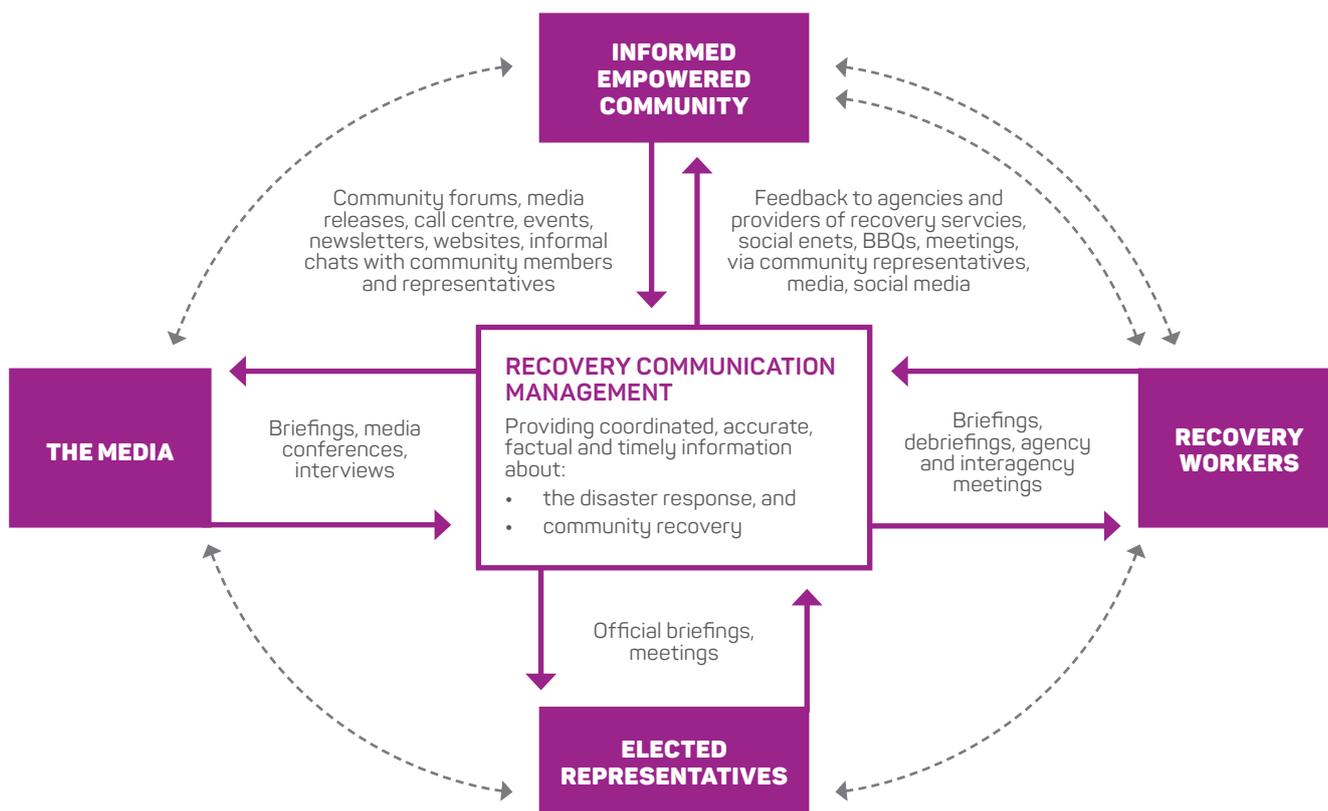


Figure 6 Recovery communication management—communicating with the various stakeholders through various means

The instant nature of social media tools, ‘citizen journalists’ and digital mediums is now well accepted. Platforms such as Facebook and Twitter can be used to effectively communicate with a wide and mobile sector of the community, especially when it comes to correcting rumours and speculation.

Communications should:

- begin as early as possible in an emergency
- include an event-specific website and/or other medium that show all available information and is updated regularly
- specifically address the needs and concerns of local communities
- be expressed in clear, consistent, plain English
- be tailored to local communities and delivered to the various groups within communities
- be provided in easy to understand formats with the aid of visual comparisons
- include practical information and advice.

Local community and social service organisations should be provided with relevant advice and information on an ongoing basis to enable them to inform clients who may be vulnerable, marginalised or hard to reach.

Communications management

Communications management in the recovery environment aims to provide timely, effective communication channels to gather, process and disseminate information relevant to the recovery of the affected community.

The management task is to identify what needs to be communicated, to whom and when, and to develop information gathering, processing and dissemination channels. The information that needs to be communicated in the recovery process depends upon the characteristics of the event, such as type, location, severity and effects on the community. For example, in a terrorist incident, and for some time after, communication may be affected/limited due to security concerns.

Communicating information in recovery provides the affected community with information about the availability of recovery services and plans, but it is also the basis for important social processes such as bonding between individuals, groups and communities. Effective communication engenders a sense of belonging and caring, and helps to provide a sense of control and predictability of events. It also provides validation that community concerns have been heard and are being acted upon.

Following the 2009 Victorian fires, Australian Red Cross developed an evidence-based *Communicating in Recovery* guide (Australian Red Cross 2010). The following provides a brief overview of the foundation principles for communicating in recovery. More information about the 'how' can be found in the guide.

Three rules for recovery communications (Australian Red Cross 2010)

Before communicating, ask yourself these three questions:

1. Is it relevant to the affected people?

People affected by disaster are often overwhelmed by huge amounts of information. Following an emergency, people want to know:

- what is happening with the recovery process
- what support is available
- what they need to do to qualify for support
- what they can do if they have questions, concerns or complaints.

If material does not address one of these four broad categories, ask yourself: does it actually need to be provided? As communication is a two-way process, asking affected people what they need will help ensure your communications are relevant.

2. Is it clear?

After an emergency, people often have trouble remembering or understanding information.

It is not appropriate to use jargon, overly complicated or technical language.

- Short, sharp amounts of relevant and practical information is best.
- Ensure there is a clear call to action in the communication (what does the person actually have to do?).
- Ensure that there are formats available for people with a sensory impairment, and/ or people from CALD backgrounds. When using text-based communications, ensure the font and size of the text is readable.

3. Is it targeted?

The method of communication you use should fit the audience. Know your audience and the best way to reach them.

Just because you can send information or use a certain communication channel doesn't necessarily mean you should. For example, if you want to alert women in a small community about a maternal health clinic opening, placing posters in the local chemist, doctor's surgery and shops may be more effective than simply updating your website.

Principles for communicating in recovery

- Public information, not public relations
 - Broadly speaking, the aim of public relations (PR) is to promote an organisation; the aim of public information is to channel information to the relevant audiences. The aim of all recovery communications should be to assist the community, not to promote an organisation.
- Respect people
 - When people are displaced or affected by an emergency, it is easy to only see their vulnerability. Communications should be respectful at all times. It is imperative that all communications recognise that affected people are rational beings able to make decisions for themselves. Communications materials that forget this principle can be viewed by the community as paternalistic and patronising.
- The right to know
 - Put the community at the same status as your manager or funding source. They have a right to know about the recovery process, your services and other organisations' programs.
- Acknowledge the impact
 - People affected by an emergency have potentially experienced a life-shaping event. They have a need to have their story told, to acknowledge and validate their experience.
- Build on local assets—Asset-Based Community Development (ABCD) (Kretzmann & McKnight, 1993)
 - ABCD refers to the practice of using and building upon existing local networks and strengths in the community. ABCD can also influence communications practices. Simply put, don't reinvent the wheel. For example, if a community already has a functioning and respected community radio network, use it to inform the community rather than developing new, and potentially ineffective, communication channels.
 - Following ABCD principles means you are working with the community rather than merely working alongside them. ABCD empowers the community to participate in their own recovery.
- Ask the community how they want to receive information
 - Consulting with the community and actually asking them how they want to receive information will increase the effectiveness of your communications and increase community participation in the recovery.
- Remember the 'unaffected'
 - Be careful not to focus solely on those directly affected in an emergency (for example, people whose properties were burned or those relocated due to a flood). Those not directly affected can often experience significant stress following an emergency. Care should be taken not to alienate or differentiate between the 'affected' and 'unaffected' in an emergency.

- Repeat information
 - After an emergency people often have trouble remembering information. People will be looking for information to assist their specific needs at that specific time, and ignoring everything else. What may be irrelevant to someone at week three may be the exact information they require at week five. Therefore, information must be repeated and re-communicated periodically throughout the recovery process.
 - An effective system of receiving and recording feedback from the community will help you know when to repeat your information.
- No 'spin'
 - People recovering from an emergency have specific requirements and want information solely to address their needs. Communications containing rhetoric or brand leveraging information is counterproductive, as it will damage your reputation and just add to the communications 'noise' in the community.

2.4.6 ACKNOWLEDGING AND BUILDING CAPACITY

Successful recovery recognises, supports and builds on individual, community and organisational capacity and resilience. Recovery should:

- assess capability and capacity requirements before, during and after a disaster
- support the development of self-reliance, preparation and disaster mitigation
- quickly identify and mobilise community skills, strengths and resources
- develop networks and partnerships to strengthen capacity, capability and resilience
- provide opportunities to share, transfer and develop knowledge, skills and training
- recognise that resources can be provided by a range of partners and from community networks
- acknowledge that existing resources may be stretched, and that additional resources may be sought
- understand that additional resources may only be available for a limited period, and that sustainability may need to be addressed
- understand when and how to step back, while continuing to support individuals and the community as a whole to be more self-sufficient when they are ready
- be evaluated to provide learning for future disaster and improved resilience.

Community members are, almost invariably, the first responders during an emergency. They will take actions to protect themselves, their families and their communities before, during and after the disaster. Contemporary recovery policies recognise the resilience

of communities and the importance of restoring control and self-determination through approaches that support 'community-led' recovery and 'asset-based community development'.

Such approaches acknowledge that disaster-affected people and communities will understand their own needs and capabilities better than those coming in from outside the community, and that they have a right to make choices and decisions about their own recovery. Rather than imposing recovery 'solutions', the goal of those working with recovering communities is to restore control and self-determination to those impacted, and to support and strengthen the resources, capacity and resilience already present within individuals and communities.

Predictors of capacity and capability

Community capacity and capability will be different from one community to another and may vary over time. It is also subject to the impacts and consequences of different types of disasters. It is important to consider these impacts and consequences when working to assess local capacity and capability. For example, where there has been loss of life or serious injury, the consequences may mean that pre-existing levels of capacity and capability are reduced, at least temporarily, whether through the loss of key people or the experience of trauma and grief.

However, it is critical to note that even the most profoundly impacted communities will still be able to actively contribute to their recovery on some level, whether this is through helping to mobilise and coordinate local activities or through the provision of important local knowledge, skills and experience.

Similar to community resilience, predictors of capacity and capability can include how well supported people feel within their community; the presence of strong community connections such as through community groups, local schools, faith-based organisations, etc., and whether people have access to the services and resources they need, including financial, health, housing, and social support. It stands to reason that where these predictors are absent, people's capability to actively participate may be reduced in comparison with another community, as their capacity is more taken up with managing everyday challenges.

Mobilising capacity and capability

One of the key issues for any community that has been affected by disaster can be the arrival of large numbers of response, relief and recovery workers, many of whom may be arriving in the community for the first time. Basing their assessment of community capacity, capability and resilience on the community as they find it 'post-disaster' is likely to be inaccurate and distorted due to the combined impact of physical damage, disruption, shock and grief.

In this setting, it can be easy to assume the non-existence of community capacity and self-determination.

However, recovery priorities and plans that are based on such a limited understanding of the community are likely to be a source of contention and frustration once the capacity of the community re-establishes. A 'ground zero' assessment of the community that conflates the post-disaster situation with pre-disaster levels of capacity will serve to define the community by its disaster, rather than by values, aspirations and priorities that shaped the day-to-day functioning of the community before.

The emergence of community-based emergency planning represents a valuable source of information about community capacity and capability. This process is a collaboration between the community and the emergency management sector to proactively plan to assess local risk and manage disaster consequences. These plans often incorporate a community profile that provides current, accurate information about community assets, strengths, risks and vulnerabilities. In the absence of this resource, recovery managers are well advised to take the time necessary to develop a basic community profile as an invaluable tool to support sustainable recovery outcomes and community resilience.

Another important strategy to engage with local capacity and capabilities is through the establishment of a community recovery committee (CRC). In contemporary disaster recovery settings, community recovery committees are commonly formed to provide community input to recovery planning, implementation and evaluation. CRCs are generally comprised of representatives from government agencies, local councils, welfare and charitable organisations, business associations or chambers of commerce, environmental and animal welfare groups, and direct representation from local residents and community groups.

A key responsibility for a CRC is to establish mechanisms through which consultation can be undertaken with the broader community about how recovery activities should be prioritised and undertaken. Ideas and input from the community will often be used to inform a recovery plan, particularly for medium to longer-term recovery actions and initiatives. In the interests of an inclusive, sustainable approach to recovery, having the 'right people at the table' who are well networked and have the capacity to honestly and accurately represent their community is vital. Effective terms of reference for the CRC that establish the scope, projected duration and areas of responsibility are also integral to success.

Recovery workers and volunteers

The capacity of the local community to withstand the effects of a disaster is significantly enhanced through effective collaboration with skilled recovery workers and volunteers. People working in recovery who can characterise and advocate for the interests of the community and the value of a community-led approach can significantly improve recovery outcomes.

It is important to note that recovery management requires intensive human resources over an extended

period and workers are engaged in stressful duties in disrupted circumstances. Workers may also be personally affected by the emergency event. It is necessary that staff, agency personnel and volunteers are provided with high levels of training, care and support. Consideration of issues relating to emergent organisations, sub-contracting work and spontaneous volunteers is necessary. The level of support must be extended to agency personnel and volunteers, not only to directly employed staff. Care should be taken to recognise that personnel continuing to deliver 'business-as-usual' agency services during the absence of their colleagues (who are delivering recovery services) may be under added stress.

The regular human resource management tasks continue to be needed; however, there will be a significant increase in selection, vetting, recruitment, rostering, travel arrangements, cost reimbursement, accommodation, and care and support. Although these functions are common to human resource managers, albeit lesser in intensity and in less disruptive circumstances, the care and support services for recovery workers need special consideration.

Section 3.4 Planning and programming examines human resource management in more detail. See also, Toolkit 2-1 Community recovery checklists – Checklist 4 Managing people for a list of the issues likely to affect workers, as well as the support aimed at their wellbeing and effectiveness.

Training

Many professional staff are not involved in disaster management in their day-to-day work. For such people to be able to contribute effectively in an emergency, it is important to include disaster management in routine training programs and/or organisational professional development.

Specialised courses for disaster management professionals are provided in Australia by government bodies, universities, regional organisations, non-government organisations and international organisations. Courses specific to community recovery are provided through the National Centre for Emergency Management Studies (NCEMS) and by some state/territory governments, non-government organisations and universities.

Exercising

Exercising offers multiple agencies the opportunity to work together to fine-tune their disaster management response and/or recovery systems. There are numerous ways to conduct exercises. When developing an exercise there are a number of considerations (such as the

exercise objectives) that will determine the exercise design (for example, discussion or role-playing), the exercise development process (involving agencies in the design), the agencies that will take part, and the review and evaluation (to capture and learn from the experience). One benefit of an exercise is the development of relationships between people who will work closely together in a time-compressed environment requiring trust and flexibility in the event of a disaster.

Succession planning

During an emergency key recovery staff may be unavailable for deployment, and succession plans should be in place for this. Colleagues might also be affected by the emergency as part of the affected communities—hence, staff with designated roles may be unavailable to fulfil their roles. Designated staff might also be on leave.

Agencies can assist their staff to manage during disasters by:

- including community recovery work in their broad strategic or work plans
- ensuring that involvement in community recovery activities is included in job descriptions for relevant positions
- providing basic awareness in orientation and training plans for all staff
- training a pool of staff in detailed designated community recovery roles
- ensuring that several staff members are able to implement the agencies' designated roles to allow for staff who are absent or affected during disasters
- supporting staff who may wish to develop their disaster management skills through formal training
- establishing effective debriefing processes during and following involvement in disasters.

2.4.7 CONTINUOUS IMPROVEMENT THROUGH MONITORING AND EVALUATION

Continuous monitoring, review and evaluation should examine the processes, timelines and outcomes of recovery operations. Continuous monitoring and review should be ongoing processes throughout recovery, and evaluation might be viewed as an 'end report'.

The National Monitoring and Evaluation Framework 2016 observes:

To date, evaluations of disaster recovery efforts have been haphazard. When they have been conducted, they have tended to focus on the process of disaster recovery, rather than outcomes, and are not consistent in their broad approaches.

A Monitoring and Evaluation (M&E) Framework will ensure that disaster recovery programs can be evaluated for their effectiveness, and that these evaluations are undertaken in a consistent way. By improving the quality of disaster recovery evaluations, governments will be able to improve subsequent disaster recovery programs, to the extent that the learnings from these evaluations are incorporated into program design and delivery. ANZSOG 2016.

The National Monitoring and Evaluation Framework (NM&E Framework) is a national tool for recording the effectiveness of disaster recovery programs, enabling lessons learnt to be shared in a systematic and consistent way.

The NM&E Framework:

- provides a common understanding of the meaning of 'disaster recovery'
- supports the development of monitoring and evaluation plans for recovery interventions
- articulates nationally developed, common, high-level recovery outcomes for recovery
- provides a suite of indicators which could be used to monitor and measure the effectiveness of recovery interventions.

The NM&E Framework will assist in strengthening a national understanding of the types of recovery interventions which support the development of resilient and sustainable communities.

Things to consider when planning, monitoring, review or evaluation

In planning monitoring, review or evaluation of recovery management, the following areas should be considered:

- contextual issues—timing, local and other politics, resource availability, nature and scope of the disaster, sensitivity
- desired outcomes—what are/were the aims of particular strategies?
- strategies—use and balance of formal/informal approaches
- performance indicators—what are they and how might they be measured?
- data sources—diaries/information records/activity sheets can be used for multiple purposes (handovers, mapping the impact of interventions, reflective practice)
- findings and gaps/outcomes achieved (what worked and what didn't)
- recommendations—whom are they for? what is their purpose?

The characteristics of a disaster or emergency mean that any review and evaluation undertaken is different from a normal, routine evaluation. Handmer & Dovers

(2013) advise that monitoring and evaluation will not be optimally effective without the following characteristics:

- explicit recognition of uncertainty
- measurable policy goals (process or desired outcome or both)
- basic routine data capture
- coordination of roles and activities across agencies, private industry and non-government organisations
- a clear mandate for monitoring and evaluation activities
- information made widely available to all stakeholders.

The outcomes of monitoring, review and evaluation should be transparent and communicated to the community and to all agencies involved in the recovery process. There is a growing emphasis around the world on social justice/equity issues and the importance of proper governance, and this can be demonstrated through sound evaluation and reporting processes (Labadie 2008).

A wealth of information exists regarding review and evaluation models and processes. In addition to the Monitoring and Evaluation Framework for Disaster Recovery Programs (2016) mentioned previously, the *National Principles for Disaster Recovery* offer process goals that could potentially be considered for a recovery evaluation process. Other examples of frameworks and tools are included in the toolkits that accompany this handbook.

Continuous monitoring

Monitoring involves the continuous observation of the recovery program's progress. Community needs and recovery service processes should be continuous and dynamic. They should recognise and respond to the changing service needs of the community and the changing capacity of the community to meet its needs.

Review

Review is an essential part of recovery management to improve the process and outcomes of recovery practices. It also informs communities and displays transparency and accountability.

A review is a comprehensive examination of progress and is carried out by a member of operational management or the recovery management agency. The potentially long duration of recovery programs can result in a number of reviews. The process also enables facilitation of the adaptive change process with communities (see Community-led recovery).

Evaluation

Evaluation is an independent, objective and thorough examination of a policy, program, support service or emergency operation, including its design, implementation and impact (IFRC 2008).

Evaluation in emergency management is an emerging capability in Australia: '... in the emergencies area and elsewhere in public policy, careful harvesting of insights from past and current experience and purposeful application of the knowledge thus gained to adapt and improve capacities are too often not evident' (Handmer & Dovers 2013).

The purpose of evaluation is important to define at the outset. Evaluation may centre around process, efficiency, effort or (more specific to the disaster context) performance and effectiveness (Handmer & Dovers 2013). Judgment about the appropriateness of the services delivered is also important.

In recovery management the process is often considered as important as the outcomes. In this context, evaluation is useful:

- as a management process to monitor performance, assess the value of existing strategies, determine the need for new strategies and, if necessary, to reposition aspects in a changing environment
- as a learning tool for those who have performed the task, as well as those new to a position
- as a validation of what has been undertaken
- to understand and assess the timing and duration of activities and programs, and of recovery overall
- to give credibility to disaster recovery processes and methodologies
- for obtaining continued funding
- for gaining new funding.

The sources of feedback and documentation used to evaluate the delivery of community recovery services include:

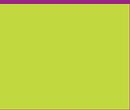
- operational records
- demographic data and community profiles
- financial records
- health records
- historical records
- incident reports and damage assessments
- media reports
- personal accounts, daily/weekly logs and file notes
- service requests
- debriefs, briefings.

Given the nature of recovery management activity there is a need for qualitative, as well as quantitative, measures. One difficulty is in developing comparative data on what might have happened if a particular strategy/process had not been put in place. However, in the long-term the NM&E Framework will assist in developing a sense of the types of outcomes that can be

achieved from particular strategies and the result if an alternative strategy or no strategy is chosen.

Revisiting the outcomes is important in measuring the process. Consequently, the process has to be monitored regularly and the desired outcomes may change over time.

For more information about evaluation processes used in recovery management, see Toolkit 2-1 Community recovery checklists – Checklist 5 Community recovery evaluation.



Part 3 Planning for recovery

A critical aspect of emergency management is planning for recovery—in particular, planning for a whole of community approach to mitigate the effects and manage the consequences of an emergency or disaster.

The *National Strategy for Disaster Resilience* observes:

In the past, standard emergency management planning emphasised the documentation of roles, responsibilities and procedures. Increasingly, these plans consider arrangements for prevention, mitigation, preparedness and recovery, as well as response. Building upon our existing emergency planning arrangements, we need to focus more on action-based resilience planning to strengthen local capacity and capability, with greater emphasis on community engagement and a better understanding of the diversity, needs, strengths and vulnerabilities within communities. Disasters do not impact everyone in the same way, and it is often our vulnerable community members who are the hardest hit.

To increase disaster resilience, emergency management planning should be based on risk and be integrated with strategic planning of government and communities. It should consider risks and risk treatments across the social, built, economic and natural environments.

National Strategy for Disaster Resilience 2011.

3.1 Effects of disasters on communities

As noted, the range of community impacts of disasters can be described across the social, built, economic and natural environments. Figure 7 shows how all four environments constitute community. The four environments are separated for the purpose of functional responsibilities within recovery, however, in terms of how communities operate the four environments are intrinsically linked. When working with communities in recovery, each environment should be considered and coordinated with all others in a systems approach that recognises their interconnection. The importance of supporting the social functioning of a community is fundamental to the implementation of



Figure 7 The four environments—integral aspects of community recovery

recovery activities in all other environments, and to supporting the foundations of community sustainability.

This focus on the impact of disasters upon communities recognises that human beings do not function separately but in interdependent social groups. Individuals are fundamentally connected to their community in conscious and subconscious ways through collective economic, emotional, physical, spiritual, environmental and cultural patterns and traditions.

While the impact upon individuals and households needs to be understood and addressed, it is equally important to understand the impact and disruption to the social capital and connectedness of communities and the need to support the restoration of communities to a functioning state.

3.1.1 EFFECTS ON THE SOCIAL ENVIRONMENT

Social wellbeing results when the essential needs of the population are met. Generally speaking, social wellbeing occurs when income levels are sufficient to cover basic needs, where there is easy access to social, medical and educational services, and where people are treated with dignity and consideration.

Many attempts have been made to quantify social wellbeing. Seven indicators that may be used include:

- wealth
- employment
- amenity
- health
- social issues
- social belonging
- recreation and leisure.

Disasters can impact upon all these aspects of social wellbeing and can degrade quality of life and undermine the social cohesion of the community.

Impacts on the social environment include the disappearance of much of what was once considered routine—from simple, everyday activities to the loss of the familiar communication networks and connections, such as walking down the street and talking to people. These impacts are often intangible.

Social structures such as faith groups, educational facilities, networks and relationships, childcare, service clubs, non-government organisations, neighbourhood centres and health facilities can all be disrupted. People may become dispersed, either temporarily or permanently, by the impacts of the disaster.

3.1.2 EFFECTS ON THE BUILT ENVIRONMENT

The effects of a disaster on the built environment depend on the disaster type, scale, magnitude, duration and location of impact.

Within the built environment, impacts may include:

- loss of essential services, power, water, food, fuel, sewerage, gas, communications, internet
- loss of community infrastructure; for example, public buildings, schools, hospitals, iconic buildings
- loss/damage/disruption of transport services (for example, roads, air, marine and rail transport infrastructure, facilities and assets), which has a flow-on effect on the movement of people and goods, and on transport and traffic management on transport networks (for example, road and rail closures, detours, vehicle permits and regulatory services, passenger transport, road traffic management systems)
- loss of property (residential, rural, industrial, public)
- subsequent changes to planning and building regulations or planning scheme overlays as a consequence of the disaster.

3.1.3 EFFECTS ON THE ECONOMIC ENVIRONMENT

The effects of disaster on the economic environment can be classified in terms of direct and indirect impacts—that is, those that are tangible and can normally have a dollar value easily assigned, and those that are intangible.

Impacts on the economic environment may include:

- loss of personal income
- damage to business premises
- loss of tourism activities
- loss of workforce
- loss of productive land (Emergency Management Victoria 2013).

3.1.4 EFFECTS ON THE NATURAL ENVIRONMENT

The effects of disaster on the natural environment that impact on the community may be a result of the disaster or they may be a secondary impact or flow on from the disaster response or recovery process. Examples include air quality, water quality, land degradation and contamination and impacts on national parks and cultural and heritage sites (Emergency Management Victoria 2013).

Impacts on the natural environment that have flow-on effects to the community may occur in relation to:

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

The effects of disasters are inter-related and may impact on all aspects of a community. For example, the Beyond Bushfires study found that people who reported feeling connected to the natural environment had better outcomes on a wide range of psychosocial measures (Gibbs *et al.* 2016). The degree to which sustainable

community recovery can be achieved depends on the disaster and on existing community and individual resilience and vulnerability. In creating a heightened awareness of the risks communities face, disasters afford communities the opportunity to adapt and reduce their exposure to potential future risks.

More detailed information about the impacts of emergencies and disasters on the social, built, economic and natural environments is included in Part 4: Recovery environments.

3.2 Recovery plans and processes

The objective of recovery management is to provide effective and efficient coordination and delivery of programs, services and activities to support and expedite the recovery of affected individuals and communities. Recovery management encompasses the measures taken before, during and after any event.

Sustainable disaster recovery is the ... process of restoring, rebuilding, and reshaping the physical, social, economic and natural environment through pre-event planning and post-event actions.

This orientation focuses on processes. It sees sustainable disaster recovery as a holistic, non-linear series of actions taken by community-level social units and systems that result in alterations to the built, social, economic, and natural environments

Both pre-event and post-event actions are part of the process, including the role that state and federal organisations, non-profits, emergency groups, corporations, and others play in local recovery.

Smith & Wenger 2006.

This section provides an overview of the essential elements of the supporting processes and systems, including preparedness and planning, the operationalising of community recovery, management structures and human resources in the Australian recovery environment.

The information on recovery management in this section is intended for all personnel involved in emergency management, not only recovery workers and managers. It is necessary for all involved in emergency management to have knowledge of recovery management functions to achieve the necessary coordination between agencies, services, workers and managers.

3.2.1 PREPAREDNESS AND PLANNING

Community recovery incorporates both preparedness and planning activities, including the two dimensions of recovery planning (pre-event and post-event community recovery plans), the planning process and business continuity.

Before embarking on preparedness activities and the development of recovery plans, it is important to consider the purpose of recovery and the involvement of community at all stages.

Preparedness

Tasks for recovery preparedness include planning activities such as the development of pre-event recovery plans and those tasks necessary to activate those plans when required.

The tasks required to maintain preparedness for activation involve:

- participation in education campaigns and community conversations
- development of community profiles to determine the community demography, capacity, and potential risk areas if an emergency event was to occur
- liaison with local, regional and/or state emergency management authorities
- liaison with recovery committees and agencies
- maintenance of preparedness for activation of recovery agency personnel (both government and non-government) and systems, sometimes called 'operational readiness'; for example, preparation of a 'dark' (offline) website including all relevant information generally needed by a recovering community (telephone numbers for helpline, call centre, medical services, Lifeline, insurance, Department of Human Services payments and services, veterinary services etc.) that can go live in an emergency, with the addition of relevant specific content
- updating and maintaining recovery plans
- education and training of paid staff within the organisation and engaging with multiple agencies
- exercising recovery plans
- updating contact lists
- identification and training of voluntary workers
- provision of assets to be deployed in an emergency event, such as mobile phones, satellite phones, laptop computers, printers, telecommunication connections
- development and maintenance of potential contractual arrangements for service provision
- regular maintenance and testing of emergency assets
- facilitating community preparedness—encouraging communities, individuals and households to plan.

Recovery planning

Planning for the recovery of affected communities requires participation by the various agencies, organisations and the community in the development of recovery plans. Pre-event planning is necessary for each operational level—local, regional and state/territory—and post-event planning also includes both strategic and operational plans.

The planning process

Planning for recovery is integral to preparing for all emergencies and is not simply a post-emergency consideration. The planning process demonstrates engagement with the community and requires forward thinking, communication and consultation.

The planning process:

- communicates intent
- clarifies roles and responsibilities
- provides consistency and a shared language
- engenders confidence
- allows an appreciation of the potential magnitude of recovery needs and the resources required to address/meet those needs
- meets statutory obligations
- fosters recovery practices that are community-focused and consequence driven-across the four recovery environments (social, built, economic and natural)
- anticipates issues likely to arise, such as media interest and the need for website maintenance and monitoring.

Dimensions to recovery planning

There are two distinct but interdependent dimensions to recovery planning:

- pre-event plans—completed as part of ‘all hazards’ emergency planning, these plans detail what can be known and/or predicted in advance about community and organisational capacity, risks and hazards, and likely impacts of an emergency or disaster. They are a vital precursor to:
 - community recovery plans—completed post-event, these plans should build on the actions identified in the pre-event plan as well as tailoring specifically for actions and activities relevant to location, type and scale of the event that has occurred, whether flood, fire, storm, terrorist event, etc.

Pre-event plans are part of the emergency risk management process and interface with other emergency plans. They can be prepared at various levels (for example, state, regional, local council, local community) and provide a broad framework and governance for recovery. They establish and strengthen relationships between individuals, communities and organisations that will play a role in the event of an

emergency. Planning must involve the community from the outset.

Planning arrangements need to be conscious of the responsibility to support recovery activities for emergencies that occur outside their boundaries (for example, in another municipal district or region, interstate or overseas). Plans should include provisions to ensure equity of emergency recovery services in such circumstances.

A checklist for undertaking pre-event recovery planning is provided in Toolkit 2-1 Community recovery checklists – Checklist 6 Undertake pre-event recovery planning.

Community recovery plans are tailored specifically for activities following an event. These plans are generally operational plans developed for each event and define strategies and interventions specific to the affected communities. The plans aim to establish and communicate the immediate, medium and long-term goals for recovery. The plans need to connect with the pre-event plans and consider the impact of the event, the location, community demography and the vulnerabilities and capacities of the community. In addition, the existing social networks prior to the event, the culture and the four recovery environments identified through pre-event planning need to be considered.

Community participation in the post-event planning process is critical to identify the specific activities that are required by the community to re-establish community systems and ensure the outcomes of the recovery process are community driven. The community can contribute to planning in a variety of ways, including formal and informal feedback, representation on planning/recovery committees and attendance at meetings. The spontaneous public forums that emerge after an event are usually indicative of community concerns and can also be an important source of community knowledge and input.

3.2.2 PREPARING PRE-EVENT AND RECOVERY PLANS

There are many ways to prepare recovery plans. Pre-event and post-event (community recovery) plans require different approaches and timeframes. Plans are living documents and are subject to periodic review and update. Plans are written by the designated agencies/committees with input from all agencies responsible for providing specific recovery services and from the community. Each plan will have clear lines that link the plan to the relevant authorising process. Recovery plans are based on normal management strategies so that agency recovery roles require only minor deviation from their normal functions.

Pre-event plans should include:

- formalised arrangements for effectively managing recovery, including accountability and responsibility
- identification of all strategic partnerships in the recovery process
- agreed arrangements, roles (responsibilities and tasks) and an understanding of capacity of the partner agencies in coordination, logistics, post-event planning, communications and service operations
- clear scope—describe what's in and what's out of scope of the role and what the plan is trying to cover (negotiation with other stakeholders is a necessary step in understanding how the recovery role fits with the response and mitigation roles)
- details of organisational networks and structures appropriate to recovery, including contacts and resources, thereby involving all agencies with a role to play in the recovery process
- clear and agreed goals and objectives for each stage of the recovery process; that is, the short, medium and long-term goals and objectives
- escalation protocols to ensure that there is capability to scale up if warranted (this may include the inclusion of experts in the planning process)
- consultation, enabling community participation
- resourcing, which considers arrangements that may be appropriate in various circumstances
- regularly testing and exercising the arrangements—this offers an excellent opportunity for agencies and community organisations to consolidate their own roles and responsibilities, to improve familiarity with the roles and responsibilities of other agencies and organisations, and to develop constructive networks in a particular community, district/region or at state/territory level; it also enables assessment of community recovery capability
- regular review and amendment of the plan where required—this is often an annual process and considerations could include changes to population/demography, community capacity and vulnerabilities, service delivery capacity, scope and likelihood of potential disaster events, recovery committee membership, and any changes to roles and responsibilities: aligning reviews with planned training exercises can help identify potential amendments (amendments that impact on operational integrity need to be approved and aligned with other relevant local/district/regional/ state/territory plans)
- post-event evaluation data that will potentially inform a review of the plan
- the authority and plan endorsement, which may include multi-level approval and signing by Chairs of appropriate committees, including those representing the community.

Post-event plans are sometimes referred to as operational or tactical community recovery plans. These plans should link with and build on the pre-event plans and should consider:

- short, medium and long-term recovery issues
- nature and scale of the event
- demographics and characteristics of the affected community pre- and post-event
- existing community values, goals and expectations
- issues identified in the impact and needs assessments
- emerging issues
- internal resources available
- external support
- mitigation for future events
- reduction of future risk and loss
- opportunities to improve community functioning.

A good plan provides a balance between fostering community resilience and maintaining the provision of community-based services that support recovery and meet community needs. Various recovery planning formats and examples are available on emergency management websites in states and territories and on local government sites.

Although there are often plans in place at local/regional/district and state/territory levels, recovery from a disaster should be guided by the recovery manager and local community. The establishment of sound processes ensures the integrity of recovery actions and outcomes and supports trust and social cohesion.

Community recovery plans should also document processes and measures to ensure:

- accountability towards disaster-affected people (beneficiaries), as well as donors, taxpayers and corporate supporters
- recovery activities are equitable (including a formalised and understood complaints procedure)
- transparency, accessibility and delivery through a community-based methodology.

It is important to be accountable for many reasons, including to:

- help build trust with the community
- ensure that the most vulnerable people are reached with the right assistance in a manner that is respectful and dignified
- contribute to peoples' understanding about how they can influence recovery actions that involve their individual situations
- ensure people are satisfied with the quality of the assistance they receive
- contribute to empowering communities and strengthening partnerships
- prevent fraud, exploitation and misuse of assistance
- minimise any risks introduced by recovery programming.

Community recovery plans are informed by community needs assessments and lead to the development of specific recovery activities that have responsibilities

negotiated with the key partners, and measurable outcomes and timelines associated with them.

Business continuity planning

Some organisations deliver community-based services that support recovery as part of core business, (e.g. local governments, hospitals and community health services, not-for-profit welfare organisations or neighbourhood houses). These services are simply carried out in a different environment when an emergency or disaster occurs. Where they exist, business continuity arrangements of organisations and communities can support recovery efforts and should, wherever possible, seamlessly interface with recovery arrangements. Conversely, community-based services and activities can support business continuity by supplementing normal business levels during a recovery event. However, care must be taken that this does not impact on existing service delivery capability and capacity. Use of technology such as cloud-based data storage services has become highly advanced and offers enhanced business continuity in relation to essential data.

3.2.3 OTHER PLANNING ACTIVITIES

A number of specific plans may exist as sub-plans to the community recovery plan. The purpose of sub-plans is to supplement and support a comprehensive recovery, and these could include:

- communications—to ensure collective responses remain coordinated, and communication and linkages between all stakeholders are clearly defined and describe the means and modes for communication with those affected (see Australian Red Cross *Communicating in Recovery* 2010)
- community development plans
- activation of recovery functions including formal handover from response to recovery
- exit/closure/transition to renewal—planned withdrawal of recovery services linking back to mainstream service and the restoration of community functioning
- other specific functional arrangements
- standard operating procedures
- household plans such as the Australian Red Cross (2016) REDiPlan, which can assist with pre-event planning.

A strong recovery process encourages individuals, households and communities to consider the consequences of events and requires a level of capacity building. Households and communities are the cornerstone, and those that plan for disaster reduce the need for extraordinary recovery services (see also Part 2 Community development and Community resilience.

3.3 Operationalising community recovery

Recovery activities assist the affected community towards management of its own recovery. They should be provided in a coordinated way to support disaster-affected communities in the restoration of their social, economic, and physical and environmental wellbeing.

The services provided depend on an assessment of the needs of the disaster-affected community. Depending on the dynamics and resilience within the community, recovery timeframes will differ (for example, urban versus rural or remote communities, the recovery may be protracted). The nature of the disaster (for example, a six-week inundation event causing isolation of communities or a half-hour hailstorm event) may also affect recovery timeframes.

This section provides an overview of recovery service providers, facilitators, and activities (including the transition of coordination from response to recovery, and from recovery services into mainstream service provision), and the project cycle (including the needs assessment process, post-disaster planning, implementing activities/services, continuous monitoring, and review and evaluation of services). The types of services that might be provided to the community across the four recovery environments are described in greater detail in Part 4: Recovery environments.

3.3.1 RECOVERY PROVIDERS

In many events, communities conduct their own spontaneous recovery, and this needs to be supported by a range of partnerships between government agencies, non-government organisations and the private sector. Government is not the only provider of services and given that corporate organisations are becoming increasingly more involved in recovery, public-private partnerships are integral to recovery planning and management. The private sector is often embedded in the affected community; e.g. electricity providers, insurance companies, banking sector, telecommunications, local media, retail outlets, private health providers, private education providers and major employers. Similarly, the community sector is embedded in the affected community.

It is important to engage these providers to support whole-of-community recovery.

3.3.2 RECOVERY OVER TIME

The path to recovery is rarely 'smooth sailing' and does not proceed in an orderly, stage-like manner. Researchers have attempted to categorise recovery phases (National Research Council of the National Academies 2006, pp. 149–50). It can be helpful to think very broadly about the recovery of communities and the activities that need resourcing over the duration; however, these categories should be used with caution

because they might mask both how phases overlap and how recovery proceeds differently for different communities, social groups and individuals. Needs can emerge over time—often years after an event. Keeping this in mind, as well as the recognition that every emergency has different impacts, community recovery activities can generally be categorised into five broad phases:

- activation
- relief—typically immediate
- early recovery
- medium to longer-term recovery
- transition from recovery to mainstream services/ongoing community development, renewal and regeneration.

In addition to these stages, planning/preparedness prior to an event is also a critical aspect of community recovery.

Community and individual needs vary prior to and post-disaster, and a community's recovery is a dynamic process—so adaptive management/governance, monitoring, review and adaptation of programs is essential.

Activation

Activation occurs in many ways depending on the nature of the event and statutory obligations or responsibilities and may be formal or informal. Commonly, activation occurs if a community has been impacted significantly; for example, if people have died or been injured, or if the community is disrupted (whether economic, social, built or natural environments or a combination of these).

Relief

Communities affected by disaster may require immediate relief such as food, water, shelter/accommodation, medical assistance and cash. Relief is provided by different agencies in different jurisdictions. Refer to your state/territory or local government emergency management arrangements for details. The length of time a community spends in the relief phase will vary based on the type and scale of the disaster, and the pre-existing plans, capacity and resources of the community.

When requested through the Australian Government, the Australian Defence Force may provide assistance in the relief and recovery phases through the Defence Assistance to the Civil Community (DACC) agreement, which is part of the Australian Government Disaster Response Plan (COMDISPLAN). As an example of this assistance, in the Queensland floods in 2011, about 1600 defence personnel helped with search and rescue and recovery in the Lockyer Valley and with the initial clean-up and recovery in Brisbane and Ipswich. Helicopters assisted in search and rescue activities and in transporting essential items and supplies.

Early recovery

In the early recovery phase, the affected community will have access to temporary or transitional shelter, services and supplies. Community routines will begin to re-emerge with children returning to school (albeit in temporary facilities) and people returning to work. Businesses will re-open, and again, may operate from temporary locations or be co-located with businesses that are less impacted. The restoration of critical infrastructure such as electricity, gas and telecommunications will be underway.

Medium to long-term recovery

The medium to long-term phase of recovery is characterised by the repair of the built environment—houses, community facilities, road, bridges, etc., and by the restoration of community connections and relationships, networks and social structures. Temporary arrangements established in the relief and early recovery stages will be replaced by, or evolve into more permanent, ongoing arrangements that reflect and support community priorities.

Transition

There is considerable overlap between the phases of recovery, given the complexity and the range of impacts and pre-existing situations that will exist in any community. The transition from one phase to another may occur quite quickly, for example, where a minor emergency situation has resolved, having had only a slight impact on the community. In other circumstances, the duration of each phase can last for weeks or months, and in the case of medium to long-term recovery, may continue for years. In these instances, the movement of the community through the various recovery stages is likely to be less clearly defined. However, the transition from response to recovery and finally, the return to a post-disaster state of community functioning are critical milestones that require understanding and effective planning.

For more information about how the phases of recovery intersect and the types of activities relating to each phase, see Figure 1 in Part 2.1 Disaster recovery and emergency management.

3.3.3 RECOVERY TRANSITION

Significant 'handovers' or transitions occur during:

- response to recovery
- recovery to mainstream/ongoing activities and services.

The response/recovery interface

Recovery begins at the same time as response. Response actions are usually conducted by an incident management team, working to an incident action plan. For an immediate or perhaps prolonged period, depending on the nature of the disaster and its impacts, response agencies will coordinate the response, and in some states and territories some relief, through the use of a central point for coordination, known variously as incident control centres (ICCs), emergency coordination centres (ECCs) or local disaster coordination centres (LDCCs). An ICC/ECC/LDCC is set up either prior to (for proactive monitoring) or immediately after a disaster has occurred. The designated (appropriate) emergency services agencies provide the coordinated provision of resources to minimise damage to life and property. A recovery liaison is usually present in the ICC/ECC/LDCC from the outset to communicate the 'state of play' to the recovery team/committee and its agency, and to enable effective decision-making and strategic planning.

The transition of overall coordination from response to recovery can vary between the different states and territories and is usually influenced by a number of considerations, including:

- the nature of the hazard/threat and whether there is a risk of a recurring threat
- secondary impacts, which may require the continuing role of response agencies and may result in a prolonged transition period
- the level of information and analysis about the known impacts, loss and damage
- considerations for the resources required to be activated for effective recovery arrangements (for example, in some situations the army has been activated to support start-up relief and recovery activities)
- the number of fatalities and injuries, and retrieval and identification of bodies (which may result in restricted access to some locations and communities).

Relief and recovery activities are undertaken concurrently, with the distinction between them primarily relating to the different functions, roles and responsibilities of key agencies.

These distinctions may not be apparent to the disaster-affected community. Therefore, there needs to be close operating procedures, communication and coordination for activities to appear seamless. Communication and coordination between agencies, service providers and the community is vital to achieve the best outcomes.

The transition from response to recovery requires:

- engaging the local community, as well as regional and national communities
- understanding the capacity of the impacted community, and identification of physical and social assets that may contribute to the recovery efforts
- establishing the recovery committee or other governance structures

- a clearly stated mission and purpose of recovery services that is communicated to the community and significant stakeholders
- consideration of the service methods that are best for the particular event
- consideration of how those services should be provided
- consideration of which people/agencies are best equipped to provide the necessary services
- consideration of how and when recovery services should be downscaled, transitioned to normal business or withdrawn.

When disasters occur the first requirement is immediate emergency relief to save lives, alleviate suffering, provide information, prevent outbreaks of disease and meet the basic emergency needs of the affected population, such as shelter, food, clean water and medical services.

Although recovery activities may be required to maintain the provision of relief services for some time, recovery goes beyond relief to restore local livelihoods, stimulate economies, rebuild physical infrastructure, strengthen institutions and invest in the health, wellbeing and social capital of disaster-affected communities.

Various functions cease to be coordinated by response agencies at various times (for example, the re-instatement of electricity or water supply), so the handover from response to recovery agency coordination will occur throughout the time that an ECC operates. This gradual shift can be an effective strategy to enable a smooth and productive transition. When the ECC closes, it conducts a handover to the committee that is coordinating recovery.

Recovery to mainstream services

If existing community services, organisations and agencies have been used within the relief and recovery phase, the transition and exit strategies will be more straightforward and direct. If additional recovery service systems have been constructed, then more careful planning for the transition is required.

Relief and recovery activities should be undertaken within the context of the pre-existing:

- socioeconomic disadvantages experienced within the community
- local community organisations, services and representative structures that are used for the provision of relief and recovery activities
- developmental aims and aspirations of affected communities
- community development work (including emergency planning and preparedness) already being undertaken.

Transitioning from recovery to ongoing community activities and services requires a comprehensive strategy that integrates recovery services into mainstream service provision while maintaining the sense of community health and wellbeing. Ideally, many of the activities and services that are facilitated will be

integrated into structures that may have existed prior to the emergency or may have emerged since, and thus will require minimal transition.

Other terms used for recovery transition to mainstream services include 'exit strategy', 'closure' and 'legacy issues'. There may or may not be a difference between the terms used within an agency and the language chosen to communicate the process to the community, however, communities may be more comfortable with 'transition' rather than 'exit'.

The transition strategy should be considered in the establishment phase of recovery and generally includes:

- use, wherever possible, of existing services and community networks to support and deliver recovery activities
- ensuring agencies and organisations involved in the management, coordination and service delivery undertake long-term recovery operations in a planned, integrated and adaptive framework
- provision of a strategic platform for recovery/service providers to embed sustainable community-based recovery services within communities
- implementation of strategies to support the integration of specific recovery-related services into mainstream service provision through integration and coordination

- maintaining the partnerships and communication that was established during recovery.

Over time, all remaining community recovery programs should transition into regular mainstream services and activities. This should result in a shift of focus from emergency recovery to ongoing community development while ensuring the community services can continue to provide services for any ongoing needs of affected people.

Within these major transitions there are changes to the resourcing of recovery services (provision of resources transitions back to the mainstream as community recovery progresses). Smooth transitioning depends on how the activities and services were initially set up in regard to the *National Principles for Disaster Recovery 2018*.

3.3.4 RECOVERY PROJECT CYCLE

The project cycle consists of a number of phases (Figure 8), including needs assessment, planning/programming, implementation of services/activities, and continuous monitoring, review and evaluation. This is described in more detail below.

THE PROJECT CYCLE

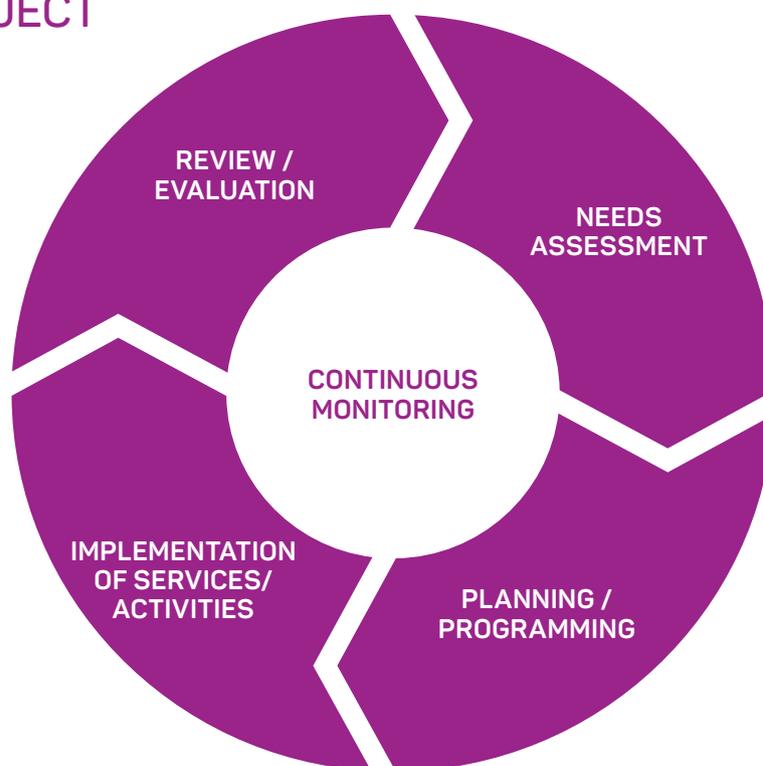


Figure 8 The project cycle as it applies to emergency recovery management Adapted from IFRC 2008

For more information on managing community recovery see Toolkit 2-1 Community recovery checklists – Checklist 7 Undertake community recovery management/coordination and Checklist 8 Recovery management/operational.

Needs assessment

A critical component in the management of an effective recovery program within any community is needs assessment. The nature of the disaster event (its type, size and effects) will indicate different needs. The demographics of the community also have an important bearing on needs, as does the availability of local resources and the health, wellbeing and psychological state within the community. Consequently, the initial needs assessment looks at effects, community demography, available resources within the community

and the pre-existing health, wellbeing and psychological state of the community. Needs assessment should be conducted to inform the initial community recovery planning and be repeated over time as the needs of recovery evolve and change.

Figure 9 shows this community-driven needs assessment process.

A critical tool in needs assessment and recovery planning is a local community profile, which includes demographics, community-based services, structures and networks, and knowledge of existing social capital. This resource may exist before an emergency, but where a current profile is not available, it is worth the time to develop one to ensure all aspects of the community and its particular characteristics are considered. Effective recovery programs are led by sound knowledge of the local communities and their capacities and strengths.

Following an emergency, emergency management services (response and recovery agencies) collect initial information regarding community needs. This knowledge is obtained when emergency response and recovery agencies ask affected populations what services

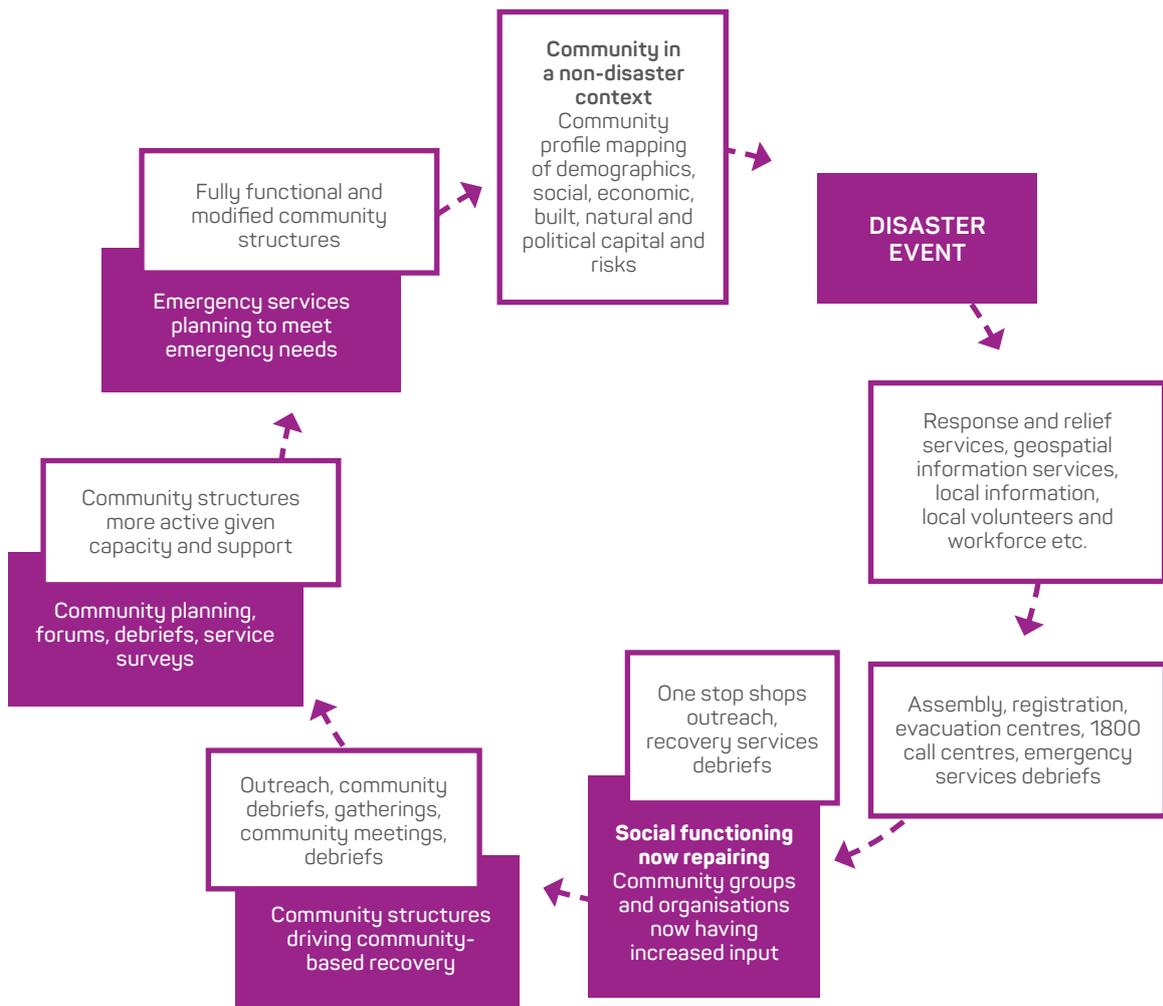


Figure 9 Community-driven needs assessment process
Source: Sally McKay

they need. The involvement of response and recovery agencies and provision of services and facilitation of programs and activities (represented by the red/grey circles in Figure 8) evolves over time in response to community needs. As the response and recovery progresses, the amount of input from these agencies decreases. The ability of community groups and organisations to function repairs, and their level of input and ownership over the recovery process increases to the point where the community becomes fully functional (represented by the blue/green circles).

Initial stages

If it is determined that recovery services are required, an initial needs assessment will help establish basic recovery services. This initial assessment can be based on rapid impact assessments (RIA) completed during response and on relevant data from the impacted community and those working with the community. The context in which recovery is undertaken is a rapidly and ever-changing environment, which requires the frequent and continuing assessment of community need (continuous monitoring).

Rapid Impact Assessment

A Rapid Impact Assessment (RIA) framework/tool has been designed and is used by some states and territories to assist with the provision of recovery services to affected communities during the initial stages of an emergency.

The RIA life cycle: data about the impact of an emergency is gathered and verified during the first 48 hours. This data includes information on people, property, environment and community infrastructure affected by the emergency event.

RIA provides a standard process for collecting, collating, analysing and distributing information for all agencies involved with emergency response and recovery.

Arrangements for activation: arrangements for activation vary; usually, control agencies can initiate RIA when the size and scale of the emergency requires additional resources for assessment of the impact of an emergency.

Care needs to be taken to avoid over-serving some groups to the detriment of others. Identified services should be provided in a planned, coordinated and adaptive framework to mitigate people becoming overloaded and thereby rejecting assistance and support in the recovery phase.

Some key questions that will assist with determining the level of recovery services that may need to be provided, in the initial stages and ongoing, include:

- what did the community look like prior to the emergency/disaster?
- what has been the impact on the community?
- what does the community need now?
- what can the community provide for itself?

Fundamental to any needs assessment of a community is change to the existing state of the community. The challenge is to determine how much of the community's need is due to the impact of the event and to estimate what level of resource is required to support an effective community development approach to the recovery process.

National Impact Assessment Framework

Another method for assessing needs is through the use of the National Impact Assessment Framework or NIAF. The NIAF provides high-level guidance to states and territories undertaking an assessment of the impact a disaster has had on a local government area. A key component of the NIAF is the National Impact Assessment Model (NIAM), which is the methodological tool used in assessing the severity of a disaster.

Specifically, the NIAF provides:

- an overview of when the National Impact Assessment Model (NIAM) should be used
- the list of possible characteristics of a disaster event which could warrant a determination of a 'severe' event
- a high-level overview of how the NIAM uses impact data to generate an event severity output
- high level guidance regarding the type of qualitative contextual information which could be included, and
- an overview of elements for states to consider when embedding NIAM into jurisdictional arrangements.

The NIAM feeds directly into the NIAF and provides the methodological tool used in assessing the severity of a disaster. The NIAM uses both quantitative data and qualitative data to produce an impact assessment of a disaster. States enter impact data by local government area against 50 impact indicators, aggregated into the four established recovery domains (social, built, economic and environmental). Disasters are then categorised as insignificant, minor, moderate, severe or catastrophic.

In the longer term, data from NIAF will assist in developing an understanding of the impact of disasters, provide baseline information on pre-recovery damage, and provide insight into how communities can be supported to recover.

Ongoing surveillance and monitoring

The sources of data to determine the needs within a community are many and varied and, again, will change over time. The most likely sources for gathering needs data include (in no order of priority) RIA, emergency services personnel, police, local government, essential services workers, ambulance service, hospitals, doctors, social workers, mental health workers, psychologists, psychiatrists, recovery workers, welfare workers, recovery agencies, community agencies, talkback radio, social media, and, most importantly, affected persons and local communities. A more detailed recovery needs assessment across all environments (social, built, natural

and economic) should be undertaken following the initial RIA, based on the relevant state/territory emergency incident management system. It is important that information and data is recorded and shared to inform a common operating picture or COP. This will improve decision-making and ensure that data does not become 'siloes'.

For more information on rapid impact assessment see *Inter-Agency Standing Committee Multi Cluster/Sector Initial Rapid Impact Assessment (MIRA) Manual (2015)*.

3.3.5 END STAGE EVALUATION—USING INDICATORS TO MEASURE OUTCOMES

Indicators of need

Some of the factors to consider in a needs assessment (to assist in answering 'what has been the impact on the community?' and 'what does the community need now?') and to plan recovery activity include:

- the scale of the disaster
- the percentage of the community displaced
- the percentage of people who remain within the impacted area
- the length of time people are displaced from the community
- loss of infrastructure (physical/social)
- the increase in requests for material aid and financial assistance
- the length of time to restore services.

Service capacity

In order to answer the question 'what can the community provide for itself?', another measure of the impact of a disaster and the subsequent need for community-based services is the capacity of existing services to meet the additional demands generated by the event. Some signals that might indicate the need for additional service support include:

- a sudden/unexpected/unusual event for the area
- the usual communication lines are broken or disrupted
- community requests—for information/meetings
- an increased requirement for information on health and safety issues
- services disrupted or redirected

Priorities of need

Part of pre-event recovery planning at the local level involves identification of vulnerable individuals and groups within local communities and implementing strategies to reduce their susceptibility to disasters.

Once an event has occurred, planning for community recovery involves identifying those who will be vulnerable and targeting the provision of services to ensure they are catered for.

Identification of the most vulnerable people and groups is especially important during high-impact and significant disaster events when prioritising and rationing of services may be required to meet the urgent needs of large numbers of affected people. Community and social service organisations are well placed to assist with identifying vulnerable people and groups. Effective relief and recovery intake systems are particularly required for assessments in these types of events to ensure the most vulnerable can be prioritised. The majority of people will have the ability to manage their own recovery, providing they have support to meet their identified needs.

The following needs should be considered in the immediate to longer-term community recovery environment:

- sustaining life (including people on life support machines)—essential medical facilities, medical equipment and 'hospital in the home', medicines
- sustaining workforces
- sustaining livelihoods
- sustaining physical wellbeing—accommodation, food, water, clothing etc
- sustaining community and individual wellbeing—personal and psychological support and information
- reducing social isolation—access to support networks, as well as information and resources
- reducing physical isolation—access to support networks, as well as information and resources
- supporting emergency staff—supporting staff whose job is to provide urgent, critical support to others
- supporting people who have few resources—access to financial supplementation and resources supplementation
- assisting people who have resources adequate to manage their own recovery—access to assistance/support measures, and
- shelter and food.

3.4 Planning and programming

Systematic identification of community needs and the development of a comprehensive strategy for long-term recovery and reconstruction provides opportunity to improve the overall quality of life for its residents, enhance local economies and improve environmental conditions.

Smith & Wenger 2006.

A needs assessment feeds into planning and programming, or the organisation of recovery activities. In practice, both the needs assessment and planning/programming occur at the same time because communicating and coordinating with multiple stakeholders identifies needs and informs the recovery plan during the planning process.

The planning process consists of developing key strategies that are agreed across all four recovery environments and between multiple stakeholders; for example, community members, local council, district recovery committees and industry leaders. Conducting planning to include a wide representation from the community is critical to the success of the program. Expect the unexpected in discussions with such a variety of stakeholders. Taking a flexible, practical and adaptive approach ensures the robustness of the planning process and consequent recovery outcomes.

The key strategies contain activities that address specific needs identified by the community. This may be, for example, a small non-government childcare centre, which, due to flooding, has lost all of its outside play equipment. Assisting this childcare centre to re-establish its service provision enables community members to place their children in care while they perform the clean-up task.

An example of a framework to support recovery will include an overarching strategy; for example, to assist local groups and communities to rebuild their routines and activities. The activity supporting this strategy might be, for example, to coordinate and deliver assistance to non-government organisations to re-establish their service provision.

See also Section 3.2 Recovery plans and processes.

3.4.1 REDUCING RISK THROUGH THE RECOVERY PROCESS

In planning and programming for recovery, the sustainability of communities needs to be supported and, as in any project, risk management needs to be incorporated into the planning. Risks can emerge in the period after impact as well as before, and in some cases, these emerging risks will be as a consequence of recovery activities.

Successful risk reduction prior to an emergency reduces the impacts of events and the cost and time of recovery. Prevention and mitigation activities (such as controlled burning or building regulations to reduce flood impacts) can reduce or avoid impact and minimise longer-term consequences. Similarly, incorporating these types of strategies, including building back better, can mitigate future risk.

Risk reduction can occur across all four environments during recovery. Although traditionally the focus has been on physical risks or hazards, equal weight should be given to strengthening the community, economic resilience and ecological enhancement as risk reduction opportunities.

Opportunities to reduce the risks of future emergencies should also be considered during recovery where possible.

3.4.2 IMPLEMENTATION OF SERVICES AND ACTIVITIES

The implementation of services and activities involves the actions taken to facilitate community recovery. Services should be integrated, thus coordination in the multi-agency environment is paramount.

In the recovery environment, services/activities might be provided to the community in a number of ways, including an evacuation centre, relief centre, recovery centre, information centre or family assistance centre, or through outreach, case management, telephone services and web-based services. The precise terminology for the various states and territories may differ, so refer to the relevant state/territory emergency management arrangements. Relevant plans will also refer to operational considerations such as locations, access, responsible agencies.

Some of the activities and services provided include registration, information, advocacy (for example, legal or insurance), financial, direct referral services, advisory services, essential services and building services. Registration is central to the delivery of effective recovery services after an emergency. This is described below, followed by descriptions of the different methods of service provision that may be used individually or in combination. Importantly, duplication of existing services should be avoided, and, integration into community programs and services which existed prior to the emergency, enables better outcomes. Working with communities where they have the capacity to provide for their own needs, at any stage of the recovery process, will lead to more sustainable results.

Registration

Registration through contact with local, state and Commonwealth governments (at points of congregation, relief centres, call centres etc.) or via the national Register.Find.Reunite program. Register.Find.Reunite. is a voluntary registration and enquiry service for people impacted by an emergency. It:

- ensures the identification, safety and welfare of people
- reconnects people with family, friends and community networks
- facilitates identification replacement and access to welfare and support services.

It registers, finds and reunites family, friends and loved ones through a computer-based filing and retrieval system. It provides basic details on the whereabouts of people affected by an emergency to their family, friends and loved ones and to approved authorities supporting the emergency response and recovery.

The service is managed by the Australian Red Cross and delivered in partnership with the Commonwealth, state and territory governments.

Evacuation centres/emergency relief centres

An evacuation centre is a facility that may be used to shelter people from the threat of a hazard. Some basic services relating to relief or recovery may be provided.

An emergency relief centre is a building or place established to address the essential needs of people affected by an emergency. Emergency relief centres are established on a temporary basis to cope with the immediate needs of those affected during the initial response to the emergency. They do not imply any long-term use of facilities as a location for recovery services. A range of services can be provided from an emergency relief centre and in some state and territories they also provide emergency accommodation.

Some states and territories use the term evacuation centre whilst others use the term relief centre.

Consideration will need to be given to location, facility equipment requirements, administration equipment requirements and management for evacuation and emergency relief centres.

For more information, Toolkit 2-1 Community recovery checklists – Checklist 10 Evacuation emergency relief centre.

Recovery centres

Different states and territories use interchangeable names for the centres that provide a range of relief and recovery services. In some cases, a relief centre may be called a recovery centre, 'hub' or a 'one stop shop'.

A recovery centre provides a single point of entry for disaster-affected people for an 'all agencies, all stakeholders' integrated recovery process—or 'one stop shop'. A recovery centre may also be called a humanitarian/family assistance centre if there has been a mass casualty event and a significant disaster victim identification process is required, as well as access to a range of support services.

A recovery centre provides support to affected communities in the restoration of their emotional, social, economic and physical wellbeing and facilitates the provision of services. A range of services can be collaboratively based in the same facility and may vary

according to the impact of the disaster but usually consists of direct access or conduits to:

- psychological wellbeing services (psychological first aid, personal support services and, in some cases, mental health services)
- temporary and medium-term accommodation
- environmental health (for example, public health)
- financial assistance
- legal and insurance advice
- case coordination/management service
- primary industry advice
- rebuilding advice, and
- disaster victim identification (for mass casualty events).

Management considerations for recovery centres include coordination of volunteers, management of donations, establishment of databases to manage registrations and administration of grants.

The site selection for a recovery centre is important—it needs to be accessible, have the potential for long hours of operation and scope to provide for the longer-term nature of services that may be required. The recovery manager needs to be mindful of the symbolism of the location of the recovery centre (it may need to be near the impact site), and the timing of its opening and its closure. Closing a recovery centre should not be promoted as 'the recovery is over', but as entering the next phase or period of recovery.

For information on location considerations, facility equipment requirements, administration equipment requirements and management considerations for recovery centres, Toolkit 2-1 Community recovery checklists – Checklist 11 Recovery centres.

Information centres

Information centres provide an easily accessible one stop shop for affected people to gather information about the whole range of services established to assist recovery.

Information centres are often operated by local authorities, citizens' advice bureaus or community agencies. The information provided may cover many services available to the community, but it is impossible for an information centre to have information on hand to satisfy every possible enquiry. Therefore, it is important for centres to have the capacity to obtain information. It is also essential for information centres to be accessible by telephone and email.

Information centres are often established at or near evacuation centres, relief centres, or in council chambers or other convenient location.

The integrity of information centres depends on the accuracy and usefulness of the information they provide. Centre management must, therefore, be vigilant to ensure the breadth and currency of the information provided.

Family assistance centres

Family assistance centres were initially set up in response to the London bombings in 2005, and although they have not been used in Australia, a description of their purpose is provided for clarity. These are facilities where bereaved families and survivors can receive information and appropriate support from all relevant agencies without the need for referral elsewhere. Their essential purpose is to enable timely two-way flow of accurate information between families, survivors and service providers, enabling comprehensive longer-term assistance for the duration of the response and any subsequent investigations (McClenahan 2006).

Outreach

Outreach support involves visiting people in their homes or temporary accommodation to provide access to core recovery information and services. Outreach teams are able to assess the impact of the event, thereby contributing to the needs assessment process.

Outreach should generally commence as soon as access to the affected area is available.

Objectives of outreach might include:

- undertaking a community needs assessment in conjunction with an appraisal of service gaps
- providing essential information to the affected community regarding community recovery services and financial assistance packages
- assisting affected individuals and communities who have little or no access to transport, who may think they are not entitled to, or don't need, recovery services, or who for some other reason can't readily access recovery centres/one stop shops or community meetings
- ensuring key services are delivered in a personalised, face-to-face manner
- ensuring ongoing recovery services meet community requirements and expectations
- consolidating service delivery from numerous agencies to people affected by emergencies
- providing data and information to assist with service monitoring and evaluation.

Activities can include initial proactive telephone contact with identified affected residents/property owners. Information gathered can assist with briefing and prioritising activities of outreach teams.

An outreach team preferably will be multi-agency and be coordinated by a lead agency.

Prior to commencing an outreach service, a distinction needs to be made regarding the type of model to be

delivered. It should be tailored to meet the needs of emergency-affected people and should not just set in motion a standard response.

It is important to be clear about the levels of personal support and the needs assessment to be undertaken. Given the significant time and resources required to develop and manage an outreach service, the maximum benefit from those resources needs to be achieved.

Management of an outreach or visitation program requires:

- a clear understanding of the objectives of the program
- adequate briefing
- notice of proposed/scheduled outreach visits to communities
- liaison with police to determine residences that should not be visited.

In conducting an outreach or visitation program:

- home visits should be undertaken by workers in teams of at least two
- visits should be carefully coordinated to avoid multiple calls to the same residence
- interpreters should be provided where necessary
- visits should only be undertaken during daylight hours
- workers should be debriefed at the end of each shift
- training and supervision should be provided by workers experienced in recovery activities.

Visits generally occur immediately after the event and may be repeated as part of the ongoing recovery process as required. They may also be conducted towards the end of the recovery process as a means of advising the community that externally provided services are transitioning and to provide information regarding the availability of ongoing services within the community.

For more information about planning and implementing an outreach activity, see Toolkit 2-1 Community recovery checklists – Checklist 9 Outreach.

Case management

Case management is a term used to describe the linking of individuals who have been impacted by disaster with a person designated as a case manager who will support the individual/household through the recovery process. Personal responsibility and self-determination in the process is often emphasised, as is the importance of linking to community activities and programs to support overall wellbeing. It is important to note that case management is a term that has different meanings and diverse adaptations within the health and social services professions (Moore 2009, p. xvi). Case management has

been used in disaster recovery in Australia (for example, for the Black Saturday bushfires in Victoria in 2009, and flooding of the Hunter Region in New South Wales in 2015).

Telephone and web-based services

Information phone lines (call centres) and web services may already exist or be established during and/or after an emergency. Recovery agencies should plan for access to telephone advice and referral services (e.g. help lines), and consider the need to have people able to provide information in a range of languages. Recovery managers should try to coordinate information lines through a single point of contact to reduce confusion (and the appearance of confusion) in the affected community, and to promote ease of access to information.

Telephone and web-based services might include:

- a disaster information line—the primary contact point at the initial stage of an emergency
- registration and reconnection services, such as the national Register.Find.Reunite service, for people unsure of the whereabouts of, or needing to connect with, family and friends
- disaster-specific web portals or recovery agencies with separate sections for the disaster within their websites
- mental health advice lines
- telephone counselling
- rebuilding, insurance and tax advice.

3.5 Coordination and management of recovery

This section examines some of the more detailed management considerations that may arise within the broad management framework that was discussed in the previous section. These considerations relate to internal organisational functions in a multi-agency environment, as well as to broad and additional cross-cutting issues that will impact on community recovery.

3.5.1 KEY RECOVERY MANAGEMENT TASKS

Each emergency or disaster has specific recovery management requirements depending on the social, built, natural and economic impacts on the community affected. Generally, the recovery management tasks include:

- resources management
 - human resource management
 - joint service delivery
 - physical resources
 - funding—operational and assistance measures
- management systems and processes

- the Australasian Inter-Service Incident Management System (AIIMS)
- Incident Command System
- records
- finance
- human resources systems
- child protection and security
- information and communications management
 - common operating picture
- convergence issues
 - vice-regal, ministerial and VIP visits
 - goodwill management (volunteers and donated goods)
 - media
 - other issues
- managing competing priorities and expectations
 - political
 - community priorities and expectations
 - agency/departmental
- post-event legal inquiries.

3.5.2 RESOURCE MANAGEMENT

The community needs assessment identifies the type and scale of services and the resources required to deliver effective recovery services. Management of human resources, joint service delivery, physical resources and funding is needed.

Human resources

Managing recovery is dependent upon competent people who are willing to work in disrupted and non-ideal circumstances, often engaged in stressful duties. These people—the human resources—whether paid or voluntary, need to be supported and managed appropriately to ensure consistent and effective services are provided to the affected communities, often over an extended period of time.

Many services, agencies and people are required to contribute to the recovery process. Some have specific jobs that only last a short time; others are involved for long periods, but in different ways. Some of these workers will be community members who were employed to provide services in their community prior to the disaster; others may be from outside agencies, or volunteers sourced from any location. Indeed, managers may find themselves having to respond to disasters when it might not be ‘what they signed up for’. Organisational training, role clarity and capacity building are essential.

Regardless of the way they are recruited to the recovery process, workers who are well trained, well supported, flexible, secure in their professional identity and secure in their environment provide the best possible opportunity to minimise the trauma of the post-disaster experiences of people.

Plans for the management of human resources during recovery must be in place prior to a disaster event to

ensure smooth deployment of services in an often-pressurised environment. A critical aspect of recovery planning is the establishment of standards for ethical behaviour and conduct that recognise the accountability that those working in recovery have to the people who have been impacted. In addition to the *National Principles for Disaster Recovery*, resources such as the Sphere Project's *Humanitarian Charter and Minimum Standards for Humanitarian Response* (Sphere Project 2018) can help guide recovery practitioners in effective and ethical ways of working that will avoid compounding the negative effects of disaster.

The recovery system itself develops in response to the specific disaster on the basis of existing plans and community need. As recovery moves past immediate survival and physical needs towards the medium and longer-term, consideration of a community development approach to recovery work that focuses on sustainability of the community may emerge.

Consideration should be given to issues including managing paid and voluntary staff in the disaster context, and the ongoing human resource considerations pre- and post-disaster, including:

- the work environment (being part of the recovery system, recovery worker characteristics and stressors)
- employer responsibilities and strategies (occupational health and safety, employee assistance programs)
- management role (staff selection, recruitment and deployment, the transition from response to recovery)
- management strategies (supervision/staff support, rostering, briefing, debriefing, other personnel policies, mechanisms such as memorandums of understanding (MOUs), funding sources and strategies, and medium to long-term recovery—community development workers)
- development strategies (training, exercising, succession planning)
- volunteers.

Other references/resources

International Federation of Red Cross and Red Crescent Societies (2017) *Community Engagement and Accountability Toolkit*.

The work environment

The complexity, intensity and dynamics of the disaster context may erode, challenge or obscure a number of professional issues for service providers. Consequently, it is important that managers and service providers be particularly conscious of the physical and emotional requirements of staff.

After disaster, communities have to coordinate three separate systems:

- pre-disaster organisations (with their own tasks and traditions)

- the recovery system coming from outside
- the new organisations emerging from the disaster.

Each of these systems has an essential part to play. Competition and conflict may occur unless these systems communicate, share ideas and work together with mutual respect.

Being part of the recovery system

The impacts of a disaster can, for a time, have a unifying effect on communities. Relationships can become closer and feelings and attitudes become magnified as people reflect on their individual and shared experiences of the disaster. While this can be a source of support, it can also trigger cycles of enthusiasm followed by disillusionment and despair. Grief, anger and depression can affect a whole community, which can make decision-making more difficult and create further challenges for recovery workers.

For affected people, the recovery system not only represents a source of help, but also the difficulties and frustrations of the disaster. They are likely to view the system as a whole and may hold one part responsible for the deficiencies of another. Coordination and efficiency of the recovery system are not only necessary for its own functioning but provide a powerful symbol of the recovery process itself.

Recovery worker characteristics and stressors

The issues confronted by individuals and communities, and the knowledge and skills needed to navigate the post-disaster community environment, are considerable. The irregular and stressful nature of disaster recovery work requires additional skills to those required to provide specific services under normal conditions.

Most recovery workers are affected in some way and at some stage by involvement in a disaster. They may show few or many of the possible responses to disaster outlined under Section 2.4.2 Psychosocial impacts on individuals. Workers involved in service provision following an event need to be capable of dealing with these stressors.

Recovery managers also need to take care of themselves. There is a high level of expectation put on managers from front line staff, and sustainable practices are critical.

In choosing appropriate staff for recovery work, it may be useful to consider that recovery workers:

- who are understanding, caring, patient, informative, encouraging and supportive to disaster-affected people are the single most important influence in helping people resume their lives and minimising adverse consequences
- need an ability to stand apart from emotional encounters with the community and not take personally, issues affecting the community
- need a high level of team skills to work with and support their colleagues

- should have consolidated their core professional skills, and have a clear understanding of their place in the recovery system, of their own job and of their organisations' tasks and responsibilities—a disaster is not a training ground for inexperienced workers
- should be secure in their professional identity, otherwise the uncertainty of the disaster situation and its consequent stresses may seriously undermine their confidence and capacity to deliver the relevant service
- should be secure in their roles in their agencies or organisations. The nature of recovery work necessitates time spent out in the field, away from the normal working environment and workers cannot function effectively or provide the time required if they are anxious about their positions or feel that their agencies are ambivalent towards them being away—work roles should permit a degree of flexibility
- need to adopt flexible working styles that allow for the unexpected, be prepared to improvise strategies for the delivery of services, and be empowered to make the best decisions at the time
- are likely to be required to travel and work out of hours in less than optimal conditions
- must be prepared to accept the limitations of what can be achieved during recovery and be willing to work within agreed hours and rosters—taking time away from emergency sites is a vital element of sustainability and in managing vicarious trauma and fatigue.

Employer responsibilities and strategies

In a disaster, staff are employed for construction, logistics, housing, financial assistance, essential services repair, health and psychological wellbeing activities, and natural environment protection and restoration, and may be recruited on short-term contracts or seconded from the private or public sector for the duration of the emergency.

As a consequence of a disaster additional staff may be required to enable agencies to meet their responsibilities. In determining additional staffing requirements, the demands of recovery operations, as well as the ongoing operational needs of the organisation, should be considered.

The most common mistake in determining staffing requirements is to underestimate the duration of recovery operations. The recovery process may be lengthy, and some services may be required for a period of months, while others may be required for years after the event. Overloading of staff will occur if adequate arrangements have not been made to perform their normal duties. This will exert enormous pressure on recovery workers to finish their tasks prematurely and return to day-to-day agency tasks.

Occupational health and safety

Employers have an obligation to provide a healthy and safe work environment for their staff, including contractors and volunteers. A safe and risk-free environment is fundamental to this requirement, and includes:

- the handling, storage or transport of plant (machinery) or substances (any material—liquid, powder, gas)
- the physical work spaces
- training or supervision and information on safe work practices
- facilities or mechanisms for the welfare of workers.

Prolonged disasters will deplete existing staff teams and create significant occupational health and safety challenges.

Given the potential for a high-stress environment and the possibility of fatigue, it is important that appropriate rostering and breaks, briefing and debriefing occur to ensure staff wellbeing is maintained and that workers are kept informed about the overall recovery process.

Employee assistance programs

Workers should also be alerted to any employee assistance programs available. These are work-based intervention programs designed to enhance the emotional, mental and general psychological wellbeing of all employees and include services for immediate family members. Recovery workers may find that this service provides preventive and proactive interventions for the early detection, identification and/or resolution of both work and personal problems that may adversely affect performance and wellbeing. Existing employee assistance program providers, however, may not have the experience or training to deal with disaster impacts. It is important that assistance is appropriate, particularly where support for trauma or vicarious trauma is required. In addition, some organisations offer peer support and mentoring programs for workers who deal with trauma or vicarious trauma.

Supervision/staff support

In addition to the usual requirements of occupational health and safety and industrial legislation, the following specific issues require consideration in managing workers in a disaster recovery context:

- awareness of stress indicators
- well-developed structures regarding roles and responsibilities/accountability, with the capacity for flexibility (including regular team meetings and management of expectations between manager/workers)
- flexibility of conditions to allow staff time off/time out
- clearly delineated boundaries on worker responsibilities
- professional supervision (task and process, regular and planned)

- access to ongoing training
- personal and team debriefing, utilising appropriate processes and models
- regular briefing and debriefing of key operational and community issues.

Rostering, briefing and debriefing

Recovery staff should be briefed and debriefed prior to, and at the end of, each shift in order to proactively address issues relating to the high-stress environment. Briefing includes time for staff to talk about their experiences during the shift and advise on any issues managers need to convey to the next shift.

Managers should note any stress responses and, if necessary, arrange or recommend further debriefing or assistance. Assistance might be provided within existing organisational structures or as an additional resource for staff in the recovery structure. All staff with a supervisory role during disasters should be trained in briefing and debriefing processes. Provision for debriefing all senior managers should also be undertaken.

To minimise the effect of stressors, recovery staff should be rostered for shifts of reasonable duration. They should not work beyond their shift time and must leave the service area for rest and recreation. This includes managers.

At the close of recovery services, an operational debriefing of all staff (and individual debriefing where required) enables recognition of positive outcomes and identification of challenges. Relevant information or outcomes can be used to inform future planning.

Other personnel policies

Other policies and procedures that need to be considered include overtime and/or time in lieu arrangements, leave arrangements, personal expenses, standby policies and debriefing arrangements. Consideration of these issues should occur in advance of an event and changes implemented if necessary.

Volunteers

Volunteers are likely to play a significant part in any recovery operation, particularly after large-scale, highly publicised disasters. There are likely to be two types of volunteer—people who are affiliated with a specific organisation (such as service clubs, community agencies and other NGOs) and members of the public who offer their services after the event has occurred.

Volunteers who are affiliated with an organisation will be directed by that organisation and are likely to have specific skills to undertake previously assigned roles. Examples of this are the volunteers with agencies such as the Red Cross, who are involved in activities such as catering, registration and personal support and who are trained for their allocated tasks.

Volunteers from the general public who offer assistance on an ad hoc basis can also benefit the recovery process,

but some action and coordination may be required to best utilise their skills.

Issues to be considered include individual skills, community and individual needs, supervision, identification, and provision of support in the form of accommodation, transport, catering, debriefing and insurance. The most effective method of supporting volunteers is often through the appointment of a volunteer coordinator.

The types of activities that may be undertaken by volunteers include everything from catering and personal support through to the clearing of properties and rebuilding activities.

3.5.3 JOINT SERVICE DELIVERY

Disaster recovery is not a single agency issue. It requires cooperation and teamwork to coordinate agencies that do not normally work closely together. A number of agencies across the various levels of government and/or from the non-government sector need to be coordinated in a way that effectively contributes towards the recovery effort. With high-profile events there is often a convergence of services, some of which are articulated within existing local, regional or state/territory arrangements, others that are not within plans (but are local service providers), and others again that are not local and self-activate to assist. In addition, some services or organisations emerge in response to perceived and real gaps in services (for example, Blaze Aid formed to coordinate fencing volunteers after the Victorian bushfires in 2009).

A part of the management task is to identify whether there may be a need for additional surge capacity to respond in a timely and effective manner to the event. Working with all partners/stakeholders in delivering a coordinated approach to service delivery ensures any identified gaps within the service system can be addressed.

Joint service delivery may be enhanced if memoranda of understanding (MOUs) or other formalised arrangements are in place and understood by the relevant agencies well before an emergency occurs. For example, MOUs between adjoining local government areas can allow for staff assistance between neighbouring areas. These can also be useful for community and social services, private industry, public-private partnerships, state/territory governments and the Australian Government, and international cooperation.

3.5.4 PHYSICAL RESOURCES

Adequate physical resources are essential for recovery workers to be able to perform the tasks required of them. Physical resources may include facilities, equipment,

vehicles, office supplies, records, finance, agency personnel and volunteers.

Management of these resources involves planning for their continued availability and accountability, purchase (or hire and return) and maintenance. Managers should confirm the condition of loaned or donated resources prior to their acceptance, and the conditions of the loan or donation. For example, a car may be donated, but running costs will require funding from the organisation managing the recovery effort.

Two of the most important tasks in resources management are record-keeping and avoidance of wastage to ensure efficient cost recovery.

Managers should be familiar with plans and have arrangements in place to escalate requests for resource assistance if local capacity has been exceeded.

3.5.5 FUNDING

Depending on the nature and scale of the event, particular funding arrangements may be available.

Financial assistance—state and territory government assistance

States and territories have primary responsibility for disaster recovery and provide a range of funding measures to individuals and communities affected by disasters. In more significant disaster events, states and territories often provide a range of personal hardship and distress assistance. This is immediate financial or in-kind assistance for people who do not have, or cannot access, their own financial resources to meet immediate needs for food, clothing and shelter. Additional grants may be available for essential contents and structural repairs to homes for low-income people who meet certain eligibility criteria.

Other bodies that are responsible for administering various types of financial assistance include the Department of Human Services and Rural Finance.

Australian Government assistance

The Australian Government recognises it has a role in supporting the states and territories to respond to disasters and in some circumstances may provide financial assistance to aid recovery efforts. The primary mechanism for providing this support is through the Natural Disaster Relief and Recovery Arrangements (NDRRA), a cost-sharing mechanism between states/territories and the Australian Government.

Some Australian Government agencies, (such as the Australian Taxation Office), may also allow greater time periods for payment of fees and may also provide other types of advice and assistance (such as financial counselling).

Other references/resources

State, territory and Commonwealth government websites provide further information about financial assistance. See also Jurisdictional arrangement for community recovery in this handbook.

In addition, the Australian Government's Emergency and Disaster Assistance website provides information on assistance for current and previous disasters, and includes web links to other organisations that can provide assistance.

Australian government agency websites provide further information about funding and relief measures.

Refer to the list of Australian agency funding assistance websites in Toolkit 2-2 Further resources.

Other types of payments

Recovery managers should be familiar with their state/territory natural disaster relief schemes (and approval processes for activation), as well as other local, state/territory, Commonwealth, corporate, philanthropic and charitable funding sources.

Section 4.3 Recovery of the economic environment further describes financial resources such as insurance and appeals.

Managers should also be familiar with funding arrangements relating to non-natural disaster hazard types/events. Depending on the impact of the event, and the event profile—the corresponding political and media interest in the event—additional resources may be made available.

3.6 Management systems and processes

Effective and efficient recovery programs and services require sound management systems and processes. Commitment to this is vital, given that the establishment of these systems and processes may place an administrative burden on organisations at critical times. The current emergency management environment reflects an increased focus on accountability and transparency, which gives added impetus to this management task.

Some of the key types of information that will need a supporting system and sound process include:

- reporting—a daily report may be required in the initial period after a disaster to inform others of the situation and the preparations and planning that are being undertaken, the capacity to respond, and any strategic or resourcing issues identified (systems such as Australasian Inter-Service Incident Management System (AIIMS) or the Incident Command System might be used)
- operational logs—these tasks and are generally a record of actions, telephone messages and decisions made, including time and date
- record keeping—of the minutes of meetings, copies of adapted plans, activation advices, media requests and responses
- resource requests—tracking and management; knowing where and how to obtain resources, where resources are and what they are being used for (including an audit trail of who used the resources each day); and returning resources at the end of the recovery phase
- financial structures—ensuring cost codes are established correctly and that the team is advised of the correct accounting codes; monthly financial reports that are verified as correct (there may be differences between reporting grants distributed and operational expenses)
- human resources—travel arrangements (car bookings, flights etc.), rosters and deployment history; roles and responsibilities and management structure, including daily meeting with team leaders and other key partners (these meetings may later move to weekly and/or monthly); insurance for staff and volunteers
- child protection and security.

Considerable investment has occurred within some organisations on information systems that track impacts and services and lead to evaluation of effort. Because recovery is associated with multiple agencies and corporate entities, there may be conflict under privacy legislation if individual and group management data is shared between entities. As a priority, management systems and processes should be considered as part of the planning effort and not left to post-event development.

3.6.1 INFORMATION AND COMMUNICATIONS MANAGEMENT

Communication management is the method through which information is communicated to the community, other recovery workers and stakeholders. The management task is to identify what needs to be communicated, to whom and when, and to develop information gathering, processing and dissemination channels. The information that needs to be communicated in the recovery process depends on the characteristics of the event in terms of type, location, severity and effects on the community.

See Section 2.4.5 for more information.

3.6.2 CONVERGENCE ISSUES

During a disaster a range of issues might simultaneously emerge and must be addressed. These may include political and organisational demands, Vice-Regal, ministerial or VIP visits, the media, the management of goodwill (such as donations of money, goods and services) and other emerging convergence issues.

Vice-Regal, ministerial and VIP visits

It is likely that VIPs from government and a range of other agencies will visit the affected area and have a high level of interest in the recovery process.

The recovery manager should provide effective briefings which should include accurate and up-to-date information about estimated losses, assistance programs and financial assistance packages. This ensures that any information relayed to the affected community or the media is accurate, reducing the risk of falsely raising expectations (such as about assistance measures) and reducing the risk of embarrassment. Some pre-visit briefing is also desirable to ensure that the visitor is informed of the necessary information prior to arrival.

Visitor briefings should detail the current state of the community, including the various emotions they may be experiencing and identification of any existing sensitivities.

Visitors should have a clear understanding of emergency management arrangements and protocols.

Clearly brief visitors on the potential impact of their visit and their subsequent role in the recovery process. In particular, it should be emphasised that any information provided must be accurate—the effects of inaccurate or ill-founded information on an affected community may reinforce the impact of the event.

In the case of a disaster affecting more than one geographic area, take care to ensure that communities are treated equitably and visits are arranged accordingly.

Goodwill management

Many individuals are moved to do something for those in need following an emergency. The convergence of goodwill includes the giving of money through public appeals, donations of goods and services, and the emergence of spontaneous volunteers.

Considerations in managing appeals and donations of goods and services are described further in Part 4.1 Recovery of the economic environment. See also *National guidelines for managing donated goods* 2011.

The large number of spontaneous volunteers who offer time and skills in an emergency can be overwhelming for an organisation and may affect its ability to deliver its core business during and immediately after an emergency. The core principle for effective management of spontaneous volunteers is that the people affected by the emergency are the first priority.

More information on working with spontaneous volunteers can be found in *Communities responding to disasters: Planning for spontaneous volunteers* (AIDR 2017).

Media

Convergence also occurs with media outlets. Managing the recovery process involves proactively engaging the media and managing this relationship. The media is a vital link to the community.

When multiple media crews arrive at a recovery scene, they may not be aware of the needs of community. Strategies that can be employed to form effective relationships with the media include:

- planning regular media briefings
- setting boundaries to enable healthy community recovery and to protect the privacy of individuals
- briefing media on what their presence means—privacy and sensitivity
- briefing recovery staff on media management
- preparation for media interviews.

Recent studies have discussed some of the drivers for the media, including the purpose and goals of their coverage of disaster and the ethical questions they faced (Centre for Advanced Journalism, 2009, p. 6). Although there are widely accepted journalism ethics and codes of conduct, emergencies can cause highly aroused and emotionally motivated behaviour (Gordon, 2006, p. 18), which changes the routine way of operating.

The affected community can be impacted by the media—or empowered—depending on their experiences with journalists, photographers and camera crews.

Research

Communities impacted by disasters and emergencies can be the focus of research for many years. This can

cause people and communities to relive the trauma of the event or become fatigued by ongoing attention. Recovery workers can assist communities by discussing whether they wish to be involved in research and/or the nature and level of their involvement.

3.6.3 OTHER ISSUES

There may be other emerging issues that will need to be managed. For example, immediately after a disaster when the media attention is high, people may visit the affected area to see and experience what has happened. ‘Disaster tourism’ is a phenomenon that the recovery manager may need to manage. The recovery manager may need to assist if the community feels that it is being intruded upon or if people in the affected community do not have adequate privacy or respect from disaster tourists. Police and other emergency services may assist with this, if requested.

3.6.4 POST-EVENT LEGAL INQUIRIES

Some time, perhaps several years, after the event, legal processes may review the causes of, and response to, the disaster or emergency. Legal proceedings can impact upon the recovery process immediately and in the long-term.

Immediately after the event investigators, police, social scientists and agency investigators may collect evidence for various reviews, inquiries (including coronial inquiries) and legal proceedings. This may involve moving about the area of immediate impact to take photographs, interview affected people, cordon off areas and conduct scientific tests. Police will take the lead role and may restrict access to a disaster-affected area, particularly if people have died or if there is suspicion that the event has been caused by criminal activity, such as a deliberately lit fire.

In the long-term, people affected by the event, as well as relief and response workers, may be required to give evidence before tribunals, enquiries or courts.

A coroner’s inquest may be held to investigate the cause of a fire or disaster and to formally establish the identity and cause of death of any person who has died as a result of the disaster.

A Royal Commission or other special inquiry may be established to review the management of, and response to, an event. The terms of reference are set by the government and may be very broad to allow a wide-ranging review of all aspects of the preparation for, response to and recovery from a particular event.

Legal proceedings may be brought by the police if a person or organisation is alleged to have committed a criminal offence that has contributed to the disaster. Criminal proceedings will usually be heard before a judge and jury and will lead to a fine or imprisonment if the defendant is found guilty.

Civil proceedings or a claim for compensation may be brought by people who have suffered financial losses

due to the disaster, or, more commonly, by insurers who have paid out claims. Civil proceedings are usually heard without a jury, and the defendant or the insurer may be required to pay damages. Civil proceedings can take many years to finalise and may impact upon a community's ability to move forward from the disaster event.

Insurance claims and other legal issues can also impact on the recovery of individuals or households.

3.6.5 MEMORIALS AND COMMEMORATIONS

Cultural and spiritual symbols and rituals can provide an essential dimension to the community recovery process. Post-death rituals provide a safe space for the expression of individual and communal grief and can be an important therapeutic step in the grieving process. This expression can be a healthy opportunity for expressing shock, anger, disbelief, grief, and other emotions associated with the disaster. A lack of, or barriers to, collective expression can hinder recovery and successful grieving following death (Whitton 2016).

Post-disaster rituals such as temporary memorials, commemorative and anniversary activities can assist in re-establishing feelings of control, social solidarity and belonging after collective crisis (Eyre 1999). These activities also assist in the long-term integration of the emergency or disaster into the history of the community. Often these activities can be conducted on anniversaries or other significant community occasions.

Commemorative services can be a powerful form of a community's expression of tolerance and support, particularly in the aftermath of a malevolent disaster, such as mass shootings or terrorism. Commemorative and remembrance activities must recognise that all people are affected and have equal rights to participate in planning commemorative events or permanent memorials. Memorialisation has traditionally honoured a society's dead, so there is a tendency to focus upon the bereaved. Recovery managers should facilitate processes that are sensitive to the wishes of the bereaved, but that are inclusive of all people affected by the disaster (Nicholls 2006; Eyre 2006; Richardson 2010).

Temporary memorials

Spontaneous expression of loss, sorrow, grief and disbelief in the form of informal, temporary memorials often begin within hours of the public having knowledge of the disaster (Eyre 1999). People feel the need to share their sorrow and acknowledge loss, even if they are not directly impacted by the event—for example, the spontaneous floral tributes that occurred after the Martin Place siege in 2014 and the Bourke St incident in 2017 (Australian Red Cross 2015). Ritual expression can be a healthy opportunity for expressing a sense of shock, anger, disbelief, grief, and other emotions associated with disaster (Whitton 2016).

Spontaneous, informal popular rituals often start within hours of a disaster. These may include people visiting the scene of the event or other significant associated places, and the placing of flowers, candles and/or cards at the site (or toys when children are involved) (Australian Red Cross, 2015). Tributes left at temporary memorials express emotion such as:

- shock
- grief
- personal loss
- anger
- disbelief
- hope
- unity/solidarity (Australian Red Cross 2015).

According to Whitton (2016), temporary memorials occur most often after human-caused events such as accidents, terrorist acts or mass criminal incidents. However, this form of memorialising also commonly occurs following the deaths of high profile people, particularly if the death is sudden.

Some practical considerations for the management of temporary memorial include:

- Allow memorial to 'grow', do not try to encourage or interfere with development of temporary memorials.
- If visitors are exhibiting signs of extreme distress, consider locating psychosocial support personnel/volunteers at the site to provide support and assistance.
- Start thinking about potential preservation of the memorial. Who or what organisation will be responsible for this.
- Consider whether survivors, families of the deceased or people injured may want to visit the memorial.
- Consider the upcoming weather forecast when determining how long the memorial should remain in place.
- Consult with affected community before moving/removing memorial.
- Consult with the affected community about archiving/preservation of memorial items. There may be particular items, e.g. photographs or personal belongings that they may wish to retrieve from the memorial site (Whitton 2016).

Permanent memorials

Permanent memorials are those 'permanent reminders of tragic events' that are erected post disaster. Examples include memorial plaques, statues and remembrance gardens. Permanent memorials are often at, or near, the site of the disaster (Eyre 2007).

Memorials often focus upon those that have lost their lives, for example war memorials. Yet as our understanding of the impacts of disasters has broadened, the scope of memorials has shifted to give recognition of these impacts.

Disaster memorials can recognise:

- loss of life
- injury
- threat to safety
- loss of homes and property
- loss of companion animals
- disruption to community networks
- education for the future
- changed community and personal circumstances
- first responders and those that helped, both early on, and in the longer term (Australian Red Cross 2015).

Whitton (2016) notes the end goal of planning and developing a permanent memorial is the physical memorial itself. This can take a long time, years in fact. Transparent, extensive and inclusive consultation with the widespread affected community is important throughout memorial planning. The affected community needs to be active participants throughout memorial planning.

The practical considerations for planning a permanent memorial include:

- The development of permanent memorials takes a long time.
- Agencies responsible for leading disaster response and recovery efforts should be careful about promising to develop memorials in the early days after the disaster.
- Consult with the bereaved, survivors and the affected community about when and how they may want to be involved in the planning process.
- Consultation should be as broad and open as possible.
- Consideration should be given to different groups involved in the event. This should be done from the beginning.
- The bereaved and survivors are key groups to consult with.
- How will the memorial be funded? Will this funding also cover ongoing maintenance of the memorial? Who will manage and oversee this money? (Whitton 2016)

Anniversary events

Anniversaries are often a time of both personal and collective remembrance that can be marked by formal and informal memorial events or services (Eyre 2007). Anniversaries fulfil both social and psychological functions (Eyre 2007) and mark the passage of time, serve as a reminder of the progress from the emergency, as well as the long journey towards community recovery.

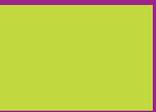
Anniversary events can be:

- opportunities for relatives and survivors to reunite
- updates for people outside communities
- times when bereavement and grief resurface

- times when media coverage of events can trigger grief and onset of post-traumatic stress
- a function to locate and reinforce a disaster in a community's narrative
- social history and identity (Australian Red Cross 2015).

Suggestions for recovery managers:

- Temporary memorials tend to happen spontaneously and at great speed, while permanent memorials often take longer than expected. Both need planning.
- Ask for assistance—for most people tasked with managing a temporary or permanent memorial, it's a new area for them. Australian Red Cross will be able to provide advisory support regarding planning.
- Ensure that the impacted community is the key focus for anniversary and commemoration events, rather than politics and the media.



Part 4 Recovery environments

The concept of the social, built, economic and natural environments in relation to disaster recovery was introduced in Part 3 of the handbook. This section provides further detail on the impacts of emergencies and disasters on these four environments together with considerations and guidance for establishing recovery initiatives. However, it is important to note that recovery arrangements will vary between jurisdictions and not all states and territories utilise the ‘four environments’ approach. Practitioners should consider their locally relevant recovery legislation, policies and procedures.

4.1 Recovery of the social environment

This section describes the impact of disaster upon people’s personal and collective social wellbeing. It is important to understand the social infrastructure that existed prior to the disaster and the consequences of a disaster upon it, because effective social recovery is the foundation for enabling the progression of recovery in all aspects of the community (including the economic, natural and built environments). Recognising a community’s strengths and vulnerabilities can help inform the recovery process.

In addition to the impacts of the disaster event, the response and the recovery effort (planning, management and service delivery) itself has potential to create negative social consequences for affected individuals and communities. These are discussed as secondary effects. Positive consequences can be enhanced, and negative ones avoided, or at least alleviated by an effective recovery effort and the thorough coordination of response and recovery.

Other secondary impacts to consider include the consequences of responding to emergency events on those within the community who help (such as the disaster workforce and volunteers).

4.1.1 SOCIAL ENVIRONMENT—DEFINITION

The social environment is defined by relationships and connected by networks of communication. In simplified terms the social environment consists of individuals, families and common interest groups that form whole communities (Figure 10). It is important to remember that, depending on the type of emergency, the impact distribution may extend beyond geographic boundaries

(e.g. equine influenza, which affects the equine industry and people with horses, is an example of a specific community of interest).

4.1.2 SOCIAL IMPACTS—UNDERSTANDINGS GAINED FROM EXPERIENCE

Understanding the impact of disasters upon the collective social environment recognises that human beings do not function separately but within an array of interdependent social relationships. Equally, each individual’s unique strengths and weaknesses (or risks and protective factors) will influence their recovery. Therefore, this section connects the personal and collective social impacts to ensure the focus is on communities as a whole.

Within the social environment the impacts of a disaster usually result in losses and/or disruptions to peoples’ lives—both individually and in terms of the social infrastructure. Each emergency or disaster is unique, varying along dimensions such as predictability, speed of onset, duration, degree of damage and so on. As a general rule, unpredictability, rapid onset, long duration and severe damage are likely to be associated with greater recovery challenges for individuals and communities. Regardless of the disaster dimensions, loss of life, loss of shelter, injury, trauma and threats to safety (many of which may continue while the recovery operation is underway) all impact on community recovery.

The following impacts are commonly found following an emergency or disaster and the consequences of these impacts on individuals and communities vary. As the number, severity and duration of the following impacts increase, so does the likelihood of longer-term social consequences for individuals and the community.

Examples of impacts that may influence people’s recovery include:

- bereavement, injury, or direct threat to life, personal health, and safety of self and loved ones (sometimes including ongoing threat in the aftermath)
- family separation (the lack of information and knowledge about the safety, wellbeing and whereabouts of other people can be a significant cause of ongoing anxiety)
- witnessing the death, injury or suffering of others
- extended isolation from information, failure of information/communication channels and networks, outage of telecommunication networks and electricity (preventing internet access) and loss of informal communication networks through lack of social contact



Figure 10 The multi-layered aspects of community

- extensive threat to, or loss and damage of, home, property, capital assets, livestock, businesses or sources of income
 - loss of essential services, including electricity, that may result in loss of foodstuffs, inadequate heating and cooling, lack of access to money and purchasing ability, and restricted access to information and communication pathways
 - loss of pets/companion animals
 - evacuation or dislocation from home, school, family and support networks
 - physical isolation and lack of transport due to road closures, bridge collapses and public transport closures
 - destruction, damage and/or failure of a range of physical and social infrastructure including historic and spiritual places
 - loss of future plans, hopes or aspirations
 - loss and disruption of usual routines and community activities
 - social problems induced by response and recovery support (for example, inequities of response and recovery, cultural inappropriateness, or the undermining of community structures or support mechanisms)
 - the language and stories (public discourse) framing the disaster (through media, VIPs, politicians, community)—along with relentless scrutiny
 - escalation of pre-existing issues such as social dislocation, poverty, belonging to a group that is discriminated against or marginalised, neighbourhood violence, family violence, mental health disorders, alcohol abuse
 - continued economic hardship due to an inability to resume income-generating activities
 - control measures, cordons and quarantine
 - coronial inquiries, royal commissions and legal class actions
 - eradication of pest animals/plants.
- The disruption to social infrastructure, normal routines and community activities in the aftermath of disaster creates a particular challenge for recovery. Examples include:
- inability to maintain income-generating activities
 - reduced quality, access and timeliness in the provision of education, health, childcare and other government and non-government services
 - inability to continue to live in the same home, street, neighbourhood, community
 - changes to recreational activities (cancelled, postponed, relocated)
 - increase in travel times and frustration
 - delays in the provision of care and other services provided in-home

- reductions in normal communication and social interactions, such as through service groups, Rotary, Lions or parent groups, kindergarten.

(adapted from Productivity Commission 2002).

Other references/resources

Disruptions may exacerbate old tensions or create new divisions or alliances within communities. This is discussed by Dr Rob Gordon in 'Community impact of disaster and community recovery.' (Gordon, 2009)

4.1.3 SOCIAL IMPACTS—CATEGORIES

Social impacts of disasters upon individuals, families, communities and workers are further described under the following categories:

- safety and security impacts
- shelter impacts
- health impacts
- psychosocial wellbeing impacts.

Safety and security impacts

The loss of life, injury and threats to safety as a result of a disaster impact upon individuals and communities. Danger to life, and threats to safety, may continue while the recovery operation is underway.

The threat of loss of safety due to an imminent, expected or ongoing disaster may also have an impact on psychosocial wellbeing. The nature of the emergency impacts on this; for example, 'the malicious intent and unpredictable nature of terrorism may carry a particularly devastating impact for those directly and indirectly affected' (Butler, Panzer & Goldfrank 2003, p. 4). Equally, a traumatic bushfire, which continues for long periods of time and is highly unpredictable, or an earthquake, after which long-term and continuing aftershocks threaten homes, buildings and the safety of the community, all escalate community safety concerns. Securing a surety of access to basic living needs (such as social order, food, water, clothing and access to money) is similarly of enormous concern.

Shelter impacts

For displaced people, safe, alternative accommodation when their homes have been damaged or destroyed is a critical consideration, both in the immediate aftermath of the emergency and often for many weeks or months beyond. Issues such as finance, insurance, and rebuilding or relocating compound the complexity of shelter impacts.

Health impacts

Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity (WHO 1948 in IFRC & International Federation Reference Centre for Psychosocial Support). It is

an inalienable right of all people without any regard to race, religion, colour, nationality, sex or origin. The impact of disaster from a health perspective includes deaths and injuries, as well as exposure to diseases and environmental hazards (for example, contaminated water, diarrhoea, viruses, influenza, chemicals and dust).

People affected by a disaster may require a wide range of health services, and people with pre-existing health needs may require additional support from service providers. This level of servicing can be difficult if medical staff and infrastructure have also been impacted.

The number of affected individuals may be significant and this can have an impact on the local health services' capacity to meet demand. The level and quality of care can also be severely impacted. For example, people may be evacuated and become isolated from their usual health care providers, medication and personal support systems; medical infrastructure may be damaged and fail; case notes may not be accessible; and regular staff may be diverted to assist with the disaster.

Health-specific threats or disasters may also significantly threaten the functioning of the social system. Pandemic influenza, for example, is an emerging threat in the globalised world we now live in, and, as with any contagious disease (human, animal or plant), one of the biggest psychosocial effects is that of uncertainty.

It is important to consider the physical and psychological health needs of recovery staff and volunteers, and to establish and encourage a strong focus on self-care throughout the recovery period. People will likely be working for long hours in highly stressful environments and may be experiencing their own grief and trauma as well as that of other people. If negative health impacts are to be avoided or mitigated, appropriate workplace health and safety procedures, inductions, briefings and debriefings and psychological support should form key components of plans for managing staff and volunteers.

For further information about care of staff and volunteers see Section 3.5.2 Resource management (Human resources).

Other references/resources

For more information about the provision of health services, see *Disaster Health* (AIDR 2011).

Psychosocial wellbeing impacts

Psychosocial impacts can be very broad and may be a result of how a disaster affects people's emotional, spiritual, financial, cultural, psychological and social needs as part of a community.

“ Everyone who has experienced or witnessed crises is likely to be affected in one way or another. Reactions may be shock from the actual event; grief reactions to having lost loved ones; feeling a ‘loss of place’ and feeling distress due to other consequences of the crisis. The extent of reactions varies between individuals and whole communities, as does the need for responding interventions ...

Following a crisis, people commonly experience a loss of confidence in the norms, networks, and mutual trust in the society that is supposed to protect them and provide for interaction between themselves and institutions. This feeling has been defined as a ‘loss of place’.

Perkins & Long in IFRC & International Federation Reference Centre for Psychosocial Support 2009.

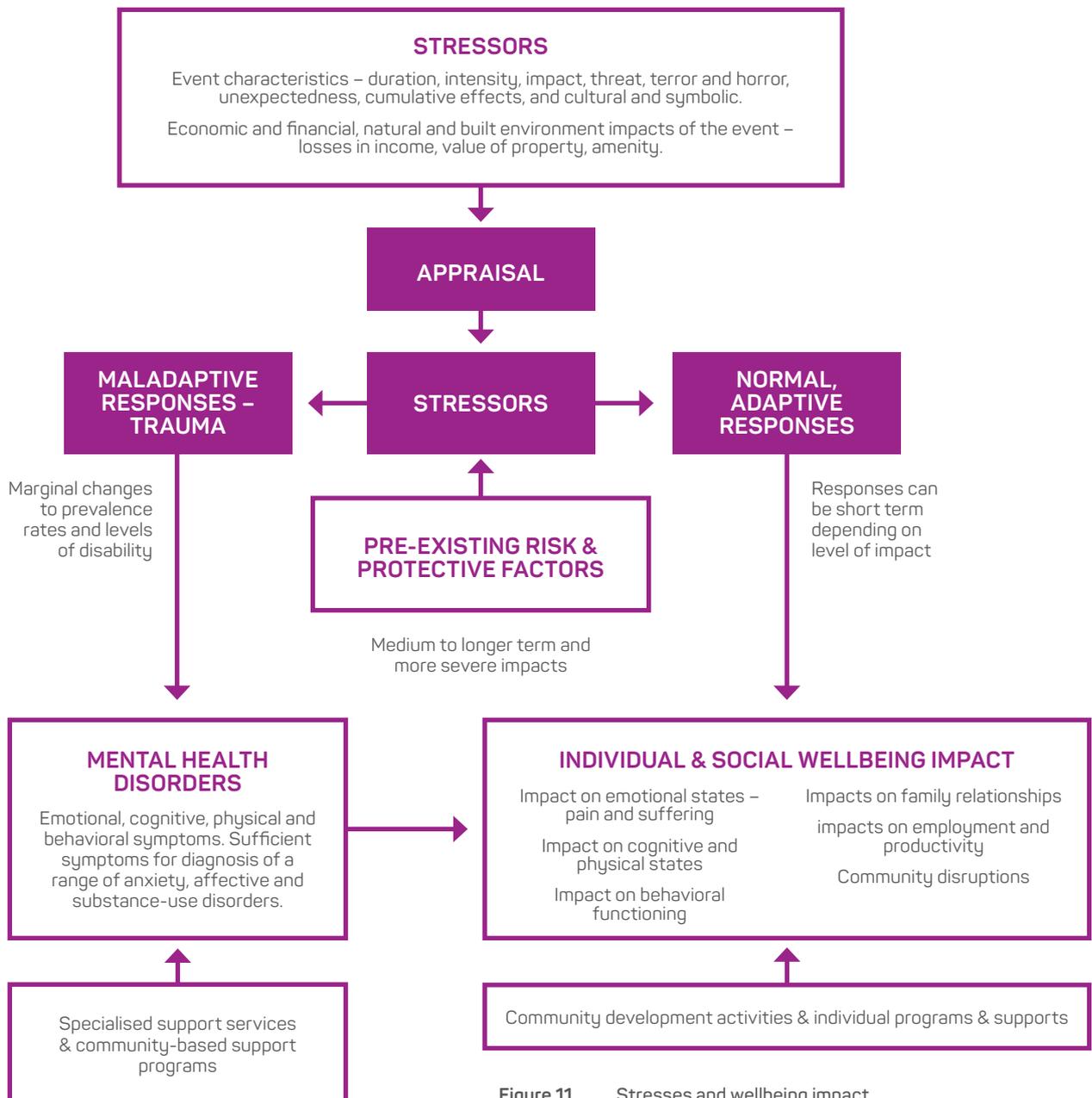


Figure 11 Stresses and wellbeing impact
Adapted from the Productivity Commission 2002

An outline of the psychological processes involved in response to an emergency event is illustrated in Figure 11. Pressure from a range of factors (stressors) impact on the individual as stresses. The majority of people experience normal adaptive responses, which are short-term and have low severity.

A dynamic relationship exists between psychological and social relationship/infrastructure effects, each continually interacting with and influencing the other.

More detailed information on psychosocial impacts can be found in Section 2.4.2 Recognising complexity (Health and wellbeing). The information focuses primarily on the normal, adaptive responses, which impact to varying degrees on individual and social wellbeing. Maladaptive responses are briefly outlined at the end of the section. (see Implications for mental health). Advice and guidance for psychosocial support and programs is included within Section 2.4.2 under Psychosocial impacts.

4.1.4 THE SOCIAL ENVIRONMENT – SUPPORTING RECOVERY

Effective social recovery is critical to recovery in all other environments and is essential to future community sustainability.

Recovery activities begin spontaneously within a community and it is the role of recovery agencies to provide structure and resources to support, integrate and coordinate these spontaneous efforts.

This section outlines the range of social recovery activities and services that address aspects of safety, health and psychosocial wellbeing. These activities may focus on a particular geographic location or community of interest and be implemented through various means of service provision, including virtual activities. They may need to take special account of geographically dispersed communities following a disaster, as well as people within a community whose need for support may not be immediately apparent.

For a checklist for recovery managers working in the social environment see Toolkit 2-1 Community recovery checklists – Checklist 12 Social environment.

Guidance for developing social recovery activities and services

The *National Principles for Disaster Recovery* in Part 2 offer guidance for the provision of all recovery activities

and services, including those designed primarily for the social environment.

A collaborative international literature review into the early to mid-term stages of disaster recovery, undertaken in 2007 (Hobfoll *et al.*, 2007), identified five empirically supported principles to guide intervention efforts in recovery. The five principles are concerned with:

1. promoting a sense of safety
2. calming (providing reassurance, strategies to reduce worry, fear, distress)
3. enhancing self-efficacy and community-efficacy, giving people a sense of control over positive outcomes
4. promoting connectedness, encouraging support networks, helping people to feel part of their community
5. instilling a sense of hope and optimism for the future.

Ensuring that these five principles underpin recovery planning increases the chances of effective individual and community recovery.

Recovery plans also need to have agreed timelines and outcomes to enable monitoring and evaluation. (See Part 3: Planning for recovery)

Effective recovery is strongly influenced by very practical issues such as food, housing, jobs and financial security. As a general rule, the more the community can be supported to rebuild the social and physical infrastructure, to return to their jobs and schools, and to regain financial stability, the greater the benefit for their wellbeing and overall recovery.

In the immediate phases of relief and early recovery, agencies can make proactive decisions about supporting the community's anticipated social needs. These decisions will be based on knowledge and experiences from previous disasters, coupled with a sound understanding about the community, the consequences of the disaster and the community's capacity to meet its own needs.

Recovery needs evolve and change, so recovery practice needs to be directed by ongoing needs assessment, monitoring and action research evaluation processes. Recovery activities and services should be developed through a community-led process that engages with the local communities' needs and future aspirations, their capacity to address those needs and aspirations, and additional support required.

In some cases, there may have been pre-existing issues and unmet community needs that precede the disaster and are amplified by it. In these cases, there may be a host of community advocates and elected officials who emerge through the recovery dialogue. Therefore, when planning social recovery activities and services, recovery agencies should understand the pre-existing conditions of a disaster-affected community, including the:

- socioeconomic strengths or disadvantages within the community

- location and access to existing services
- minority and/or excluded groups
- local community organisations, services, formal and informal networks, and representative structures to be used for the provision of relief and recovery activities
- developmental aims and aspirations of the community into the longer-term recovery activities and the plans for transition into developmental work
- community development work (including emergency preparedness) already being undertaken
- history of emergencies and incidents in the area that may reduce people's ability to cope.

Recovery agencies should also consider:

- the nature of the emergency (for example, whether there is likely to be a criminal investigation (terrorism, mass murder, arson or malevolent intent, technological failure) or civil legal proceedings)
- the scale, impact and public perception of the emergency
- communities of interest.

Government assistance—supporting social recovery

A number of Australian Government agencies support social recovery by providing free advice and assistance to individuals and communities impacted by a disaster.

The Department of Social Services (DSS) provides a range of counselling and intervention support services for individuals and families experiencing mental health issues. Specialist services, such as the Family Mental Health Support Service provide early intervention support to vulnerable families with children and young people up to age 18 years who are at risk of, or affected by, mental illness, including families experiencing trauma as a result of a disaster.

DSS also funds Commonwealth Financial Counselling services which are delivered by community and local government organisations nationally. Services are free and may include direct casework, advocacy and/or negotiation, referrals and community education. Individuals can call the Telephone Financial Counselling Helpline on 1800 007 007 for assistance.

DSS provides accommodation and case management services to newly arrived humanitarian and refugee entrants in their first six to twelve months in Australia through the Humanitarian Settlement Services (HSS). HSS service providers assist in an emergency by linking people to appropriate support organisations. Emergency contact details are provided to clients by their service provider on the client's arrival in Australia. Further information on the assistance that may be provided by DSS to people impacted by a disaster can be found at: www.dss.gov.au.

The Department of Health has an online mental health portal providing people with lived experience, carers and health professionals (www.mindhealthconnect.org).

au). The Department of Health can also issue incident-specific clinical advice or expedite approval to practice at an alternate location for general practitioners in areas affected by the disaster. Further information on the assistance that may be provided by the Department of Health to people impacted by a disaster can be found at: www.health.gov.au.

The Department of Agriculture and Water funds a Rural Financial Counselling Service, which provides free financial counselling to primary producers, fishers and agriculture-dependent small rural businesses, who are suffering financial hardship and have no alternative sources of impartial assistance. Counsellors can assist clients experiencing financial difficulties created by natural disasters, or who have longer term financial difficulties. Counsellors can provide clients information about government and other assistance schemes, and where appropriate can refer clients to the Department of Human Services and/or to professionals for personal, emotional and social counselling. Assistance is provided on an ongoing basis and could be highlighted to clients as needed. Further information on the assistance that may be provided by the Department of Agriculture and Water to people impacted by a disaster can be found at: www.agriculture.gov.au/.

For further information on government assistance in supporting social recovery in local and state jurisdictions, refer to the information on Jurisdictional arrangements for community recovery on Page x and the relevant sections on local and state government support in this handbook.

4.1.5 SOCIAL ENVIRONMENT RECOVERY ACTIVITIES—OVERVIEW

Individuals and communities have inherent strengths, assets and resources, which should be recognised, valued and used in all aspect of emergency management practice. Social recovery processes seek to support communities by building upon those strengths, and by viewing people as survivors in charge of their own lives, not as victims.

Following a disaster, affected individuals and communities may require the provision of specific recovery activities and services. When developing activities, it is important to identify people who are, or may become, the most vulnerable to the impacts of disaster to ensure their needs are recognised, prioritised and addressed. All recovery activities should be integrated and coordinated to ensure that appropriate referral mechanisms are established.

Effective recovery relies on people being able to access accurate and timely information through effective recovery communication processes and plans.

4.1.6 SOCIAL ENVIRONMENT RECOVERY—CATEGORIES

Activities and service delivery depend on the nature and scale of the event and the pre-existing and new (resultant) community needs and aspirations.

As with disaster impacts, recovery activities and services in the social environment are developed in the categories of:

- safety and security
- shelter, including accommodation in the short, medium and long-term
- health, including medical, allied health and clinical services, public health (water, sanitation, hazardous materials, food security, mental health support and health promotion activities)
- psychosocial support, including individual and community activities and services.

Safety and security

Social order and strong governance provide the sense of safety that people require to reduce their anxiety about the future. Aspects of civil order are primarily addressed by state/territory or federal (in the case of terrorism and offshore disaster) police forces and are not covered in detail here.

Social recovery activities to address safety and security may include:

- provision of timely information about safety, protection issues and mitigation actions to address emerging safety and wellbeing issues
- demolition and/or securing of damaged buildings (see Section 4.2 Built environment)
- support during restoration of essential services and transport
- emergency and/or temporary shelter, accommodation and housing
- security services, which may be required in and around evacuation and relief centres and for overseeing the distribution of cash grants
- protection issues for children who as a result of the disaster are orphans or separated from their families and require care and protection
- maintenance of safe working environments, as well as safe environments for vulnerable people (for example, ensuring 'working with children check' for all workers).

Shelter

A paramount concern for displaced people is to have safe, alternative accommodation when their homes have been damaged, destroyed or are inaccessible due to contamination or ongoing hazard threats, or if they are visitors from other towns/states or overseas countries. Access to basic living needs such as food, water, clothing and money are also required for people to feel secure.

Ensuring displaced households and individuals have appropriate shelter (accommodation) is a key to ensuring their safety and supporting the commencement of their recovery. Accommodation arrangements may range from short-term to long-term.

The type of accommodation provided depends on the remaining undamaged, accessible and appropriate infrastructure, as well as on the level of demand and the availability of alternative accommodation options. It may also depend on people's circumstances. If they are travelling they may need assistance to get home, or they may need assistance to get to other family members elsewhere.

Section 4.2.2 The built environment—supporting recovery discusses planning and specific issues regarding buildings.

It may be that short-term, medium-term or transitional accommodation is not able to be sourced within the local area. This can be the cause of further disruption if, for example, children are not able to attend their school or workers are required to travel long distances from temporary accommodation to their workplace.

The majority of displaced people choose to stay with family and friends wherever possible. These types of immediate and ongoing living arrangements can place pressures on displaced and host families through co-existing in shared and/or cramped environments for extended periods. What is lost in these make-do situations is the space and opportunity for privacy, quiet reflection and processing of experiences, and the resumption of usual roles within family structures.

Spontaneous offers of accommodation in caravans, granny flats and spare rooms of homes often occur in high-profile disaster events. Planning needs to determine the agency that will take responsibility for managing and coordinating these offers equitably and ensuring that all accommodation meets consistent standards of safety and suitability for the duration of the displaced person's stay.

Most people whose homes have been destroyed or significantly damaged prefer to return to their house blocks or farms to be as close as possible to their home sites, livelihoods and communities. Returning home after an evacuation period can be stressful and traumatic because lives may have been lost, homes destroyed or damaged, landscapes changed or familiar points of reference gone, and physical evidence of the disaster may still exist.

If people's homes are cordoned off for a long period of time as a result of a criminal investigation or contamination, recovery managers must consider how to support people to return home. For example, when residents in Manhattan near the World Trade Centre were allowed to go home after the 9/11 attacks, the American

Red Cross deployed personal support teams into apartment blocks to assist with the transition.

Recovery managers should:

- keep accurate and up-to-date records of where people relocate and their contact details
- organise emergency accommodation in conjunction with local agencies, and preferably arrange for transitional or longer-term accommodation on home sites of those people whose own homes are not habitable
- consider how transportation may occur
- ensure privacy is respected and maintained at all times
- establish a referral mechanism for psychosocial support (if appropriate).

Additional support and assistance may need to be provided to a proportion of the population who may find it difficult to make decisions and adapt to new circumstances.

Emergency and short-term accommodation

Emergency shelter provides security and personal safety, protection from the climate, and enhanced resistance to ill health and disease. It is important to human dignity and in sustaining family and community life as far as possible in difficult circumstances (Sphere Project 2011).

Where events cause dislocation from or destruction of the primary place of residence, it is important to provide access to safety and shelter as soon as practicable. Therefore, according to local arrangements, the primary task is either to establish evacuation/relief centres or to identify and source alternative accommodation options. Emergency accommodation is usually planned for within local recovery plans and organised and provided locally. It is often provided by friends, family, community, business or government and non-government organisations.

Additional resources need to be provided to support the conditions of emergency accommodation through the provision of short-term supplies of water, food, hygiene facilities and goods, medications, personal needs such as glasses and walking frames, clothing, bedding and other necessities.

Accommodation may be provided in evacuation/relief centres, hotels, motels, caravan parks, houses, transportable accommodation units, flats.

Catastrophic events may require the provision of tents or camps established by the army, or the provision of shelter modules via international humanitarian agencies, such as the Red Cross.

Following the cessation of the provision of emergency accommodation services in the immediate relief phase, affected people may continue to have urgent accommodation needs, due to limited housing options and resources.

The timeframe for providing emergency accommodation can range from days to weeks. It is usually planned for the relief stage, but in some cases emergency accommodation has transitioned into medium-term or interim accommodation. This has occurred due to limited alternative options, when housing and accommodation services are unable to meet demand.

Interim/medium-term accommodation

Depending on local and/or state/territory arrangements, disaster-affected people may receive assistance to access interim accommodation if their primary place of residence is destroyed or damaged by an emergency event and is not habitable. Interim accommodation can be in a house, flat, caravan or similar and can continue for extended periods of weeks, months or longer prior to permanent housing becoming available. In some cases, interim accommodation may transition into permanent housing.

Interim accommodation can also be provided by friends, family, community, business or government and non-government organisations.

Permanent housing

Permanent housing includes the range of normal housing options (for example, owner-occupied homes, rental properties, public housing or equivalent). Options for specific households and individuals may differ to the pre-emergency state.

People may need assistance to make decisions about rebuilding, or selling and relocating.

Health

Health response and activities (including the details of medical and health services and arrangements) are fully covered within each state/territory health plan, which is usually a subset of the emergency plan, so they are only briefly described here to inform recovery agencies. Although the recovery manager is not responsible for provision of health activities/services, close liaison and coordination is important.

In keeping with local health plans, where additional primary health care is identified as a need, field clinics may be established and staffed by registered general practitioners, nurses and paramedics. Additionally, clinical health services may be provided in the home or through outreach services.

Clinical health services, including general practitioners and other allied health providers, hospitals and rehabilitation services, may need to provide a range of services including:

- immediate and ongoing care for those injured or affected by the event
- management of individuals or groups that may have been exposed to hazards (such as chemicals, dust or smoke), suffered traumatic injuries (such as burns or blast injuries) or are traumatised by their experiences

- continuity of health services for those who are reliant on ongoing medical care within hospitals and community settings (for example, ongoing disease treatments, prescriptions, wound dressings, dialysis)
- monitoring and medical support for the response and recovery workforce.

Public health services, which have a preventative focus and provide community information on health and safety assistance, are usually provided by the relevant local, state or territory agencies, and cover a range of activities including:

- communicable disease issues—surveillance and review of morbidity that may be occurring in the community and subsequent implementation of interventions such as vaccine programs, if, for example, there is an increase in diagnosis of influenza or hepatitis A
- health protection/environmental health—air quality, food and water inspections and advice (for example, to boil water, water tank quality, disposal of spoiled food stores, review of food preparation procedures in welfare centres)
- inspections and review of sewerage and other contamination issues that may impact on the health of the community
- health promotion activities, such as information and advice about heat stress, clean up, health hazards (such as mould and asbestos), and other activities that aim to enhance self-care and address emerging and/or ongoing hazards in recovery.

Psychosocial support

The impacts of a disaster on the physical, economic and emotional state of people are variable. Psychosocial support commences spontaneously within communities following a disaster. Disaster-affected people receive assistance from their families, friends, colleagues and community organisations.

Government and non-government organisations can provide individualised and community development programs to build community wellbeing. This is termed the 'psychosocial recovery response'.

Whatever type of psychosocial service model is implemented, individualised support programs need to be closely tied to community development programs so that support services can move smoothly between individuals, groups and the community as required.

Psychosocial activities throughout the phased continuum of recovery range from providing early relief via personal support services to addressing the emerging medium and longer-term recovery needs (such as supporting families to function, helping people to return to work and school, bereavement support, livelihood-orientated activities, recreation, social, spiritual, cultural and sense-making activities). Some of these are described in this section; others are covered in the sections which consider the built, economic and natural environments.

“ Psychosocial support activities should be planned for whole communities, focusing both on individual and community needs, and on their resources to cope and recover. Such activities can help individuals, families and communities to overcome stress reactions and adopt positive coping mechanisms through community-based activities.

IFRC & International Federation Reference Centre for Psychosocial Support 2009.

Psychosocial support can also be used as an entry point to recovery services for the affected population and as a platform for all other recovery environments.

Figure 12 illustrates individual support activities (such as single points of contact (with people), service coordination and case management) and community support activities (such as relief and recovery centres, community recovery committees and community development activities). All these types of activities encompass the psychosocial recovery response.

The model shown in Figure 12 follows the 'umbrella of care' (Raphael 1986) and uses processes for developing the social infrastructure to deliver the 'whole person' care required to effect recovery from a disaster (Gordon 2004b).

Psychosocial services following a disaster

Psychosocial activities and services for recovery are provided for:

- individuals and households
 - psychosocial support (for example, psychological first aid, personal support services, childcare services, registration, information, bereavement, spiritual care)
 - practical support (transport, access, communication, accommodation, personal needs, water, food, clothing)
 - information
 - health
- community development activities/projects—a range of very simple, low-cost community development options provide the foundation for the establishment of a meaningful disaster recovery program (for example, assisting in re-establishing social connections and functionality through group and community activities, including neighbourhood barbeques, street meetings, school activities, community recovery planning forums, spiritual, social and sporting events, ceremonies, planning for remembrance activities, virtual forums, impromptu displays).

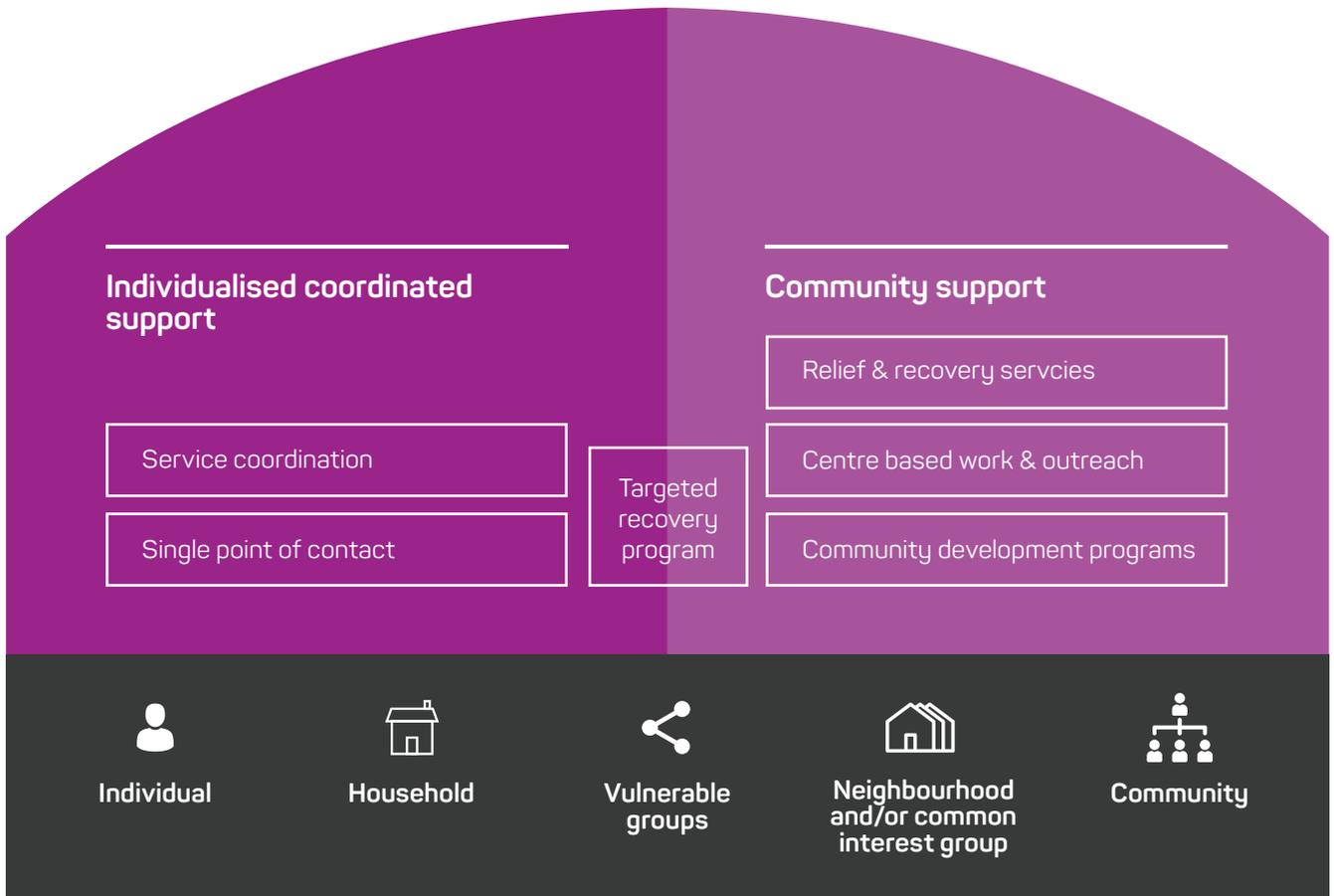


Figure 12 Psychosocial recovery—balancing individuals, households, neighbourhoods

Individuals and households

A number of terms are commonly used in Australia as part of the spectrum of psychosocial activities, including ‘psychological first aid’, ‘personal support services’ and ‘mental health intervention’ or ‘referral’. (Although it is important for recovery workers to be aware of the providers and referral processes for accessing mental health services for community members as needed, this field is a specialist field and is only described briefly within this handbook.)

The 2009 Black Saturday bushfires in Victoria provided an opportunity to implement a three-tiered training and intervention program to mirror and enhance the implementation of the Victorian Psychosocial Recovery Framework (DHS 2009). These tiers reflect differing levels of support required for increasingly more problematic reactions to trauma:

- Level 1 activities/services are aimed at the broad community in the immediate aftermath of a disaster and include things like personal support services and psychological first aid delivered by a range of appropriately trained emergency relief and community members
- Level 2 services are delivered by primary care workers to individuals in need

- Level 3 interventions are delivered by specialist mental health workers to people who require mental health support.

This handbook focuses on Level 1 activities and outlines a range of programs that might be implemented for individuals and households.

Personal support services

In Australia, the term personal support services refers to the specific role within the social recovery workforce, which provides a diverse range of practical assistance coupled with psychological first aid for the immediate and early recovery needs of individuals, families or groups of disaster-affected people.

Personal support services can be provided by a wide range of personnel from government and non-government agencies and local communities. These personnel can be employees, trained volunteers or trained local community members who have the capability and interpersonal skills to support people in distress. These personnel do not provide counselling or psychological services but should be able to recognise people with these needs and refer them to the appropriate service providers.

Specifically trained personal support personnel provide support at a range of sites, including:

- evacuation/relief and recovery centres/one stop shops
- call centres
- disaster sites (if it is safe to do so), such as mass casualty events, train or aeroplane crashes, bridge or tunnel collapse etc.
- reception or assembly points (airports, evacuation holding locations, hospitals etc.)
- community information forums (neighbourhood or community meetings)
- social events (barbeques, memorials, anniversary events etc.)
- centres for overseas repatriation (airports etc.).

Support is also provided through outreach programs. Some of the service provision considerations for the different sites are detailed in Operationalising Community Recovery.

Other references/resources

The Psychosocial Support in Disasters website details further information on psychosocial support in preparedness, response and recovery for both health professionals and the general public.

Psychological first aid

Psychological first aid is a key component of psychosocial support and provides a set of skills to underpin the effective provision of psychosocial support services. It is an evidence-informed approach based on common sense principles of support to promote normal recovery, and includes helping people to feel safe, connected to others, and calm and hopeful; facilitating access to physical, emotional and social support; and enabling people to be able to help themselves (Hobfoll *et al.* 2007; IFRC & International Federation Reference Centre for Psychosocial Support 2009; Brymer *et al.* 2006).

Psychological first aid is a 'humane, supportive response to a fellow human being who is suffering and who may need support'.

The Sphere Project and the Inter-Agency Standing Committee 2007.

The goals of psychological first aid are to:

- reduce distress
- assist with current needs
- promote adaptive functioning
- get people through periods of high arousal and uncertainty
- set people up to be able to naturally recover from an event

- assist early screening for people needing further or specialised help
- reduce subsequent post-traumatic stress disorder.

Community leaders and other key members of the community can be trained in the principles and delivery of psychological first aid to ensure that an appropriate response is immediately available within the community and to allow community members to work alongside emergency support workers to manage community needs.

Other references/resources

For further information on Psychological First Aid see *Psychological First Aid – An Australian Guide to Supporting People Affected by Disaster* (APS and ARC 2013).

Practical assistance as a component of personal support services

Key recovery agencies and personnel delivering personal support can provide, or ensure access to, a wide range of practical assistance. Practical assistance is usually available through evacuation, welfare, relief and recovery centres and through outreach programs and can include:

- comfort and reception
- information about what has happened, services available and plans that are in place
- access to available communication, such as telephones, satellite services, free internet access
- referral to other agencies
- reassurance and security
- material aid (food, water, toiletries, hygiene kits, bedding, clothing)
- time away for families
- child minding
- child/aged care services
- transport
- advocacy, legal aid, insurance
- pet care
- clean up
- meetings/forums
- interpreters and translated information
- organising funerals
- medication and medical care
- tracing relatives and loved ones.

Designing individual and household psychosocial support programs

Several issues need to be considered when designing and delivering personal support services:

- The majority of disaster-affected people are not used to accessing welfare or social services and may find

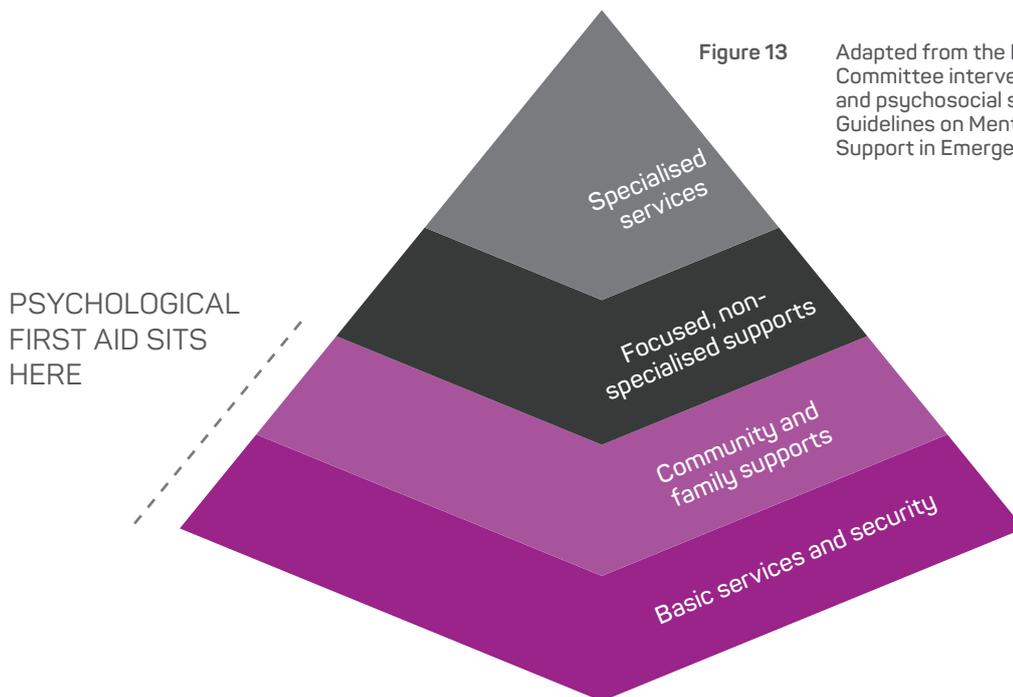


Figure 13 Adapted from the Inter-Agency Standing Committee intervention pyramid for mental health and psychosocial support in emergencies (IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings).

it difficult to approach or fully utilise emergency relief and recovery services.

- Some people may need specialist support that is not readily available or may require a complex mix of services to meet their needs.
- In identifying the need for individualised support services, recovery planning needs to consider the impact the event has had on local service providers and any disruption to their usual service delivery, and their capacity to meet the disaster need—there may be the need to develop strategies to counter the disruption and augment the availability of local community services to meet the surge demand.
- Individualised support programs can graduate in intensity from self-accessed information and personal support services to coordinated service delivery and case management approaches.

Key components in the delivery of individual and household psychosocial support programs include:

- availability
- consistency of delivery
- accessibility
- seamless service
- single point of contact.

Community development activities/projects

Many recovery-specific services are provided through relief and recovery sites (as detailed in Implementation of services/activities in Part 3). The activities below build on these operational recovery structures at the community level, primarily through utilising and complementing

the community development activities, networks and services that exist within an affected community.

Depending on the community's capacity to recover, in some circumstances it may be necessary to provide additional resources to support the community development component of the recovery process.

Community development programs can alleviate the expected escalation of health and socioeconomic issues, including continued loss of productivity and economic hardships.

Community development processes can assist all levels of government and other key recovery agencies to interact productively with local disaster-affected community groups throughout the recovery process and build closer relationships.

Throughout the medium to long-term community recovery processes, disaster preparedness and risk reduction activities must be included to assist in building community resilience towards future disasters. Undertaking these activities during a recovery process is highly applicable because disaster-affected people are often motivated to learn new protective actions. These activities also help to build feelings of control in the event of another disaster.

Funding for community development

Community development programs are generally funded by the relevant state/territory community services department.

Funding can support local agencies to facilitate community development programs and/or to employ community development officers to facilitate a range of

activities that will enhance the recovery of individuals and the broader community.

Managing community development projects

Community development programs can be managed by local government or lands councils, local community organisations or state/territory community services departments. The decision about the management of these programs is often related to local presence, community trust and capacity to manage.

Although local governments in some areas across Australia can ably support or lead recovery processes and activities, not all local governments are similarly resourced, skilled or knowledgeable about community disaster recovery processes. For some local governments, the focus on recovery may be primarily on restoring the built infrastructure at the possible expense of psychosocial community needs.

In addressing community needs, the following tasks need to be undertaken as part of the management of a community development process:

- Identify community needs by working with the communities to develop their local community recovery plans—this includes continuing to assess the evolving recovery needs of the local community and future aspirations, their capacity to address these needs and aspirations, and additional support required
- Identify the most vulnerable groups within the communities and address strategies to meet their needs
- Assist community organisations to identify the effects of the disaster on the organisation and their community
- Understand the capacity and capability of each organisation post-event and supplement the organisation with support, assistance with rebuilding and, if required, measures for variation to funding agreements
- Identify key community leaders
- Initiate and support key committees and working groups
- Scope, develop, implement and evaluate opportunities for adaptive change processes that support future socioeconomic opportunities
- Assist in accessing information and resources
- Assess, monitor and evaluate the overall recovery process.

Using existing services and networks

Following a disaster event when social networks and communications systems may have been destroyed, significantly damaged or impaired, disaster-affected people may be disconnected from their usual systems and networks. These networks may require support to regain their functionality to be able to reinstate an effective or stronger level of community connectedness.

Equally, new networks may emerge (for example, a bereaved community or a locally affected residents group). Community development activities need to engage emergent groups to enable their activities to become integrated within recovery processes.

Many local networks/agencies have a small resource base and may be significantly overwhelmed following a disaster, including staff who may have been personally impacted. This can result in local networks/agencies struggling to meet their ordinary business, let alone the escalation of needs arising from the disaster.

Local social and economic networks need to be actively engaged and supported throughout the recovery process. If existing community services and networks have been used in the relief and recovery phase to provide psychosocial projects or activities, the transition and exit strategies for recovery agencies is simpler and more direct. However, if additional recovery service systems have been constructed, more careful planning for the transition back to the existing services is required.

Examples of community networks that may take an active role in supporting community development recovery activities include:

- volunteer emergency services (for example, the Country Fire Authority, State and Territory volunteer fire services, State Emergency Service, Australian Red Cross, Salvation Army, Lifeline)
- community development or progress associations
- community and social service organisations
- religious and spiritual organisations
- economic and tourist bodies (farmers' and growers' organisations, chambers of commerce)
- child care, school, parent and educational organisations
- environmental groups (for example, Landcare, Green Cross Australia, employment initiatives)
- service clubs (for example, Rotary, Lions Clubs, Apex, Probus, Returned & Services League, Country Women's Association)
- arts and historical groups
- cultural groups
- sporting clubs and community recreation groups
- emergent networks based on the disaster itself (for example, the bereaved community, people hospitalised and/or displaced).

In addition, it is important to recognise the power of informal networks, such as those at pick-up and drop-off points at schools (or the school bus stop), shops/supermarkets/malls, in parks where people walk their dogs, livestock sale yards, football fields and sporting venues, cafes and workplaces.

Examples of community development psychosocial activities

Well-facilitated group meetings can support community groups and members of the community to become more engaged in strategically thinking about their longer-term recovery needs and how they would like to address their own needs with support.

To address the important recovery issues of family and community interaction, the organisation of social activities has proven very effective. Neighbourhood barbeques and local social events that make use of the arts, music, theatre or sporting activities all provide opportunities for people to mix, share their experiences and work cooperatively to plan for the future. Practical activities such as building fences or clearing weeds can also include a social component, and may be attractive to people who may not attend a 'social' event.

Other references/resources

For a description of a range of activities, see the State emergency relief and recovery plan: Part 4, Emergency Management Manual, Victoria (Emergency Management Victoria 2015).

4.2 Recovery of the built environment

The complex character of the built environment is highly regulated and legislated, has a mix of public and private service providers, and has evolved over a long period of time so that it incorporates facilities built to different standards. Ownership of elements in the built environment brings another layer of complexity. Parts of the environment may be owned by multinational companies, individuals, government, community groups and all manner of other entities.

Recovery of the built environment provides opportunities to build to meet the needs of the future environment. Recovery is likely to be staged to recognise the changing needs of an evolving and emerging community landscape. Reinstatement must be done in a way that benefits the community, and with a degree of flexibility that recognises that it happens within a dynamic environment.

Recovery of the built infrastructure is always a support function for community recovery. It supports the recovery of the social, economic and natural environments of the community.

An important distinction in the built environment is the term 'restoration'. The restoration of an essential service does not necessarily mean the recovery of the infrastructure supporting the service. Restoration of an essential service may mean 'patching' infrastructure or using temporary solutions. Restoration allows community life, individual life or services to resume, thereby assisting the recovery process.

Through partnership and cooperation, the aim of recovery of the built environment is usually to provide facilities and services to support and benefit the community's requirements. All recovery activities need to be undertaken in an orderly fashion and in a safe manner.

The environment in which recovery takes place is characterised by:

- relationships between the huge range of stakeholders
- necessary engagement with the right people at the right time
- all parties working towards the same objectives, which requires careful and constant communication
- the priorities of each party to the process, which can often be competing and opposing—particularly where a profit requirement exists for private entities that are operating alongside a government imperative
- cooperation and compromise, which are required because of differing drivers and priorities
- facilitation (rather than direction) of individual agencies and companies undertaking their roles in recovery—this is required for the overall recovery of the built environment.

Recovery also has impacts into the future:

- relationships built during recovery can lead to resilience of the community and its facilities
- experience of an event should guide future planning of land use, emergency management or community development. It is important to evaluate whether community facilities have performed well in the event and to ensure that lessons learned are taken into the future.

4.2.1 IMPACTS ON THE BUILT ENVIRONMENT

The built environment is broadly defined as those human-made assets that underpin the functioning of a community. With the relatively high dependence of modern-day communities on the built environment, large-scale disruption to these assets causes broad-ranging hardships for the community. This chapter identifies the effects of disaster on the elements of the built infrastructure and the services that rely on the infrastructure and how the community is impacted by the absence of any of these.

Damage to essential services—whether significant or small, and whether to commercial and industrial facilities, public buildings and assets, or housing—may disrupt both the commercial (economic and financial) and social life of the community. The direct and indirect costs of this disruption are discussed in Chapter 9. Rapid impact assessments are increasingly being used and coordinated among the multi-agency response and recovery interests after disaster. In addition to the economic and social systems that rely on the built environment, the networked nature of the

built environment means that few aspects of it are independent.

Elements of the built environment may be privately run or owned and operated by public agencies, and this has implications for the management of the recovery.

The community impact

Effects on the built environment impact on the activities of all who are involved in recovery, including:

- the community that is significantly affected by the physical effects of an event—it will be inconvenienced by damage to infrastructure and other services, which will frustrate efforts to affect speedy recovery; this may be reflected in decreasing community morale
- recovery and reconstruction workers, who, whether normally part of the community or not, may have to cope with compromises in operating conditions due to lack of power and other facilities—response workers will most likely come into contact with affected people

Community interactions with recovery workers

An understanding of community reactions assists recovery managers to plan for compromised operational conditions and prepares them for some of the impacts on the community that will become the focus of the recovery efforts.

Electricity transmission workers involved in reconnection of power after Cyclone Larry in Far North Queensland in 2006 experienced a high level of community interaction characterised by ‘highly aroused, emotionally motivated behaviour’ (personal communication, Rob Gordon, consultant psychologist October 2010). This was a result of people’s need to make sense and meaning through talking about their experiences—and to reduce uncertainty through information. This can be a very difficult situation for workers who have not been briefed on how people may react to a disaster experience. People may complain about services that the worker is not responsible for, and some simple skills and tips on reducing emotional behaviour are beneficial.

4.2.2 THE BUILT ENVIRONMENT—SUPPORTING RECOVERY

The built environment supports a range of services on which the community relies. Damage and disruption to the built environment inhibits the capacity of these services. These include:

- essential services, including water supply, wastewater removal, power, gas and communications
- food and merchandise distribution systems, which include markets, wholesalers and retailers—food and produce distribution may come to a standstill, at least temporarily

- supply chains that allow goods and supplies to be managed in and out of locations—this includes food, as well as material aid, reconstruction materials, fuels and freight-forwarding capacity
- the building sector, including insurers, builders, sub-contractors and suppliers
- the health care sector, including health insurance, medical practitioners, pharmacists, pharmaceutical suppliers and hospitals—as well as injuries from the event, there are additional problems for people whose regular life-support systems or drugs may not be available due to the loss of infrastructure
- education and training functions
- recreation
- housing, accommodation and catering systems
- financial systems, including banking functions.

These are very important networks for recovery operations and for broader community recovery. Restoration of any one of these can rely on functions in many of the others.

Damage to the built environment can also create consequential hazards that also need to be addressed. For example, leaking gas and exposed power lines can cause fires and contaminated water or asbestos exposure can lead to public health issues. In addition, damage to industrial and commercial facilities can cause loss of livelihoods and production, and damage to housing and infrastructure can cause personnel shortages as workers attend to their own losses.

Accommodation is a critical aspect of the recovery process. Cyclone Tracy in Darwin provides a well-known example of this. The repair of the city required a large workforce, but the loss of around 90 per cent of the accommodation meant many people who performed vital infrastructure tasks had to be evacuated to ease the accommodation shortage.

Specific physical effects

The following section describes the impact on the built environment under the categories:

- essential services infrastructure
- rural infrastructure
- residential infrastructure
- commercial/industrial infrastructure
- public buildings and asset infrastructure (adapted from Ministry of Civil Defence Emergency Management 2010 and Australian state plans).

The impacts described can be considered as twofold—those that are a direct result of the disaster, and recovery-related difficulties and impacts (particularly due to the interdependencies in the systems).

Essential services infrastructure

Essential services are also referred to (in different contexts) as ‘physical lifelines’ or ‘critical infrastructure’.

The Australian, state and territory governments have a shared definition for 'critical infrastructure', namely:

“ Those physical facilities, supply chains, information technologies and communication networks which, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact the social or economic wellbeing of the nation or affect Australia’s ability to conduct national defence and ensure national security.

AGD 2015.

Basic infrastructure is likely to be affected and may include damage to the supporting infrastructure for essential services, such as:

- communications and data network/systems—information, telecommunications, public media networks
- energy supplies—liquid fuel, electricity, gas
- water supply, treatment and sewage
- transport networks—road, rail, aviation, maritime
- food production and food/merchandise distribution
- health and community service sector—aged care, hospitals, health care facilities (general practitioners, chemists)
- sanitation—liquid and solid waste disposal
- drainage systems
- security—fire alarms, security lighting and cameras.

Damage to one of the essential services is likely to impact on others due to their interdependencies. Failure to coordinate the re-establishment of these essential services will cause difficulties and hinder recovery. For instance, without water or communications, electricity cannot be restored, and, conversely, without electricity, water and communications may not be able to be restored. Interim solutions may be undertaken before the longer-term repairs are made.

A 'criticality assessment' is the process of evaluating the criticality level of an infrastructure system and/or its parts. By applying the process, the aim is to gather and use information that can assist to identify and protect infrastructure and assets that are most important to continued service delivery. The assessment will consider the societal impacts as well as the organisational impacts on the service provider.

The Australian Government's (2015) *Critical Infrastructure Resilience Strategy* sets out two core policy objectives. The first is for critical infrastructure owners and operators to be effective in managing reasonably

foreseeable risks to the continuity of their operations, through a mature, risk-based approach. The second objective is for critical infrastructure owners and operators to be effective in managing unforeseen risks to the continuity of their operations through an organisational resilience approach. Implementation of the strategy is through a broadly, non-regulatory business-government partnership.

For more information, see Attorney-General's Department – *Critical Infrastructure Resilience Strategy: Plan* and *Critical Infrastructure Resilience Strategy: Policy Statement*.

Communication and data network/systems

Data transfer is essential for many aspects of commercial activity, community support and administrative functions. Communications systems failure creates a significant sense of dislocation and isolation in a community and an inability to deliver key messages and information to the public. The length of isolation can magnify the adverse impact and the capacity to recover. Recovery workers need to take this into account and may need to revert to hard copy and face to face communication until communication and data networks are restored.

Although many communications systems have back-up power, they are vulnerable when:

- towers for repeaters, mobile network base stations and transmitters are damaged (back-up battery systems only have a limited life of 20–30 hours)
- telephone systems (for example, hands-free telephones), internet and email services require power supplies—mobile telephones rely on batteries, which have a limited life.

Energy supplies

The consequences of loss of energy supplies may include:

- perishable food spoilage
- an impact on supply of essential services, such as water, sewerage and gas
- failure of communication and information technology-based systems (for example, public media and banking services)
- disruption to fuel distribution
- a high demand for portable generators
- security and safety concerns due to lack of lighting and loss of traffic lights and rail signals, which will compromise transportation
- an impact on commercial and industrial activities
- implications for the location of a recovery centre

- difficulties in maintaining accommodation
- problems for medically dependant residents who require electricity.

Implications for business and industry can be very costly following power outages, especially prolonged outages. Restaurants, other food outlets, food suppliers and food storage facilities can quickly suffer downturns in business. Businesses that typically rely on the tourist trade are particularly at risk of business failure.

Many farmers are impacted by prolonged outages; for example, if dairy farmers have no back-up generators they are unable to work their milking machines. Consequently, cows that go un-milked are open to a number of debilitating diseases.

Many agricultural businesses rely on tourist and backpacker trade for their seasonal workforce. If a community is impacted, many tourists move on to find casual labour elsewhere. During the south-west Queensland floods early in 2010, many tourists who were staying in accommodation not equipped with back-up generators simply left town and headed for other regions not impacted by the weather event. The mass exodus of tourists can have prolonged economic impacts on a region.

Water supply, treatment and sewage

Damage to the water supply system impacts on the quantity and possibly the quality of water available for community and commercial use.

Impacts of the loss of water include:

- sanitation systems will not work, which creates health problems
- firefighting is compromised
- businesses that are water-dependent cannot operate
- post-event clean-up operations are hampered.

Overflows caused by blockages and local flooding may lead to flooding of homes and businesses.

Transport networks

Transport networks, including road, rail, aviation and maritime, and the infrastructure that supports them, can be affected during an event. Consequences include:

- difficulty in accessing communities
- problems with delivery of supplies
- difficulty in accessing medical and other essential services.

Restoration of these networks is a priority in support of recovery.

After a disaster there may be road weight limitations, which may cause difficulties moving livestock from pasture and farms or moving fodder on to farms.

Food production and food/merchandise distribution

Following an event some households will have sufficient food and groceries to sustain them for a period of time, but the majority will not. For example:

- the food and groceries industry suggests that on average 95 per cent of households have between two and four days of pantry supplies (Bartos & Balmford 2010, p. 14)
- 40 per cent of meals are purchased and consumed outside the home (Bartos & Balmford 2010, p. 22)
- people in rural areas may have significant pantry supplies due to their experiences and locations (personal communication, Alan Edwards, Trusted Information Sharing Network, Food and Groceries Sector Group, October 2010).

The impact on the food supply chain depends upon the extent of the event. The food supply chain is very flexible and can respond very quickly where the event is regionally contained. However, in the affected area supplies may be limited due to the direct impact of the event and panic buying by the community. The food supply chain is also the primary channel to market for a range of essential household health, sanitary, cleaning and disinfecting supplies. Restoration of the food supply chain is a priority.

Health and community services

Health and community services are primarily delivered from premises within the built environment. Damage and disruption to these premises reduces the capacity of the service system to meet the existing and emerging health and psychosocial needs of the community. At the same time, a disaster event almost always carries with it the likelihood that people will be killed or injured and/or experience emotional trauma. The demand for medical and personal support is likely to increase, which will place extra burden on a community with an already diminished capacity.

Impacts within health and community services include:

- damage to hospitals, clinics and aged care facilities and/or their equipment—disruption to water, gas and power will also severely restrict the services these facilities can provide
- inadequacy of services of existing health care facilities for the number of patients and types of injuries; for example, specialist burns units are usually located in larger regional and metropolitan hospitals
- damage to supported accommodation facilities for housing vulnerable people (frail aged and people with disabilities), which may put them at higher risk of harm
- the need to evacuate people from health care facilities and other forms of supported accommodation—this becomes more complex if people are frail or ill or have special needs

- public health concerns that arise with the displacement of large numbers of people (including into temporary accommodation such as ‘tent cities’)—the interruption and disruption of utilities and sanitation creates a high risk of infectious disease outbreak.

Sanitation—liquid and solid waste disposal

The level of sanitation may well be severely compromised and result in the inability to manage wastes as normal. This can increase the likelihood of public health issues. In addition to contaminated water, hazards can result from:

- rotting food
- other contaminated materials, such as soft furnishings, papers and even building materials
- dead animals, including pets and farm animals
- human bodies

Security

Security infrastructure such as fire alarms and security lighting and cameras may all be impacted. Security issues following an emergency may also relate to a crime scene or coronial inquiries. The forensic requirements of these issues can hamper recovery of the built environment.

Looting may also be an issue:

Looting of any kind is rare in certain kinds of disasters in certain types of societies ...

There are occasional atypical instances of mass lootings that only emerge if a complex set of prior social conditions exist.

Quarantelli 2007.

Damage to buildings presents genuine concerns for the security of premises and possessions.

Rural infrastructure

Damage to rural areas can impact on livelihoods and on living conditions. For rural people, the loss of their homes may result in dislocation from their livelihoods. It may be very difficult for them to remain living onsite to maintain their enterprises.

The following aspects of rural infrastructure may be damaged:

- fences
- pasture
- machinery
- sheds
- irrigation infrastructure.

Other specific rural issues include:

- the length of time needed to restore livelihoods in rural areas may be extended
- there may be a difference between commercial and hobby farmers
- the impact on livestock by loss of fodder and pasture and the consideration to sell, agist or cull livestock may be foremost in farmers’ minds
- biosecurity can be compromised by damage to fences or movement of soil or water,
- timber and forestry assets may be damaged or lost.

Residential infrastructure

Residential losses can occur in the following categories:

- houses, home units, apartments, flats, sheds, mining camps
- nursing homes, hostels, aged-care facilities
- boarding houses, hotels, motels, caravan parks
- residences in commercial buildings and businesses.

Damage to accommodation contributes significantly to community disruption. Residential damage affects:

- accommodation for community members and the recovery workforce
- coordination of recovery and reconstruction operations when owners cannot be contacted—displaced people may not be able to access community recovery services.

In general, Australia’s building regulations have reduced risk associated with predictable events. However, there will certainly be substantial damage if a major centre with substandard infrastructure is impacted upon by tropical cyclones or earthquakes.

Commercial/industrial infrastructure

Much of the economic activity in a community is driven by the commercial and social networks that depend on the built environment. The quick return of small businesses is often a crucial indicator of broader commercial recovery. Demand on most commercial and industrial facilities increases during the recovery period but the capacity to meet the increased demand is often hampered by the damage to the built environment.

Damage or disruption to commercial facilities and infrastructure may inhibit the community’s access to the services and support provided by:

- transport
- banking and finance; for example, cash accessed by ATMs
- employment
- hospitals and emergency facilities
- waste management
- tourism
- supply chains, such as for food (supermarkets, warehousing and transportation offices), fuel,

hardware and building supplies, chemists and suppliers of other controlled substances.

Adverse effects of damage to commercial facilities can include:

- contaminated debris; for example, hazardous waste (asbestos)
- health hazards; for example, biochemical, animals, food.

Public buildings and asset infrastructure

For a community to function or to be viable, it requires operational public buildings and assets, including:

- community/neighbourhood centres
- schools
- kindergartens
- places of spiritual worship
- sporting clubs
- cultural centres
- entertainment venues
- restaurants and cafes
- heritage-listed properties and cultural icons.

Each facility has the potential to help considerably during the recovery but may be unable to perform its community functions if damaged. The community is reliant on the restoration or replacement of the above infrastructure to establish a sense of normality, recover and function based on community needs.

4.2.3 PRACTICAL STRATEGIES

In planning recovery, recovery managers must:

- be aware that essential services and infrastructure may be significantly damaged
- have contingency plans to allow work to be done, despite the immediate difficulties (including reduced transportation and communication services)
- recognise the strong links between infrastructure recovery and human/social recovery
- prioritise infrastructure restoration and its eventual recovery according to the importance of the service that the infrastructure supports
- recognise that people may be traumatised if they feel that their buildings have not protected them or if they have suffered loss as a result of the event
- recognise that these feelings of loss and deprivation will be heightened if the normal community structures for support are not in place, and if the damage to infrastructure places further threats on their continued wellbeing
- understand that reconstruction of the infrastructure by external parties can alienate the community unless the community is involved in the formulation of recovery strategies.

Build back better

The build back better principle underpins recovery in the built environment. Build back better encourages consideration of sustainable practices, which means investing in planning, designs, materials and community-led processes that enable reconstructed assets, buildings and homes to be more resilient in the event of future disasters. See Queensland Betterment Fund and Framework, QRA (2017).

Areas for community recovery in the built environment

Communities articulate many needs through recovery committees, and many of these may need to be supported.

Consideration of recovery of the built environment may involve:

- energy (production and supply)—electricity, gas, fuel
- transport—roads, airports, rail, ports, public transport
- communication systems—telephony (landline, public and mobile), radio networks, media networks (emergency broadcasters, community, commercial), data/SCADA (supervisory control and data acquisition), information technology, internet access, communication infrastructure, messaging about recovery
- utilities—water, sewerage, drainage, waste disposal and recycling (controlled and uncontrolled)
- commercial—retail (supermarkets, stores), banks/automatic teller machines, restaurants/food outlets, fuel outlets, building supplies, chemist shops/pharmacies, food producers (bakeries etc.), pubs, mechanical and vehicle repairers
- public facilities (public and private)—hospitals and medical facilities, aged care facilities, childcare, morgues, prisons, schools, police stations, fire stations, ambulance stations, State Emergency Services stations, places of worship (churches, mosques etc.), public toilets
- recovery operations—warehousing (building materials, food, donated goods, equipment), security
- accommodation—motels, hotels, housing, caravan parks
- animal welfare—wildlife, veterinary facilities, shelters/kennels, yards, feed, carcass disposal/disposal of animal products (milk, eggs etc.), burial pits
- rural—fencing, crops, farm dams, water decontamination, pasture conditioning, irrigation, machinery, sheds and buildings
- government administration—council offices, recovery centres, state government
- recreation—sporting clubs, community group halls (scouts etc.), public spaces (parks etc.).

Key steps to begin the work that needs to be undertaken include:

- understand what needs to be done to recover

- identify external constraints and internal organisational restraints
- prioritise tasks
- put in place short-term/interim fixes
- identify the resource and material requirements
- strategic planning (including longer-term recovery outcomes).

See Toolkit 2-1 Community recovery checklists – Checklist 14 Stages/key process elements in recovering the built environment.

The implications and interactions are illustrated through the identification of some of the challenges or obstacles, key tasks for service providers or recovery committees, and the critical issue of communication. The iterative process of establishing and re-evaluating priorities through monitoring and review means that these key elements do not flow as a linear sequence. In addition, all issues have a time implication and prior planning and identification of critical path disruptions can make a significant difference (Brunsdon *et al.* 2004).

Teamwork

The diversity of elements, ownership and interconnectedness within the built environment requires close and deliberative teamwork. Relationships must be built and nurtured to enable sound decision-making where there is overlap between activities or conflict between priorities. This is the case even in the recovery of small communities.

Key aspects to keep in mind to enable this include:

- the common goal—the benefit of the community
- articulated and understood needs of all parties
- articulated and understood expectations of all parties
- articulated and understood strengths and capacities of all parties.

Synergies

In developing strategies for the recovery of the built environment, some activities are closely connected and rely on completion of tasks by other agencies or companies. For example:

- the provision of power, water, telecommunications and access are often interconnected
- where deaths have occurred, recovery operations must be tailored to the requirements of recovery workers dealing with, for instance, identification of victims, crime scene investigations, coronial enquiries and collection of evidence
- builders, insurers, regulators (including local governments and the Environment Protection Authority) and recovery workers dealing with

environmental hazards and debris clearance must work together to achieve their outcomes.

A declaration of a disaster or emergency can cut through many bureaucratic requirements to accelerate the responses of government agencies. It is important to consider whether or not a declaration has been made. Arrangements for a declaration are in place at state/territory level. For specific requirements, see individual state emergency management plans.

4.2.4 ASPECTS OF RECOVERY OF THE BUILT ENVIRONMENT

Make safe

Each step in recovery is complex. Unless carefully managed, this complexity can compromise safety and security. Throughout recovery, therefore, it is important to maintain normal safety measures and procedures (for example, electrical isolation procedures, ensuring that only appropriately qualified people perform work).

The term 'make safe' implies many different activities and can include:

- classifying structural soundness
- establishing safe areas by removing hazards
- maintaining health, public health and safety standards
- obtaining emergency services clearances to enable access
- isolating electricity and gas etc to ensure that hazards don't arise
- managing access and egress routes
- receiving suitable sign-off
- requesting domestic and industrial consumers of gas, water and electricity to shut off their equipment to preserve limited supply. This may be difficult where consumers' facilities have been extensively damaged, or where the consumers have been evacuated.

Provide essential services for those who are working on site

Recovery operations make extra demands on the already impaired infrastructure. Some aspects that must be considered as support for recovery workers include:

- utilities and staging areas for receiving deliveries and assembling components
- accommodation
- power for tools, computers etc.
- essential services (water, food, shelter, latrines, sanitation)
- psychological first aid (support) where the environment may lead to exposure to stressful situations
- medical first aid
- fuel for vehicles and fixed plant

- communications.

Energy supplies, such as electricity, gas and liquid fuels, will be restored to the distribution systems in a systematic manner, taking into account pre-determined priorities and agreements. Some households may be self-sufficient and have a reduced reliance on external supplies.

Clean up

A significant volume of damaged material must be removed prior to the construction of new facilities. In many cases this operation must be performed to restore amenity to the community.

Clean-up operations include:

- removal of debris and other matter:
 - debris removal—green waste, building waste
 - removal of rotting food from shelves and refrigerators in commercial establishments and houses (both attended and unattended)
 - removal and disposal of hazardous substances (for example, asbestos-containing material, dust from fluorescent tubes)
 - removal of enviro-hazards (for example, oil or chemical spills, copper and arsenic, treated timber, lead, silt, flood debris which may become a future fire risk)
 - disposal of carcasses from pets or agricultural animals—this may require special disposal and environmental health officers should be consulted for appropriate areas and requirements
 - processing waste—grinding, compacting, recycling
 - disposal of medical waste, including pharmaceutical waste—this may require special supervision and disposal at secure sites (consult environmental health officers)
 - managing and removing debris that presents a safety hazard to the community and may require special steps to remove (for example, glass in school playgrounds)
- handling, safety and regulation
 - a need to take care with removal, handling and disposal of hazardous substances (for example, lead or asbestos-containing products)
 - calculating the logistics of moving the waste and debris—transport and heavy equipment within built-up areas and high traffic levels at the disposal site may impact communities
 - consulting the Environment Protection Authority (obtain sign-off) for some disposal processes
 - assigning landfill and burial sites—these may have to be new sites and would be subject to permissions and approvals
 - obtaining specialist services/contractors/expertise
 - obtaining suitable sign-off at the commencement of the work or on completion of debris removal—the requirements for these may vary for different services, and in different jurisdictions

- disinfecting water-damaged facilities and other areas where there is concern about continuing health and amenity of the facility
- maintaining normal safety measures through all operations
- site-specific issues
 - work performed on and around heritage-listed facilities may require special permissions
 - working in an environment affected by coronial matters—where there are deaths associated with the event, or crime has been associated with the event, the access to the site may require clearance from police or coronial staff.

Collecting information for damage/needs assessment

Collection of information from the community is required at a number of times during recovery and by many agencies and companies participating in the recovery (see Section 3.3.4 Recovery project cycle (Needs assessment)). This information is used to monitor the demands on the services needed in the recovery. However, the community can be inundated by requests for information and become resentful of it.

When managing data, recovery managers should consider that:

- a central point for information dissemination and collection can be helpful—this permits everyone involved in the recovery to access and supplement the information
- a centrally held register of people who have been part of the recovery effort and who offer professional advice can facilitate information sharing
- partnerships are required so that data collection is sensitive to the affected community.

Issues that may arise include:

- Subject matter experts are required for some assessments—some of these come from the private sector through volunteer registries or professional associations: the nature, location, extent and timing of the event determines the range of experts required.
- Structural checks may be required for buildings—in residential buildings to determine whether people can live there, or in commercial buildings to determine whether people can work there.
- Earthquake engineering is a particularly specialised area of structural engineering and care should be taken to ensure that assessors have the required expertise.
- It is sometimes not clear whether empty buildings have been assessed, but a national system for marking properties that have been assessed is in place—it indicates whether assistance is required, whether there are deaths associated with a property, or whether temporary shelter is needed.

- Data on damage sourced from the media may be distorted—media outlets, however, often have resources such as helicopters that may be used for some qualitative data collection (this requires a suitably qualified person to accompany the media representative).
- Any and all agencies can be involved in data collection, so partnerships and coordination are critical.

Assessments may be categorised into three separate activities:

- initial assessment (within the first few hours)—assessment activity could be airborne, such as via the use of a helicopter, and provides a general overview of the extent of the damage
- rapid impact assessment (within the first 24 hours)—assessment activity could be ground-based (for example, divide the affected area into sectors when driving the street and use multidisciplinary teams to ensure efficiency and best resource allocation in mapping needs), followed by
- detailed assessment (within the first 72+ hours)—this is needed to develop detailed recovery strategies. Depending on the type of disaster, further impacts or changing circumstances, further assessment may be necessary.

Complexities of collecting and processing data

Information collected may be required by a range of agencies, and may include data on:

- power
- water
- gas
- fences
- roads
- rail
- communication networks (exchanges etc.)
- hazard footprints, locations
- displaced people
- food supplies and food and merchandise supply chains
- alternative access points
- damaged residential and commercial buildings
- damaged hospitals
- dam walls.

Analysis of the data may also be complicated by the following issues:

- properties that are empty at the time of assessment present problems—is an empty house normally occupied but the occupier is temporarily out? Has the occupant been evacuated or injured so that the building will remain unoccupied for some time? (Has it been assessed? Will it require power?)

- professional advice will be given and this has risks associated with it—arrangements must be made about professional indemnity for these professionals
- organisations and individuals often have competing priorities and differing agendas, which may impact on speed and depth of analysis
- interpretation of data may be affected by the detail collected—some collectors may provide more rigorous data than others
- accessibility—flooding, fallen trees or fire damage may make it difficult to access some facilities: in some cases, permission must be obtained to enter private land to access a facility; in addition, privacy issues and inability to exchange information between agencies can cause delays to planning and permit provision, or even ownership claim
- resources required for processing data may be considerable—resource-sharing between recovery agencies or organisations may help
- data are collected in a range of forms and formats—media (paper, electronic), database set-ups and even interpretation of key phrases may vary from one dataset to another.

4.2.5 RECONSTRUCTION

Reconstruction activities carry complications beyond regular building and development activities. Impacted communities, regulations and systems in flux, and relationships between organisations all have a bearing on how the reconstruction takes place. Planning for and implementation and monitoring of reconstruction are affected by the environment in which they take place. Some of the key issues that may arise in each phase are considered below.

Planning for reconstruction

In spite of the urgency of reconstruction, it is vital that proper planning takes place.

In relation to the community, planning involves:

- community consultation, which is crucial in ensuring that a 'place' is built back that people will want to be in and live in—the area needs to be capable of nurturing a community after the event and subsequent reconstruction
- prioritised and staged reconstruction, which may mean that temporary fixes are provided first, and more detailed solutions prepared and developed over a longer period—this may apply to accommodation, medical, schools, pump stations, sanitation and other facilities
- the range of private and public agencies that are involved in the ownership and operation of many community facilities—partnerships are required for effective recovery
- consideration of location—in some cases, the place where the community is situated may have

contributed to the scale of the event—an important planning issue is whether to rebuild in the same place.

In relation to assessment:

- Knee-jerk reactions to the damage (and therefore approaches to the assessment) can be more severe in the first instance than at a later time—this can mean that early planning for rebuilding is difficult or awkward
- Insurance assessors from different companies can make completely different assessments, which may lead to community unrest—this can be mitigated if assessors meet with recovery staff before assessments are done, and regularly during the assessment phase, to ensure that uniform standards are applied
- Damage to facilities is often hidden, and sometimes inexperienced assessors can miss it.

In relation to the environment, planning involves:

- the need for carefully discussed plans for redevelopment to address exposure to future environmental risks (especially after storm surge events, floods and bushfires)
- consideration of the environmental impacts of new infrastructure, which might create new risks and vulnerabilities—planning may also need to provide for underground power supplies, erosion control, or environmental, heritage and Aboriginal and Torres Strait Islander site assessment.

In relation to regulations and frameworks:

- Temporarily lax planning regimes may allow buildings and structures to be built that reinstate pre-disaster vulnerabilities/threats—in addition, house repairs might not have to meet new building codes, whereas rebuilding is usually to the new standard
- Decisions need to be made regarding the tenet of ‘build back; build back better; and build back better plus’—this will inevitably involve input from insurance providers
- Underinsurance and low damage write-offs may place a significant burden on building owners—post-disaster inflation means that insurance companies can write-off a building with little damage: under these circumstances the onus is on the owner to arrange and supervise any repairs.

Specific issues regarding reconstruction of buildings

Appropriate standards for reconstruction may not always be clear. Buildings must conform to the current building regulations at the time of their construction. Over time, these regulations may change. This can cause difficulties for owners, insurers and financiers. In addition, supervising the reconstruction may bring other problems.

In relation to approvals and planning:

- Many people may not be aware of the need to apply for building approval for major repairs and may try to start major repairs without approval—in the confusion of clean up and general construction activity, their work may go unnoticed.
- Although temporary repairs to give some amenity are accepted in the early stages of recovery, some temporary repairs may become incorporated into the final structure without approval.

In relation to staffing:

- The staff required to approve and inspect building and construction will be swamped with work—there will certainly be a need to boost staff levels during the recovery phase.
- Volunteers may be required to show that they are appropriately qualified.
- Volunteers in the building industry, who, for instance, have travelled to another state or geographic area to be part of the reconstruction, may assist with reconstruction while not being familiar with the requirements for the particular area—some training or explanation may be required to ensure that all building industry personnel have the appropriate understanding of the requirements of reconstruction relating to the specific location.

Other considerations include:

- Insurance companies may insist that the reconstruction only replaces what was damaged with similar construction—in many cases this construction is known not to work and, clearly, better reconstruction is called for to avoid future claims: discussions with all the companies involved can help achieve an understanding that some improvement in structural performance is called for in all damage, and local building regulations/codes may override what insurance companies require.
- In some places, salvaged material presents issues because it can be readily obtained and used for makeshift shelters that may become inappropriately permanent.
- Partially damaged buildings that have been written-off, are privately owned and are uninhabited can cause problems at a later stage—these buildings will deteriorate in time and can present a significant problem to community safety in future events.
- Consequential water damage to a partially damaged structure (after assessors have made their final assessment) may increase the extent of the work to be accomplished and lead to a mismatch between needs and budgeted work.

Reconstruction of heritage buildings

Where buildings are heritage listed there are constraints on demolition or reconstruction works. Matters can be complicated where heritage lists are changed in the aftermath of events.

In some cases, the community will recognise that particular buildings have heritage value only after they are threatened. There may be community pressure to update the heritage list. Recovery operations may also have to engage the community in addressing heritage listing. The definition of a heritage building needs to be carefully considered and any additions to the list made in a systematic manner.

A strategy is required to fund the repair and redevelopment of heritage buildings. If the community restrains a building owner's options for recovery, then the community should be prepared to contribute to the extra costs incurred in the redevelopment to keep the original character of the building intact.

Implementation of reconstruction

Undertaking the reconstruction can prove complicated in the post-emergency environment. An array of issues may arise after careful and detailed planning has been done—many of them unforeseen at the time of planning and related to the evolving environment in which a disaster-affected community finds itself. For example, new building codes and/or regulations may be introduced in response to the disaster which may increase the cost and complexity of the rebuild, homeowners may have been uninsured or underinsured, or new planning restrictions may be introduced that prohibit or limit reconstruction in the previous location. Recovery managers need to be flexible and responsive to the evolving needs of the community.

Community members

The demography of the community may complicate normal processes of construction work. Considerations for recovery managers may include age groups in the affected populations, languages, and cultural issues including value systems and priorities attached to recovery activities.

Ideally, the use of local contractors should be considered where at all possible. This injects work opportunities back into the community and makes use of the local experience and knowledge.

Educating community members about what they should expect to see in resilient construction can build confidence in the completed works.

Where possible, the community should be involved in setting recovery priorities.

Delays in construction

Commencement of reconstruction can be delayed by:

- the nature of the event and the damage (for example, earthquake repairs should not be commenced until all aftershock activity has ceased—often more than six months after the original earthquake)
- the availability of building resources (for example, shortages in materials (such as scaffolding) and

labour (trades with appropriate qualifications and experience in the work), and/or

- budgetary constraints can further delay reconstruction. There is often post-disaster inflation due to pressures of work, cost of deployment or other factors and this may limit the affordability of reconstruction.

Processes

In reconstruction, normal processes of tendering, awarding work and contracting should be followed. Appropriate and accountable processes should be used.

It is important that the skills required in recovery are identified and continually reassessed so that capabilities within the existing (and imported) workforce match requirements. Education and training must be used to address any mismatch between the skills required and those available.

4.2.6 MONITOR AND REVIEW

The needs of a recovering community change all the time. Monitoring is necessary to ensure that the recovery effort is still addressing their needs.

The changing nature of recovery means that:

- staged reinstatement may be needed to deliver some quick but temporary outcomes that address the immediate needs (with later work required to address longer-term needs)
- plans may need to change to meet the changing needs
- at all stages, time should be set aside to reflect on the decisions that have been made and to make sure that they provide the best solutions—in some cases, rushed decisions are not necessarily the best ones
- communication (both by listening and talking) is important with all stakeholders—this includes the recovery committee, one's own organisation and organisations with which partnerships have been forged to accomplish recovery activities.

For information and a checklist for recovery managers working in the built environment see Toolkit 2-1 Community recovery checklists – Checklist 13 Built environment.

4.3 Recovery of the economic environment

A vibrant local economy is a vital part of a sustainable community in the normal/routine environment, so in an emergency, economic recovery is critical to the whole-of-community recovery process. This section describes some of the broad economic and financial impacts on

communities after disaster, together with strategies that support economic recovery.

Economically, the physical damage (to lives, property, infrastructure, crops, livestock etc.) following a disaster is often the most evident impact, but, increasingly, indirect and intangible economic impacts are being recognised and measured. For example, according to the Australian Business Roundtable for Disaster Resilience and Safer Communities, the total annual cost of natural disasters in Australia is expected to double to \$39 billion by 2050. Its 2017 report, *Building Resilience to Natural Disasters in our States and Territories*, examines the costs of natural disasters including social impacts such as mental health issues, family violence, chronic disease and alcohol misuse.

Broadly, the range of economic effects and consequences on an affected community varies greatly and depends on the nature and duration of the event and the resilience of the community. It is also important to recognise that communities are diverse. In some cases, affected communities recover and prosper; in others, the adverse economic impact compounds other social and economic challenges with an effect that spreads throughout the community.

Detailing and understanding the economic and financial impacts of a disaster is a critical component of the recovery process for a number of reasons:

- to enable implementation of strategies to minimise negative impacts and embrace opportunities, such as supporting people’s livelihoods (which supports social, emotional and community wellbeing)
- to enable the economic recovery task group/practitioner, the householder or the business enterprise to quantify what has been lost (to replace it, make an insurance claim, and/or build back better)
- to enable the community to attract funding support (government, appeal, philanthropic etc.) through provision of evidence
- to quantify impacts to improve mitigation and evaluate prevention and preparedness strategies and to direct future policy and strategy development
- to contribute to monitoring, reviewing and evaluating the recovery process as it proceeds.

4.3.1 THE IMPACTS

The economic effects of emergencies and disasters can be devastating and widespread. When disasters strike, houses, businesses and community infrastructure may be damaged or destroyed and people’s livelihoods may be temporarily and sometimes permanently disrupted. Physical damage is the most visible economic impact. However, the less visible impacts such as lost income, through disruption of trade, are just as significant and the consequences often last longer than the physical damage (for example, bankruptcy and business closures). The flow-on effects through a community can be pervasive and long-term.

Table 5 Outline of some of the impacts that may be experienced by households and businesses following an emergency event

Household	Business/industry
Loss of employment and income (loss of livelihood)	Loss of supply chain networks
Loss of household assets	Loss or damage to business assets
Instability or loss of social networks	Loss of employees due to business closure and migration of skilled staff
Increased costs due to short supplies of goods and services	Infrastructure damaged or devastated
Lack of childcare and school facilities	Damage to or loss of natural resources

Local business and industry economic impacts can be far reaching, especially in small communities where a large proportion of the workforce is employed in a small number of businesses or where people depend on rural properties for their livelihoods. Loss of income through loss of trading activity and the time taken to re-establish such activity is often difficult to quantify.

The consequences of extended periods of downtime in trading or production can result in bankruptcy, forced sale of the business, forced sale of stock or livestock, business closure, loss of experienced workers, loss of supply chain linkages and a depleted customer base due to temporary or permanent reduction in population. These consequences are exacerbated by community losses, which result in a reduction in disposable income. The flow-on through the affected community has been likened to a ‘domino’ effect.

4.3.2 MEASURING ECONOMIC CONSEQUENCES

In order to understand the economic and financial impacts of a disaster on a community, we need to be able to measure the consequences quantitatively and/or qualitatively.

The economic consequences of disasters can be classified in a variety of ways. No single framework covers and prescribes every possible impact a disaster might have. Each event has unique characteristics and, consequently, in any attempt to classify these impacts there will be impacts that do not fit neatly within the classification. Nevertheless, a classification framework is a useful guide or tool to tackle these issues. One common classification relates to tangible (loss of things that have a monetary or replacement value) and intangible impacts (loss of things that cannot be bought or sold). This is further discussed below (see ‘Economic impact assessment’).

Direct and indirect impacts

For recovery management purposes it is useful to evaluate the direct and indirect impacts.

Direct impacts result from the physical destruction (or damage to buildings, infrastructure, vehicles and crops etc.) of direct contact with the emergency event.

Indirect impacts are due to the consequences of the damage or destruction.

For example, the impacts of a storm might be:

- direct impacts—flood and wind damage to buildings, infrastructure and crops
- indirect impacts—transport disruption, business losses due to lack of trade/loss of income (OESC 2008).

4.3.3 THE AFFECTED SECTOR

Another approach is to examine the impacts of disasters in terms of who or what is affected. Four interconnected groupings that may be helpful to consider are:

- residents and households
- public infrastructure, community facilities and the natural environment (essential services such as water and sanitation systems, electricity, gas, telecommunications and transport)
- business enterprises and supply networks (retailers, distributors, transporters, storage facilities and suppliers that participate in the production and delivery of a particular product), and other networks including peak bodies, not-for-profit sector
- government.

These groupings are described below, and are then considered in terms of direct, indirect and intangible economic impacts.

Residents and households

The residential sector includes houses, flats, units, townhouses and so on and the people who live in them.

Public infrastructure, community facilities and the natural environment

Essential services are vulnerable to all types of disasters. Direct damage to essential services infrastructure includes the immediate physical damage (for example, roads cracked or washed away, destroyed electricity transformers) and the damage that may take some time to become visible (for example, accelerated road deterioration due to the effect of water intrusion under road pavements).

Public buildings include schools, childcare centres, kindergartens, hospitals, nursing homes, neighbourhood centres, churches, entertainment/art/cultural centres, museums and clubs. Direct damage to public buildings can be classified as structural damage (for example, roofs, windows and walls), damage to contents (furniture,

floor coverings and specialist items like sound systems and equipment, etc.) and external damage (playground equipment, swimming pools etc.).

Business enterprises and supply networks

Business enterprises include commercial, industrial, retail, financial, service, agricultural and not-for-profit business types. Essentially, the impact on businesses falls into three main areas:

- infrastructure damage or loss
- asset damage or loss
- virtual business interruption or reduction.

For example, in the rural sector, built environment/ infrastructure damage or loss might apply to fences, machinery, sheds and irrigation infrastructure. Asset damage or loss might include propagation of crops, stock feed, aquaculture, livestock and horticulture. Virtual business interruption or reduction may include loss of internet access or telecommunications resulting in lost orders or sales.

Government

Government includes local governments, the state and territory governments and the Australian Government. In any disaster government resources will be impacted in various ways depending on the type of disaster (for example, government infrastructure damage, workforce continuity). However, cost-sharing arrangements between states/territories and the Australian Government occur following an event, and often local government can recoup some costs through arrangements with their state or territory (see Section 4.3.11 Financial services [Financial assistance—Government assistance]). Predictions from climate change science indicate that the frequency, duration and scale of events in Australia may rise, and both government and other affected industries (such as the insurance industry) are considering the implications of this.

4.3.4 DIRECT ECONOMIC IMPACTS

Direct impacts result from the physical destruction or damage to buildings, infrastructure, vehicles and crops etc from direct contact with the emergency event. Table 6 lists some examples of direct effects of disaster by sector/area of impact.

4.3.5 INDIRECT ECONOMIC IMPACTS

Indirect impacts are incurred as a consequence of an event but are not due to the direct impact. Many indirect impacts are common to the household, business and public/community sectors (for example, disruption and clean-up). Importantly, indirect economic impacts are not always losses: they may be opportunities for businesses to provide services to affected areas, or to renew their businesses/start again with a better business plan. Furthermore, a loss to one business can mean a gain

Table 6 Examples of direct economic effects of disaster by sector/area of impact

Sector/area of impact	Examples of direct economic effects
Residents and households	Structural (roofs, walls). Contents (furniture, floor coverings). External (swimming pools, gardens). Death and injury.
Public infrastructure, community facilities and natural environment	Damage to or loss of roads, bridges, dams, sports grounds and facilities, schools, halls, parks, waterways, bushland.
Business enterprises and supply networks	Infrastructure damage or loss: structural damage to buildings such as shops, factories, plants, sheds, barns, warehouses, hotels etc. This includes damage to foundations, walls, floors, roofs, doors, in-built furniture, windows etc. Asset damage or loss: farm equipment, food, records, product stock (finished manufactured products, works in progress and input materials), crops, pastures, livestock, forestry/timber, motor vehicles, fences, irrigation infrastructure, contents damage to fixtures and fittings (carpets etc.), furniture, office equipment. Virtual business interruption.
Government	Local governments impacted by disaster may experience loss of ratepayer base. This may occur, for example, if a council waives rates as a goodwill gesture or if properties have lost their homes and/or businesses resulting in a reduced capital improved value or CIV. In high-profile disasters state and federal governments may outlay greater funding. Where this is for building substantial infrastructure, the impacts for local/state/federal governments include project management and ongoing maintenance costs.

to another business (thus maintaining the regional economic balance). An influx of recovery grants may also increase the cash flow in an emergency-affected area and provide business opportunities.

The provision of material donations can impact negatively on local economies. For example, the donation of new whitegoods in an affected area can mean that the local electrical retailer may have much less business immediately and in subsequent years.

The disruption to households, businesses and the community caused by disasters is pervasive. The economic impact of disruption and its consequences for community recovery may be overlooked, as economic recovery can tend to focus on the highly visible direct physical damage. Table 6 lists the common forms of disruption or indirect economic effects relevant to each sector.

Loss of services like child care, aged care and other support services can mean people are unable to get

to work. This can have a flow-on effect to the local economy.

Natural disasters can cause serious disruption to affected businesses. Businesses may not be able to operate during the event, and for some time afterwards, while premises are cleaned and equipment repaired. Business lost during this period can have devastating financial consequences and, in some cases, businesses may not recover at all. Similarly, the concurrent replacement of things such as fences, sheds, furniture and floorcoverings throughout the entire disaster-affected area can mean a spike in activity for related businesses, followed by an extended slump that may last for some years, as all future potential work has already been fulfilled. These issues are compounded when a business is a major employer in a small community.

Loss of farm income due to a natural disaster can affect the economies of country towns. For example, the Australian Bureau of Agriculture and Resource Economics estimates that farm expenditure represents at least a third of the economies of towns with less than

Table 7 Examples of indirect economic effects of disaster by sector/area of impact

Sector/area of impact	Examples of indirect economic effects
Residents and households	Additional costs (alternative accommodation and transport, heating, drying-out costs, storage, medical costs wetc.) Cost of clean-up and removal of debris, insurance excesses, planning and building fees
Public infrastructure, community facilities and natural environment	Transport (traffic delays, extra operating costs etc.) Loss of computer-controlled systems Loss of other lifelines (electricity etc.)
Business enterprises and supply networks	Impact on production (manufacturing, agriculture, services etc.) Impact on income/trade/sales/value added (tourism operators, retail traders etc.) Increased costs (freight, inputs, agistment etc.) Loss of supply chain networks Increased work (construction industry) Opportunity to renew struggling business
Government	Increased demand on government services (education, health etc.) Loss of business continuity (state government may provide case management involving significant resources to be redeployed immediately for long periods) Loss of tax revenue Cost of engaging extra resources and/or backfilling positions Costs of implementation of inquiry or royal commission recommendations

1000 people (ABARE 2000). Disasters that reduce farm expenditure can therefore have a major effect on the economies of small towns.

Clean-up

Cleaning up after a disaster is an obvious area of indirect impact. The impact for businesses, households and for public and community infrastructure is essentially the time it takes and the costs of cleaning materials.

Clean-up activities typically include the removal of debris (e.g. mud, building rubble), disassembly and cleaning of machinery and equipment, removal of destroyed household and business contents items, and so on.

Response costs

The time and effort of emergency services and volunteers in responding to disasters are other forms of indirect impact. Costs typically include those associated with dealing with the disaster and rescue, evacuation and other immediate relief measures.

Response costs can also include the cost of aerial surveillance, which is sometimes the only means of assessing the impact of flood waters on agricultural land and for conducting fodder drops to stranded livestock. Other examples include the cost of engineering assessment of impacted infrastructure, and environmental assessment of damaged waterways/ water storage facilities.

The considerable volunteer input into recovery is increasingly recognised. The impact of this includes potential loss of income to volunteers and disruption of business for their employers.

4.3.6 INTANGIBLE ECONOMIC IMPACTS

Intangible impacts are often described as a 'catch all' that includes all those costs that are very difficult to estimate, for which there is no agreed method of estimation and for which there is no market to provide a benchmark. Examples of intangible impacts are listed in Table 8 for each of the four sectors.

The social cost of disasters far outweighs the financial cost. The Australian Business Roundtable (2016) found

Table 8 Examples of intangible economic effects of disaster by sector/area of impact

Sector/area of impact	Examples of indirect economic effects
Residents and households	Loss of personal memorabilia Inconvenience and disruption, especially to schooling, community connections and social life Stress-induced ill health and mortality Pets—loss, injury, stress Quality of life Dislocation / disruption
Public infrastructure, community facilities and natural environment	Health impacts (deferral of procedures, reduced quality of care etc.) Death and injury, spread of diseases Loss of items of cultural significance Environmental impacts Heritage losses Lack of access to education, health, defence, culture (art galleries and museums, etc.)
Business enterprises and supply networks	Loss of confidence (investment and individual decision making) Loss of future contracts Loss of, and inability to attract, experienced and skilled staff Loss of access to transient (backpacker) casual labour
Government	Managing perceptions and expectations, including public confidence in the recovery

that increased mental health issues, alcohol misuse, domestic violence, chronic disease and short-term unemployment result from disasters. It states that the true cost of natural disasters is at least 50 per cent greater than previous estimates when the cost of these social impacts is incorporated. It is estimated that the total economic cost of natural disasters in Australia by 2050 will be \$39 billion (Australian Business Roundtable for Disaster Resilience and Safer Communities 2017).

4.3.7 ECONOMIC IMPACT ASSESSMENT

Assessing the impacts of emergencies and disasters is integral to the recovery process. Impact assessments provide communities and policymakers with invaluable information about how a disaster manifested and with the results of previous prevention, mitigation and preparedness initiatives. These assessments can inform future disaster risk management, as well as broader sustainability goals.

Measuring the economic impacts of a disaster needs to be strategic and therefore requires thorough planning. There are a number of guides to conducting disaster loss assessment (OESC 2008). The process is complex and requires some specialist expertise, so at the minimum some members of the assessing team should have

formal experience or training in disaster loss assessment or economics.

Economic impact assessment attempts to quantify, in a common unit (dollars), all impacts (both costs and benefits) possible. This allows for a usable comparison between impacts and between different disaster events. Importantly, the 'economic' in economic impact assessment applies not only to goods and services that are traditionally traded in the market place, but also to the value attributed to social and environmental assets.

Economic impact assessment is distinct from financial impact assessment. Economic impact assessment includes all impacts—financial impact assessment concerns a single economic unit such as an industry, business or household.

As well as direct and indirect impacts, economic impacts are typically divided into tangible and intangible impacts:

- tangible impacts—the loss of things that have a monetary (replacement) value (for example, buildings, livestock, infrastructure)
- intangible impacts—the loss of things that cannot be bought and sold (for example, loss of life, injuries, environment, memorabilia).

Tangible impacts are typically easier than intangible impacts to assign a dollar value to because they are traded in the market place. With tangible impacts the practitioner must choose and justify whether to record the replacement or depreciated value.

Despite the fact that intangible impacts are not traditionally tradable, there exists a wide literature and practice devoted to assigning them dollar values. For example, the loss of life and morbidity has a long tradition of valuation through statistical value of life estimates. Cost-benefit analysis and environmental valuation literature and practice have a breadth of techniques available for valuing environmental services and amenity (such as travel cost method, hedonic pricing, contingent valuation and benefit transfer). Valuing intangible impacts is challenging; however, when carried out correctly credible estimates are possible. Intangible impacts, such as loss of ecosystem services, may often hugely outweigh tangible impacts in an economic loss assessment and this can lend a new perspective to the evaluation of a disaster or emergency.

Direct and indirect impacts of disasters and emergencies are discussed above. From the perspective of economic impact assessment, it is essential that the practitioner ensures a theoretically sound and consistent approach. A key issue with some assessments is the problem of double counting. Double counting can occur when both stock and flow measures are taken to measure loss. For example, a practitioner may count the loss of stock as a direct impact, and then also count loss of sales as an indirect impact of business interruption; in this case the stock loss has been counted twice.

Assessing how much disasters cost the nation and its communities is a major challenge, in part because different agencies and entities calculate costs and losses differently. This complexity is compounded by the absence of pre-determined values. For example, not having a predefined average expenditure rate for overnight or daytrip visitors makes calculating the disaster impacts on tourism challenging. In these instances, values will be determined using local intelligence and qualitative research. Where the recovery manager is aware that the information collected in the short to medium-term following a disaster will most likely be used in an economic impact assessment, this may contribute to better information and hence improved disaster risk management (National Research Council of the National Academies 2006).

An economic impact assessment practitioner must set the geographical and temporal boundaries for the assessment. These boundaries often depend on the scale of the disaster and emergency, as well as the sort of information being sought. An economic impact assessment that looks at the impact of a disaster in one local government area over one year will be very different to an assessment that looks at the impact of the same disaster on the nation over five years. The spatial and temporal scales of the analysis determine which costs and benefits to include.

Economic impact assessment looks at not only the negative impacts (costs) of an event, but also any benefits that may occur, for example, increased value attributable to an increase in volunteering. All impacts are used to determine the net impact of the disaster.

Practical strategies

In measuring the economic impact of disasters and mapping the economic strategies for recovery over time, recovery managers should seek answers to question such as:

- what strategies will assist in the economic recovery of the community?
- what makes some communities recover and prosper and others decline in the aftermath of a disaster?
- how can local business and trades be supported to benefit from recovery/rebuilding activities?
- what are key characteristics of disaster resilient communities?

These are important questions and are critical to understanding the economic recovery process.

Periods of disaster recovery are often times of strong reflection when new choices and learning can occur. The sensations of disorientation and disequilibrium following a disaster can enhance individual and community abilities to address change and adopt new learnings.

Recovery processes can support disaster-affected people to come to terms with their different life circumstances and move forward into a new, changed reality, which may in time provide new socioeconomic opportunities (in keeping with the build back better model).

For a checklist for the development of an economic and financial recovery plan for an affected community, see Toolkit 2-1 Community recovery checklists – Checklist 15 Economic environment.

4.3.8 OPPORTUNITIES IN ECONOMIC RECOVERY—ADAPTIVE CHANGE

Economic recovery programs that assist affected communities to explore alternative and more viable economic opportunities can greatly assist in building future sustainability. The recovery process is an evolving one in which community circumstances and economic needs change over time. Planning around economic recovery should respond to these needs.

Understanding the economic wellbeing of the affected community before the disaster will support the planning of appropriate economic recovery interventions. For example, in strong economically sustainable

communities, recovery support may be minimal; for declining communities, recovery support may mean examining various options to establish alternative economic models.

Economic recovery should commence immediately. Recovery managers need to advocate for a greater understanding by all stakeholders that events that have resulted in significant impact upon the local economy present new challenges and opportunities that require longer-term recovery support.

Decisions regarding the economic environment made in the short and medium-term impact on the longer-term economic recovery. Giving priority to local resources wherever possible should begin early. Early messaging around strategies to counter the impact of donated goods may prevent waste and a secondary impact on local businesses (cash and vouchers for local business support should be given preference over donated goods).

Short-term payments of grants and cash programming enable localised economic stimulation, while longer-term economic recovery needs to be driven through community planning to develop strategic and sustainable solutions.

4.3.9 THE IMPORTANCE OF LIVELIHOODS

Residents and households, along with business enterprises (supported by public infrastructure, community facilities, the natural environment and government), are all dependent on their livelihoods.

In Australia, as well as internationally, it is usual for all possible steps to be taken to alleviate the human suffering that arises from an emergency event. Fundamental to the dignity of individuals is the right to earn an income through employment or operation of a business to assist them to recover from crises; that is, support for their livelihoods (SEEP Network 2009, p. 7).⁵

Working in paid employment or running a business profitably empowers affected individuals and motivates communities to regain control of their lives by meeting their own needs as they best see fit. Increasingly, recovery managers are recognising the need for rapid, tailored support for the livelihoods, enterprises and economies affected in the wake of a crisis. This is often done in parallel with emergency efforts to meet basic human needs for shelter, water, food and health services. In the past, economic recovery assistance has been viewed as a later-stage activity. However, disasters such as the 2004 Indian Ocean tsunami have illustrated that an economy continues to function during a crisis, albeit at a reduced or shrinking rate of growth. Affected populations require sources of income—at a minimum to survive, and at best to thrive once again.

A livelihood comprises the capabilities, assets (material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers & Conway 1991, p. 6).

Disaster affected populations have overwhelmingly identified livelihoods as their greatest recovery priority. An evaluation of the Disasters Emergency Committee involvement in the 2001 Gujarat recovery effort [in India] noted that, 'People constantly emphasised the need to restore livelihoods rather than receive relief and expressed some frustration that outsiders did not listen to them on this point' ... Similar findings in Indonesia ... Nicaragua ... Iran ... and Haiti ... affirm at a global scale the importance people give to restoring their capacity to earn a living. UNDP, ISDR & IRP 2010.

The effects of disasters often mean that people cannot readily return to earning an income through self-employment, casual or permanent employment, small business, agriculture production and so on. In some cases the loss of livelihoods may continue for a long time. The prevailing economic conditions at the time, people's skills transferability and their stage in their careers may also be barriers to easily finding other ways of earning a living.

The usual safety nets (such as income support through Department of Human Services) can assist eligible people, and in response to some disasters, governments have provided income support for small businesses, self-employed people and primary producers. Other forms of financial support (such as allocations from appeal funds) can also assist.

Depending on the level of government support available, grants may be available (for example, through Rural Finance and small business departments). Financial counselling, business planning, whole farm planning, and incentives for adaptive farming and business practices are increasingly available within recovery processes.

Livelihoods programs that support long-term sustainability can provide facilitated processes for people to review their livelihoods and assess their future directions. For example, following the foot and mouth disease outbreak in the United Kingdom in 2000, many dairy farmers were paid compensation for dairy herds that were destroyed, and they were unable to recommence farming for more than a year. After they had restocked and commenced dairying again, several farmers said that if they had been provided with financial planning, market advice and support to review their choices, it would have been a good time for them to leave farming and make new life choices.

Livelihoods programs that assist affected people and groups to explore alternative opportunities through learning new skills, developing new markets and/or value adding to their products can greatly assist in building the sustainability of livelihoods.

⁵ This right is articulated in many international conventions and documents, including the Universal Declaration of Human Rights (1948), the Declaration of Philadelphia by the International Labour Organization (1944), the United Nations Charter (1945), the International Covenant on Economic, Social and Cultural Rights (1966) and, most recently, in the preamble to the United Nations Millennium Development Goals (2005).

4.3.10 GUIDELINES FOR ECONOMIC RECOVERY

The following guidelines for economic recovery and the supporting strategies provide a framework for planners, managers and workers to assist the recovery of affected communities.

Economic recovery from emergencies and disaster is most effective when the *National Principles for Disaster Recovery* (2018) are considered in conjunction with the following guidelines:

- Economic recovery strategies are an integral part of the overall recovery management process
- Coordination of all recovery programs is needed to support and enhance the economic structure
- It is important to recognise that affected people need to re-establish their means of making a living to enable them to manage their own recovery
- Response and recovery actions actively support the recovery of business and industry
- The best outcomes are achieved when business and industry is returned to activity as early as possible
- Adaptive change is adopted in light of previous knowledge of the sustainability of businesses and communities
- Business and/or industry representatives must participate in economic recovery decision making
- It is important to retain skilled workers in the affected area through paid employment
- It is important that measures are taken to mitigate the impacts of future disaster on business continuity.

An example of a post-disaster economic strategy that a community might adopt is: To support the affected community to come to terms with its different life circumstances and move forward into a new, changed economic reality, which may in time provide new socioeconomic opportunities (in keeping with the build back better model).

Suggestions for economic recovery following a disaster.

Management strategies

Examples of specific management initiatives are to:

- formulate short-term business survival strategies
- identify all aspects of the economic impact of a disaster and continue to assess, analyse and monitor to inform the level of support required by the community
- plan (from the beginning) for the transition back to mainstream service provision
- establish and maintain communication channels between community, business, industry and government representatives in the community

- proactively seek and involve investment and technical assistance from within and outside affected communities
- facilitate a reference group (or subcommittee of the recovery committee, or working group), where appropriate, that is representative of business, industry and employee groups—these may be specific to the recovery process, but ideally they would tap into previously existing business/industry structures in the community/region
- ensure communication strategies incorporate information about economic recovery support to the broader community
- support and facilitate the development and maintenance of partnership arrangements to enhance economic activities
- establish positive images to attract visitors when appropriate
- report information on the effectiveness of the economic recovery program to all stakeholders
- develop risk management assessments for the economic recovery program
- avoid duplication of services and identify gaps
- maintain confidentiality and privacy principles
- ensure monitoring, evaluation and reporting processes are embedded in all economic recovery activities.

Service delivery strategies

Examples of specific service delivery are to:

- Develop a comprehensive list, including contact details, for all available and accessible financial and economic services for disaster-affected people (for example, government agencies, banks, insurance companies).
- Ensure recovery workers know the range of services available and appropriate referral processes.
- Facilitate the provision of financial assistance measures in a timely, fair, equitable and flexible manner.
- Provide material aid where it is appropriate (for example, to isolated properties or remote Indigenous communities).
- Facilitate the provision of financial counselling and management services.
- Ensure economic and financial services and/or information are coordinated and provided by a variety of means and use the existing communication networks within communities.
- Provide community awareness on how to source information regarding the validity of goods and services being offered by businesses seeking opportunities within the disaster-affected localities.

Enabling initiatives

Examples of other initiatives are to:

- Encourage response agencies to implement procedures to support economic recovery (for example, a local employment program for clean-up).
- Support and promote opportunities for sustainable economic recovery.
- Actively work/negotiate with financial institutions on behalf of affected people and businesses.
- Advocate for the safe return of evacuees into the affected area as soon as possible.
- Facilitate access to lease arrangements or loan schemes to support the timely replacement of plant and equipment.
- Procure goods and services via local businesses and tradespeople wherever practical (e.g. use local electricians for power safety checks and repairs, encourage agencies to employ local residents and to purchase resources and services locally).
- Value and build on the local capacities of services that support economic activities (e.g. childcare services and non-profit groups)
- Build on local/regional/state/territory industry and business organisations and their networks (e.g. home business network, tourism boards, chambers of commerce).
- Explore the potential of co-working spaces to support a return to work for small businesses.
- Encourage the community to buy locally through known and trusted businesses.
- Facilitate the creation of work placement projects (e.g. clean-up activities) to provide short-term paid employment to retain skilled workers in their current location while they await their former place of employment to recover and re-open.
- Consider mandating minimum 'local content' standards for contractors entrusted with large scale recovery clean-up.
- Facilitate the provision of government grants, appeal distribution and charitable payments as financial, rather than material, assistance in support of economic and local business recovery.

4.3.11 FINANCIAL SERVICES

Financial assistance measures support those in need, while encouraging appropriate personal responsibility. Resilience and preparedness (such as appropriate and adequate levels of insurance) are encouraged.

The recovery of communities from the effects of emergencies and disasters is assisted by a range of financial measures, which provide a source of funds to businesses, local and state/territory governments, householders and the community to assist with and promote recovery. These sources include insurance and may also include government-provided natural disaster relief and public appeals (depending on the scale and impact of the event). Assistance may also be provided

by banks (for example, the suspension of mortgage/loan repayments and provision of financial counselling and advice), and the Australian Taxation Office has developed a Disaster Response Framework.

Communities should be encouraged to explore their own resources, and to plan and be prepared for an emergency. Changing community expectations and the political landscape have historically impacted on the provision of financial services.

Overseas studies have found that:

The higher the socioeconomic level, the more likely households and businesses are to recover to pre-disaster levels. Similarly, those who are better integrated into economic and social networks will recover faster. Conversely, those with fewer resources get less attention from aid organisations and get it later in time.

Olshansky 2005.

The need for financial assistance measures such as insurance, Commonwealth and state/territory government assistance and appeals are critical after disaster because of the effect on people's employment and income stream—more commonly referred to in the international humanitarian assistance literature as livelihoods.

Financial assistance—Insurance

Insurance is the primary means of gaining financial compensation for the cost of restoration. The major types of insurance cover are for home and contents, income protection, and property and business interruption. However, many households may be under-insured or uninsured.

For example, research undertaken in 2016 identified that one in two Victorian households were uninsured or had insufficient insurance (Department of Health and Human Services [DHHS] 2016).

Home and contents policies usually provide replacement and reinstatement insurance, which covers the cost of repair and replacement of damaged property and contents. The less common indemnity policies take account of the age and condition of the items insured. If buildings and/or contents are underinsured, the settlement amount from the insurer is less than the cost of replacement. There is also a need to be aware of the policy exclusions (i.e. the risks not covered).

Commercial insurance is designed to cover many of the risks which are faced by business in relation to loss or damage caused by disasters, including coverage for buildings, vehicles, equipment, stock, plant, and fixtures and fittings, as well as business interruption. Adequacy of insurance cover should be reviewed regularly.

Insurance Council of Australia

The Insurance Council of Australia (ICA) assists affected people to navigate and negotiate the insurance process. In large disaster events the ICA may deploy specialist staff to assist affected communities through the insurance process where necessary. The ICA also coordinates insurance activity with the recovery activities of government and manages an insurance taskforce comprising senior representatives from all insurers who are involved in the event. Community members who have questions about their claim will typically work with their insurer to resolve matters, however individuals can also contact an insurance specialist at the ICA by calling a 24hr hotline (1800 734 621) or visiting www.disasters.org.au.

The insurance industry specialises in measuring risk and as such has compiled data showing where disasters are most likely to impact communities across the nation. When not responding to disaster events that have already occurred, the ICA can provide briefings to communities with acute disaster risks, as one way of assisting communities to recognise risk and undertake appropriate pre-disaster preparations.

Other references/resources

Refer to www.disasters.org.au for further information on the insurance aspects of a declared disaster event.

Financial assistance—Government

State and territory government assistance

The states and territories have primary responsibility for emergency management and provide financial assistance measures to assist individuals, businesses and communities. In more significant disaster events, states and territories provide a range of personal hardship and distress assistance. This is immediate financial or in-kind assistance for people who do not have, or cannot access, their own financial resources to meet immediate needs for food, clothing and shelter. Additional grants may be available for essential contents and structural repairs to homes for low-income people who meet certain eligibility criteria.

Grants

In more significant disaster events, states and territories often provide a range of personal hardship and distress assistance. This is immediate financial or in-kind assistance for people who do not have, or cannot access, their own financial resources to meet immediate needs for food, clothing and shelter. Additional grants may be available for essential contents and structural repairs to homes for low-income people who meet certain eligibility criteria.

Other references/resources

State and territory websites provide further information about financial assistance. Refer list of state arrangements in this handbook.

Australian government assistance—funding and relief measures

Immediate financial assistance

The Australian Government may also provide additional types of payments for disasters, where the impact on individuals and families is such that Australian Government assistance is required.

The Australian Government may provide the Australian Government Disaster Recovery Payment (AGDRP), a one-off payment for eligible individuals as a direct result of a major disaster. Financial assistance may also be in the form of Disaster Recovery Allowance (DRA), and the ex gratia equivalent, which is intended to provide short term (13 weeks) income support to eligible employees, primary producers and sole traders who experience a loss of income as a direct result of a disaster.

The Australian Victim of Terrorism Overseas Payment (AVTOP) scheme provides financial assistance for Australian residents who are harmed or whose close family member is killed as a direct result of a declared overseas terrorist act. AGDRP, DRA and AVTOP are all administered by the Australian Department of Human Services.

Assistance to those receiving social welfare

Individuals receiving benefits and welfare payments who have been impacted by a disaster may also be eligible for advanced payments. The Department of Human Services may also provide a crisis payment for individuals receiving income support payments from Department of Human Services, who have had to leave their home and establish a new home due to extreme circumstances such as a natural disaster. The Department of Human Services may also provide an advance payment of future income support. Income support and family assistance payments may also be paid to previously ineligible individuals, if an individual's income has been reduced or personal circumstances have changed as a result of a disaster, so that the person now qualifies for these payments (for example – changed employment status, income, health status, impairment etc.).

Assistance for farmers

The Department of Human Services may pay income support to eligible farmers and their partners who have been impacted by a disaster via the Farm Household Allowance.

Rural Finance will provide grants to eligible primary producers to assist with clean up and restoration costs after a disaster. Rural Finance will also provide concessional loans to assist farmers experiencing a

significant financial impact as a result of the effects of drought.

Advance payment of Child Care Benefit

The Department of Education and Training provides business continuity payments for child care approved services if the disaster affected services is unable to submit data to the Child Care Management System for a period of two weeks. Payments are calculated based on the service's average utilisation and recovered once the service can resume operating.

Delayed tax liability

The Australian Taxation Office (ATO) supports taxpayers, businesses and tax agents through its disaster response framework. Mechanisms include appropriate and timely arrangements to relax tax obligations and expedition of tax refunds to people impacted by a disaster. During the 2009 Victorian bushfires, for example, some key responses included:

- allowing lodgement deferrals of activity statements or income tax returns without penalty
- allowing additional time to pay tax debts without incurring general interest charges
- initially stopping correspondence to affected areas
- fast-tracking refunds.

Financial assistance—public appeal funds

It is recommended that communities wishing to assist people affected by a disaster make monetary donations rather than providing other forms of aid. Cash grants empower people affected by a disaster event to choose how they support their own recovery; they are easily targeted to meet immediate needs; and they are likely to stimulate the local economy. Monetary donations may also be eligible for tax deductions (refer to the ATO's website for further information). The key message is that cash donations are preferred because it can be targeted to meet immediate needs.

Other references/resources

The Australian Government's Disaster Assist website provides information on assistance for current and previous disasters. The website also includes web links to other organisations that can provide assistance.

The Department of Human Services' website provides information on financial and non-financial assistance for people impacted by a disaster at <https://www.humanservices.gov.au/individuals/help-emergency>

Information on the Department of Education and Training's Business Continuity Payments for childcare services can be found at <https://www.education.gov.au/child-care-management-system-2>

Information on taxation relief provided by the ATO is at <https://www.ato.gov.au/individuals/dealing-with-disasters/>

Information on grants provided by Rural Finance is available at <https://www.ruralfinance.com.au/>

Australian Taxation Office guidance on tax relief measures available to people impacted by a disaster may be found at www.ato.gov.au/non-profit/gifts-and-fundraising/in-detail/running-australian-disaster-relief-funds/

Australian Charities and Not-for-profits Commission (background on how charities work to support disaster relief) at www.acnc.gov.au

Donated goods and services and material aid

Material aid is the provision of essential goods that have been destroyed or made inaccessible by an emergency event. Material aid typically includes sanitary items and toiletries, bedding, clothing, furniture, personal items and other necessary items. They may be requested or they may be unsolicited donations or supplies.

It is essential to ensure that agencies and organisations involved in the management, coordination and service delivery of material assistance undertake this community-based service in a planned, coordinated and adaptive framework.

One concern about the donation of goods and services is their quality and usefulness—together with the cost attached to receiving, sorting, storing and distributing them and, in the case of loaned goods, the cost of making good or returning them to the owners. Recovery managers should be mindful that donations of money are more useful than goods as they provide choice and independence to affected communities (State Government of NSW 2016, p. 31).

Material aid may have a direct impact on the local economy (through the loss of income for local businesses). A key lesson learned in disaster is the imperative to have pre-positioned messaging and a philosophy about donations. Governments and recovery managers must have a clear philosophical understanding of the need to limit and target particular goods (AGD and SRO 2011).

The *National guidelines for managing donated goods* recommend the following principles:

- The needs of disaster affected people and communities must always be the first consideration
- Where the need for public assistance is identified, donation of money should always be the preferred option
- A clear and transparent communication process should be used to inform workers (government and non-government), the community and the media about how best to assist the people and communities affected by disaster
- Donation of material goods must be managed through an equitable, efficient and coordinated system
- A review which is inclusive of recipients' views of the donated goods program, should occur after every disaster

- Policy about donated goods should be encapsulated in national, state/territory and regional/local policy and planning.

4.3.12 PUBLIC-PRIVATE PARTNERSHIPS

Public-private partnerships can capture the goodwill that exists in the private sector and its willingness to be part of the recovery process. They do not include the normal procurement that enables services to be provided and they do not necessarily involve exchange of money. An example is the provision of goods or services following a disaster by a private enterprise to a relief agency that is covered by a memorandum of understanding.

These partnerships can increase capability to respond in a timely manner and can provide a mechanism to assist the smooth provision of services.

Partnerships in the recovery environment can provide:

- corporate in-kind support
- information to the community
- information to the disaster recovery committee on damage assessments, community needs and the effectiveness of recovery actions
- human resources
- construction contracts (e.g. supply of heavy lift or specialist equipment, loan of equipment and staff to assist in the immediate response, deployment of engineers to undertake damage assessments, deployment of reconstruction and building trades professionals)
- supply (for example, the provision of catering)
- maintenance
- accommodation
- grants/appeals management
- supply of credit (to other businesses to allow them to resume operating, or to customers)
- health and community service professionals
- fuel supply and distribution.

In preparing and planning, it is useful to consider the public-private partnerships that can be established prior to an event to assist with contingency planning. Traditionally, corporate support has been a spontaneous response to an emergency event, and needs to be negotiated after an event, taking into account the needs of a community.

For partnerships that can be established as part of preparedness and planning, consideration should be given to:

- identifying goods and services that can be procured through this means
- establishing and identifying accredited/licensed/certified suppliers, and seeking indicative costs to avoid cost inflation/profitteering post impact (for example, to provide food and supplies to individuals at recovery centres)

- including local suppliers in recovery efforts where possible—issues to consider include the potentially impeded capacity of local suppliers to deliver due to the disaster
- establishing links between non-regional and local suppliers to retain local employment
- establishing links between non-regional and local suppliers that are able to continue or re-commence trading, to keep money in the community
- documenting partnerships between suppliers—use of non-regional suppliers needs to be handled with some sensitivity for local suppliers.

4.4 Recovery of the natural environment

The impact of a disaster on the natural environment can have a profound impact on community recovery, including economic functioning. Recovery management is increasingly expected to take account of sustainability concerns in policy and activities. These involve more emphasis on issues such as biodiversity protection, sustainable use of land and water resources, greenhouse gas emissions (including land use aspects) and pollution. Response and recovery actions have the potential to assist in the recovery of the natural environment. However, successful outcomes require a clear assessment of the impacts and effects, both immediate and longer term, of the disaster.

The Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* defines environment to include ecosystems and their constituent parts, including:

- people and communities
- natural and physical resources
- the qualities and characteristics of locations, places and area
- the social, economic and cultural aspects.

4.4.1 ENVIRONMENTAL IMPACTS OF DISASTER

For the purposes of this section, effects of disaster on the natural environment are considered in terms of the ecosystem components:

- air
- water
- land and soil (and organic matter)
- plants and animals.

A healthy and functioning natural environment is critical because it underpins the economy and society. Indeed, environmental functions often have a value put on them and this is termed ecosystem services.

Ecosystem services are the services that nature provides which benefit human health and wellbeing, support our economy as well as supporting nature itself. They include regulation of the atmosphere and climate, protection from the effects of extreme weather, provision and storage of water, production and protection of soils and associated nutrients, treatment of wastes, provision of systems that support biodiversity, food and fibre production, provision of natural medicines, opportunities for outdoor recreation and a range of cultural values [including spiritual, religious and aesthetic values. Tovey 2008.

The natural environment is necessary to sustain our health, agriculture, industry, amenity and cultural values. The natural environment also has intrinsic value. Building resilience into the natural environment builds socioeconomic resilience. Prioritising natural environment considerations after an emergency is critical to sustainable community recovery.

Pre-event recovery planning needs to factor in the potential impacts on the natural environment and consider the impacts of climate change risk. Environmental risk management and ongoing community development planning are integral to this, including natural resource management and land use planning.

Whether for a threat or actual disaster, community recovery planning for the natural environment should use a whole-of-community approach. Cross-sectoral taskforces and local recovery committees should work together within a community-led recovery process.

Impacts from emergencies or disasters can be immediate and/or have long-term effects; for example, the interruption of breeding cycles during a disaster can have long-term effects on population numbers.

Responses therefore also need to consider the immediate and longer-term actions required to recover the natural environment.

Some examples of potential risks that may need to be considered are listed in Table 9 in terms of the components of air, water, land and soil, and the plant and animal life that depends on them. The impacts of a disaster will be specific to the impacted community and so the natural environment needs to be carefully considered in the given context.

4.4.2 ASSESSING THE IMPACTS

In normal activity, environmental impact assessments are typically designed to assess and protect environmental values (those qualities of the natural environment that make it suitable to support particular ecosystems and human uses) where development is proposed. But the procedures can easily be adapted to the post-disaster situation to identify significant

ecosystem attributes and the likely impacts from the disaster. This type of report includes a broad survey of the impacted area (usually both through desktop analysis of existing data resources and, if required, the use of survey methods). In some cases, ecological survey techniques need to be employed to assess specific concerns, or to gain a broad audit of natural environmental impacts and likely consequences of the disaster. A rapid response research capacity following a large-scale natural disturbance assists in understanding the ecosystems dynamics and long-term consequences of natural disasters (Lindenmayer, Likens & Franklin 2010).

The aspects of each component of the natural environment and some potential impacts of disasters are described below.

Air

The release of particulates (dust, ash, smoke, heavy metals), gases, chemicals or biological aerosols during or after a hazardous or natural event can cause degradation to air quality. This can have effects on visibility and air quality and can cause health problems and reduce the amenity of the environment.

Air contaminants can deposit in the environment and can contaminate rain water tanks, water reservoirs, food crops, livestock, recreational water bodies, buildings and flora.

Air quality can be impacted by the management of waste, such as the release of biological aerosols (such as during incineration of carcasses after infectious disease), discharge of ozone depleting gases (from air conditioners, including those in cars bodies or from refrigerators), and creation of dust and odours from food and organic material disposal.

Water

Aspects of water quality and quantity can be affected by disasters. Groundwater, surface water (including rivers, lakes, canals, reservoirs and tanks) and marine water are all types of water systems that may be susceptible to impact from disaster. Without appropriate quality and quantity, the sustainability of production systems, human health, ecosystems and recreational water use may be jeopardised.

Water quality can be affected by dust, sediment, rotting organisms (decaying organic matter), disease or pollutants. Where the water is used for drinking (by people or animals, including stock and aquaculture), the degradation directly impacts the community. In other cases, changes in water quality may affect suspended gas and lead to changes in the biota and flora in the water. This may lead to fish kills, development of algal blooms, weed kills or the choking of waterways with weed or algae. If the water quality is reduced, public health may be compromised and there may be fears of disease outbreak. The degradation of water quality can pose health risks to communities or decrease

Table 9 Examples of impacts of disasters on the natural environment by component

Component of the natural environment	Aspects of this component relevant to disaster management	Some examples of effects
Air	<ul style="list-style-type: none"> Particulates Chemicals Biological aerosols Radiation 	<p>Immediate: asthma cases</p> <p>Longer term: deposition of particulates residues on assets and resulting psychological impacts</p> <p>Dust from wind erosion—denuded landscape (fire, drought)</p> <p>Heatwave deaths</p> <p>Deaths from bushfire smoke affecting air quality</p>
<p>Water:</p> <ul style="list-style-type: none"> • surface water • ground water • marine • artificial storages 	<p>Quality:</p> <ul style="list-style-type: none"> • biological contamination • particulate contamination • chemical contamination • dissolved oxygen levels/quality • radiation <p>Quantity:</p> <ul style="list-style-type: none"> • changed river flows • changed groundwater storage • flow regimes • storage polluted with ash and sediment contaminants <p>Marine:</p> <ul style="list-style-type: none"> • storm surge • biological contamination/introduced pests 	<p>Loss of capacity (drinking water, stock supply, etc.)</p> <p>Behaviour change as it moves through the environment</p> <p>Quality and quantity supporting:</p> <ul style="list-style-type: none"> • production systems • recreational water • ecosystems
<p>Land and soil:</p> <ul style="list-style-type: none"> • landscapes • rocks • soil • geo-heritage 	<p>Loss and movement:</p> <ul style="list-style-type: none"> • erosion • deposition <p>Quality and condition:</p> <ul style="list-style-type: none"> • contamination • changes to soil—acidification/structure change/compaction <p>Damage to landforms and landscapes</p>	<p>Significant erosion after a fire or flood, earthquake or cyclone can change the course of waterways, reduce the productivity of farmland and create erosion risks for infrastructure both up and down stream.</p> <p>All of this will have impacts on flora and fauna. Potential impacts also include natural, cultural and geo-heritage sites.</p>
Plants and animals	<ul style="list-style-type: none"> Loss of species and populations (biodiversity), especially threatened species Change in abundance of species Predators Competitors Changes in recruitment (whether seedlings can survive) Loss of habitat Disease Pollination 	<p>Increased interaction between wildlife and humans due to animals being disorientated, displaced (vehicle collisions, kangaroos/rabbits grazing in gardens, noisy birds (such as corellas) concentrated in civic areas, foxes coming into yards and killing domestic animals/stirring up pets (spreading mange to pets) etc.).</p> <p>Introduced predators concentrate on the native species and livestock remaining in the landscape (advantaged by no harbour for wildlife), can wipe out threatened species, impact on farm production/survival.</p> <p>Rabbits compete with native wildlife for scarce food resources, impact on regeneration of plants, impact on pasture/crop production.</p> <p>Weeds are first to establish on bare ground and can outcompete native plants and agriculture/pasture plants.</p> <p>Birds may move out of the area, reducing pollination activity and/or allowing insect activity to get out of balance.</p> <p>Sea-grass disturbance or removal from sediment deposition/chemical outfall can change fish population dynamics (fishing industries affected), increase beach erosion and deposit seaweed on beaches.</p>

opportunities for commercial activities such as tourism, agriculture and aquaculture.

Land and soil

Soil forms from rock so slowly that it is effectively a non-renewable resource. Healthy soil is essential to provide us with food, fibre and clean water. Land and soil can be affected by disaster through:

- changes to location through loss and movement; for example, erosion, landslip or earth movements due to earthquakes, which might cause damage to landforms
- changes to the quality, such as soil chemistry, through contamination and structure, including the effects of compaction.

Erosion

Erosion is a natural process that gradually wears away land by wind and water but can be accelerated by human activities and particularly during emergencies (e.g. fire and flood). Following severe weather or fires, the vegetation that protects the soil from erosion is often damaged or removed, leaving the soils exposed and in danger of erosion. Soils can then be transported during a flood (by water) or following a fire (by wind or water), leaving rural farm properties damaged, and potentially depositing soil on roads or floodplains. Although there may be some positive impacts for environments downstream (from the addition of silt and soil on the quality of that soil), there can also be negative impacts due to compaction (from the weight of floodwater), which hinders growth of crops and native vegetation, or due to the toxic nature of some floodwaters.

Climate change may further increase erosion risk. When natural events occur in combination (for example, heavy rain soon after fire), these events create great potential for severe erosion. If severe storms affect landscapes already impacted by fire or floods, or if marine storm surge (very high tide at the same time as a low pressure weather event) occurs, there can be impacts on the marine environment when sediments from the land are deposited in and beyond river mouths. This can reduce marine visibility, impede growth of marine plants and have flow-on impacts to fisheries. The sediments may be toxic, leading to fish kills, impacts on sea birds and potential public health issues from raised *E. coli* levels. There is also potential for large items of rubbish to be transported.

Bare soils are also susceptible to land slip, which can block roads or threaten the integrity of buildings, putting people in danger and impacting businesses. Landslides may result in fences being displaced, so that stock are no longer contained.

Earthquakes have the potential to cause dramatic changes to the landscape, potentially altering the surface of the land in urban and rural areas, disrupting economic and social activity, and leading to changes in water courses.

Soil contamination

Contaminated or polluted soil directly affects human health through direct contact with soil or via inhalation of soil contaminants that have vaporised. Potentially greater threats are posed by the infiltration of soil contamination into groundwater aquifers used for human consumption, sometimes in areas apparently far removed from any apparent source of aboveground contamination.

Plants and animals

Plants and animals are the biological components of the earth and operate as ecosystems. An ecosystem is a dynamic composite of plant, animal and micro-organism communities and the non-living environment interacting as a functional unit. People are an integral part of many ecosystems. Ecosystems are relatively stable and balanced, but that balanced state is dynamic, responding to changes in energy and nutrient inputs, predator-prey relationships (including diseases) or irregular disturbances.

Ecosystems have always experienced (and will continue to experience) periodic natural disturbances such as floods, fires, volcanic activity and even release of hydrocarbons from the sea floor, which offer both opportunities (for example, floodplain nutrient replenishment) and threats (death of populations of organisms, ecosystem damage). However, people have developed a system of industry and agriculture (production), a way of life (society) and forms of recreation that rely on the ecosystem functioning in a relatively predictable manner.

Significant disturbance to ecosystems can drive them out of their balanced state. If a disturbance pushes an ecosystem beyond its capacity or resilience, the balance can be lost forever, and a new ecosystem will eventually result. Due to the complexities of ecosystems and our relative ignorance of how they work, it is impossible to predict the characteristics of the 'new balance' and whether it will support the industrial, agricultural, societal and recreational activities of before. In these cases, particularly, recovering ecosystems (to a previous state or an 'in-balance' new state) will enable society, built environments and the economy to also recover. For example, the natural environment was a critical area of recovery in Marysville after the Black Saturday bushfires because the community relied heavily on visits from weekenders and nature-based tourism. While things have improved in the period since the fires, tourism visitation has not returned to previous levels.

The ability of ecosystems to recover through their own energy and resilience depends on a number of factors including the level of disturbance or degradation of the ecosystem prior to the event, and how the ecosystem is managed after the event. An already-impacted or degraded ecosystem is more vulnerable to a disaster event and may be irreversibly changed by a major disaster or event. A resilient system is more likely to

be able to sustain and respond to impacts and recover balance more quickly.

Plants and animals/flora and fauna (and ecosystems) across a landscape have variable resilience, depending on the level of disturbance pre-event. Disturbances include degradation of vegetation (for example, grazing of feral animals and livestock) and soil resources (e.g. erosion), vegetation clearance and fragmentation of habitat (e.g. small, unconnected patches of vegetation), length of time since last disturbance (e.g. time since last bushfire) and level of removal of species (e.g. fishing).

Plants and animals don't just exist in parks and reserves or on land owned by government. They are distributed widely across the landscape and across a range of tenures (public and private land, freehold and leasehold land). After a disaster, plants and animals may 'appear' in unusual or different places, in environments they would not usually occupy. Although this may sometimes be transitory behaviour (travelling to a safe refuge elsewhere), for less mobile species the new location may become their safe refuge. In either case, recovery actions across the landscape, across tenures and land uses will be important.

Man-made disasters (e.g. oil spills, radioactive leaks or the release of toxic chemicals), which can include the secondary impacts of response and recovery actions, can severely impact animals and plants and might push sensitive species to local or wider extinction. They may also give exotic species advantages (e.g. marine pests and weeds). The impact of natural or human-induced disasters on ecosystems and species needs to be assessed and monitored to determine if active intervention is required.

Enabling biodiversity is a wise strategy for managing risks associated with medium-term and long-term climate change and other environmental changes and for keeping future management options open.

Prioritisation of efforts to recover natural environment

Although rapid assessments provide a benchmark of current environmental system status and indicate a method of prioritisation, this does not necessarily align with community needs. It is important to not only contextualise the way natural resources are used and valued in any particular landscape, but also to understand how local communities prioritise recovery.

For example, the 2015 Sampson Flat and Pinery Fires in South Australia provide excellent examples of how different community profiles and the resulting different priorities should be considered and incorporated in recovery efforts by agencies involved in natural environment recovery efforts.

The Sampson Flat community, nearby to a capital city, consists largely of lifestyle property owners, many of whom commute daily to jobs in the city and outer suburbs. Although many properties run some stock, grow the occasional crop of hay or have an orchard or vineyard that may be used to supplement their incomes, there

are few properties that could be considered primary producers. Another level of complexity is represented, in that many of these are relatively new property owners who may lack land management skills (with turnover of properties occurring in the Adelaide Hills, on average, every seven years). Essentially, the majority of these residents have moved to an area of natural beauty where the open spaces, hills, trees, native vegetation, watercourses, and animals contribute to a sense of place.

The Pinery Fire burnt a large area where the community are predominantly primary producers, mostly broadacre cropping with some sheep and cattle production. Many landholders come from generational farming families, are practical and skilled land managers who live in a well-connected, structured and supportive community. The values and needs that are placed on the natural environment largely relate to economic use and productivity which provides a different set of priorities in comparison to the Sampson Flat community. This is not to say that there is little value placed on the visual and amenity aspects of the natural environment in the Pinery area—indeed there will always be differing value sets and opinions within any community, but broader community requirements will influence the prioritisation of recovery activities.

Strategies to help identify community priorities for natural environment recovery

During the early recovery phase, it is important to capture, record and collate community sentiment about priority natural environment recovery issues by listening and talking to community members. This cannot occur by simply attending recovery committee and working group meetings but requires a commitment from recovery organisations to provide a person that can get out amongst the community, attend all post-fire community events, organise targeted local events, and be available to talk to community members and capture their thoughts.

One way to help facilitate this is through asking residents to fill out an 'Issues Survey' form, a useful way to capture information about impacts and priorities of individuals and properties. It is important that is carried out with empathy and awareness which may require that the activity be deferred, or that the recovery practitioner completes the form on behalf of the individual.

Once a broad section of a community has been provided with the opportunity to contribute to the process, the collated information provides an invaluable set of community recovery priorities. This allows programs to be developed and actions incorporated that align with community needs and connect with community sentiment. It is then possible to overlay the natural environment recovery priorities on that which have been identified through technical assessment reports so that these can be woven through the recovery programs. This provides an effective means of addressing broader environmental recovery needs while continuing to meet community needs.

The values placed by community members on the different components of the natural environment and subsequent recovery priorities should be considered and incorporated into a strategy that encompasses community sentiment and also addresses broader environmental needs. There are times when community prioritisation is at odds with the most effective way forward for the recovery of components of the natural environment. This can provide recovery practitioners with real dilemmas that can only be addressed through a flexible, considered and adaptive approach.

Management of animal welfare

In any disaster event there is likely to be wildlife that has been seriously injured. The act of assisting injured wildlife may be therapeutic and can provide the broader community with a social and emotional connection to recovery efforts. This work can be a symbol of recovery and helps general wellbeing, particularly if supported by experience wildlife carers and agencies.

Even if animals are uninjured, they can face a perilous existence if they remain in the disaster impacted, often denuded landscape. However, it is generally not necessary to feed wildlife after a disaster. They are highly mobile and if food is unavailable, will generally move off into undamaged parts of the landscape. Encouraging them to remain in the disaster area has potential to impact vegetation recovery in the long-term.

There are excellent systems in place whereby Primary Industries Departments in each jurisdiction assist landholders to manage dead stock and destroy seriously injured animals. Because livestock require access to food, are opportunistic browsers and will seek out new shoots, this has the potential to have long-term impacts on pastures and native vegetation recovery, if they are allowed to return too early or maintained on a property without appropriate management, e.g. containment areas/hand feeding.

Fencing of properties

This is a complex matter that is often driven by recovery support agencies as a priority issue. This is not necessarily in the best interests of the property owner or the natural resources of the property. Maintenance of stock on properties is problematic as it can impact on the ability of pastures and native vegetation to recover. A key message may be that re-fencing is not an urgent issue, unless the fencing is for a stock containment area to facilitate hand feeding. Impacted properties should be provided with time to recover, and this can provide an opportunity to better consider opportunities to change (for the better) in the way the property is fenced and/or managed. This has to be balanced by the fact that there are volunteer agencies available to assist directly after a disaster which can significantly reduce the overall cost of replacement fencing.

Hazardous trees

Depending on the nature of the disaster, large trees may become damaged or destabilised, thereby posing a risk to people and infrastructure. In an effort to make the area safe after disaster many significant and important trees may be removed, sometimes unnecessarily, from roadsides and private property. In other instances, genuinely hazardous trees should be removed, but landholders may not have the ability or financial capacity to undertake the work, and there may not be provisions within the recovery structure to support this urgent and important work.

In addition, there is potential for the visual aspect of damaged trees in the landscape to have impacts on community wellbeing over the long-term—even years after the event.

Consideration should be given in the planning stage about how dangerous trees will be managed and surviving vegetation protected during recovery. Through pre-established relationships with arborist associations, it may, for example, be possible to obtain qualified assistance and pro bono work or advice to support recovery efforts.

Other references/resources

The linkages between people's wellbeing and the natural environment is detailed in *Ecosystems and Human Well-being – A framework for assessment* (Island Press 2007).

Environmental risk management—principles and process (Standards Australia 2006) details identification of impacts and potential impacts through sources of risk (hazard/aspect, event), pathways, barriers and receptors.

4.4.3 KEY CONSIDERATIONS FOR RECOVERY OF THE NATURAL ENVIRONMENT

This section presents some key questions for determining the activities and interventions that may be necessary to enable recovery of the natural environment, along with examples of recovery activities.

Impact assessment

Post-incident environmental assessment procedures exist. They are well developed for bushfire/wildfire incidents in the United States, where they are known as BAER—Burned Area Emergency Rehabilitation. This approach has been used following bushfires in Victoria in 2003, 2006/07 and 2009 and is being piloted in the Australian Capital Territory and New South Wales. Some of the principles and procedures could apply in recovery of the natural environment for a range of disasters or emergencies.

The BAER approach uses pre-planned teams of appropriate staff to make assessments and to develop and implement recovery plans post-incident. In some cases, team members are part of the incident

management team or emergency coordination centre as environmental advisors/planners. These teams commence their work before the incident has finished, which is an important point to consider when taking action—recovery planning for the natural environment starts before the disaster event has finished (that is, during the response phase).

When recovering the environment, the focus and principles need to be on ecosystem resilience and maintenance of ecosystem processes. If the incident is particularly damaging (for example, acid sulphate soils or flooding), species-level recovery is likely to be costly and often impractical, and a triage approach may be needed. Landscapes that are fragmented and disturbed (prior to the incident) may need special attention and approaches post-disaster because the potential losses (and gains) are great.

A disaster may or may not necessarily have negative consequences for an ecosystem and the likely threats to the system need to be evaluated. Impacts that are part of the environment (in that they fulfil an ecological role) may be beneficial to certain ecosystems. Further, as environments have many species that have varying niche requirements, impacts may be beneficial for some plants and animals, while only negatively impacting on a few. Not only are species affected differently, but the severity of the impact on a species population may depend on the lifestage (e.g. whether the population is reproductively mature or not) or age of the population. It is important to work with ecologists, biologists, scientists and other professionals in the field of the natural environment in the recovery phase. They can provide the specific detail of impacts on the natural environment and provide advice. Agencies representing these disciplines need to be part of the local recovery committee structure.

Some attention is needed for competing outcomes of other recovery (social, built and economic) activities. Often there is a high level of activity post-disaster to restore infrastructure services, and ‘normal’ environmental considerations may be bypassed (for example, seeking vegetation clearance approvals). Although quick action is essential, good environmental practices, if built into the process beforehand, can still be applied.

As noted, community-led priority setting, based on pre-incident priorities, assists in decision making, along with risk management frameworks (Standards Australia 2006). It is also critical to compare pre-disaster conditions with environmental aspirations (objectives). Where possible, safeguards and strategies to avoid the same issues from occurring again should be built into the recovery phase, and post-disaster preventative/sustainability planning commenced.

The natural environment has historical and spiritual meaning for Indigenous people and communities, and, as such, the protection and preservation of the natural environment is of paramount importance. In the management of recovery from emergency or disaster, it is important for agencies and communities to respect

and recognise the unique meaning that place has for many Indigenous communities and to seek their advice about the most respectful way to treat the impacts of disasters.

4.4.4 RISK MANAGEMENT

Risk management provides a structured, systematic approach to decision making. The Australian Standard for risk management is Risk management—principles and guidelines (Standards Australia 2009). The handbooks *Emergency risk management applications guide* (EMA 2000) and *Environmental risk management—principles and process* (Standards Australia 2006) have been published in support of these processes. Both handbooks are written for planners working to manage the risk prior to a disaster. The processes, principles and considerations in these handbooks can equally be used in managing the risk of the impacts of disaster. See also *National Emergency Risk Assessment Guidelines* (NERAG) (AIDR 2015).

Special features of environmental risk management

Environmental risk management is complex because of the complexity of the natural environment.

“ The large number of ecosystems and organisms, the way they interact with one another and their surroundings, create a high degree of complexity and introduce significant uncertainty ... Decisions often involve long time spans and assumptions about projected impacts, such as effects on future generations. Because of the difficulty in making accurate projections in these circumstances, decisions must often be made when there is still significant scientific uncertainty about potential outcomes.

Standards Australia 2006.

4.4.5 PRINCIPLES OF ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Ecologically sustainable development (ESD) is ‘development which aims to meet the needs of ... today, while conserving our ecosystems for the benefit of future generations’ (Ecologically Sustainable Development Steering Committee 1992).

The *National Strategy for Ecologically Sustainable Development* includes three core objectives and seven guiding principles.

The goal is:

Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The core objectives are:

- to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations
- to provide for equity within and between generations
- to protect biological diversity and maintain essential ecological processes and life-support systems.

The guiding principles are:

- decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations
- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- the global dimension of environmental impacts of actions and policies should be recognised and considered
- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
- cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms
- decisions and actions should provide for broad community involvement on issues which affect them.

These guiding principles and core objectives need to be considered as a package. No objective or principle should predominate over the others. A balanced approach is required that takes into account all these objectives and principles to pursue the goal of ESD (Ecologically Sustainable Development Steering Committee 1992).

4.4.6 GUIDING QUESTIONS AND PRINCIPLES OF NATURAL ENVIRONMENT RECOVERY

The natural environment is a complex area where ill-considered treatments may cause further damage. The consequences of acting or not acting need to be considered. After a disaster there may be action that is unavoidable in order to make repairs to infrastructure (e.g. releasing sewage into the sea at Christchurch after the earthquake in 2011). Prior to implementation of any recovery treatments, a recovery plan that considers

environmental risk management (Standards Australia 2006) needs to be prepared.

When working to provide programs and activities to recover the natural environment, some key questions can inform a course of action. Figure 14 illustrates these questions and is followed by a detailed explanation of the processes.

Establish the context—key questions

The key questions in Figure 14 can be considered in the context of environmental risk management. Any recovery activity needs to be preceded by a risk assessment (to identify, analyse and evaluate risks), which considers its impact on each of the natural environment's intrinsically interconnected components.

Question: what has happened to the natural environment as a result of the disaster/emergency/incident?

- Action: initially the action is to investigate, monitor and evaluate the impacts.

The natural environment is a highly complex system. Some aspects of the environment might continue to function well, but others may be devastated. Consideration should also be given to how the environment reacts over time. For example, air quality immediately after a bushfire may be bad, but soon recovers, but river water quality and biodiversity may be severely impacted for many weeks or longer.

Question: can the natural environment adequately recover on its own in an acceptable timeframe?

- If the answer to this question is 'yes', the natural environment will adequately recover on its own in an acceptable timeframe, and no specific recovery activity needs to be undertaken (a valid treatment option).

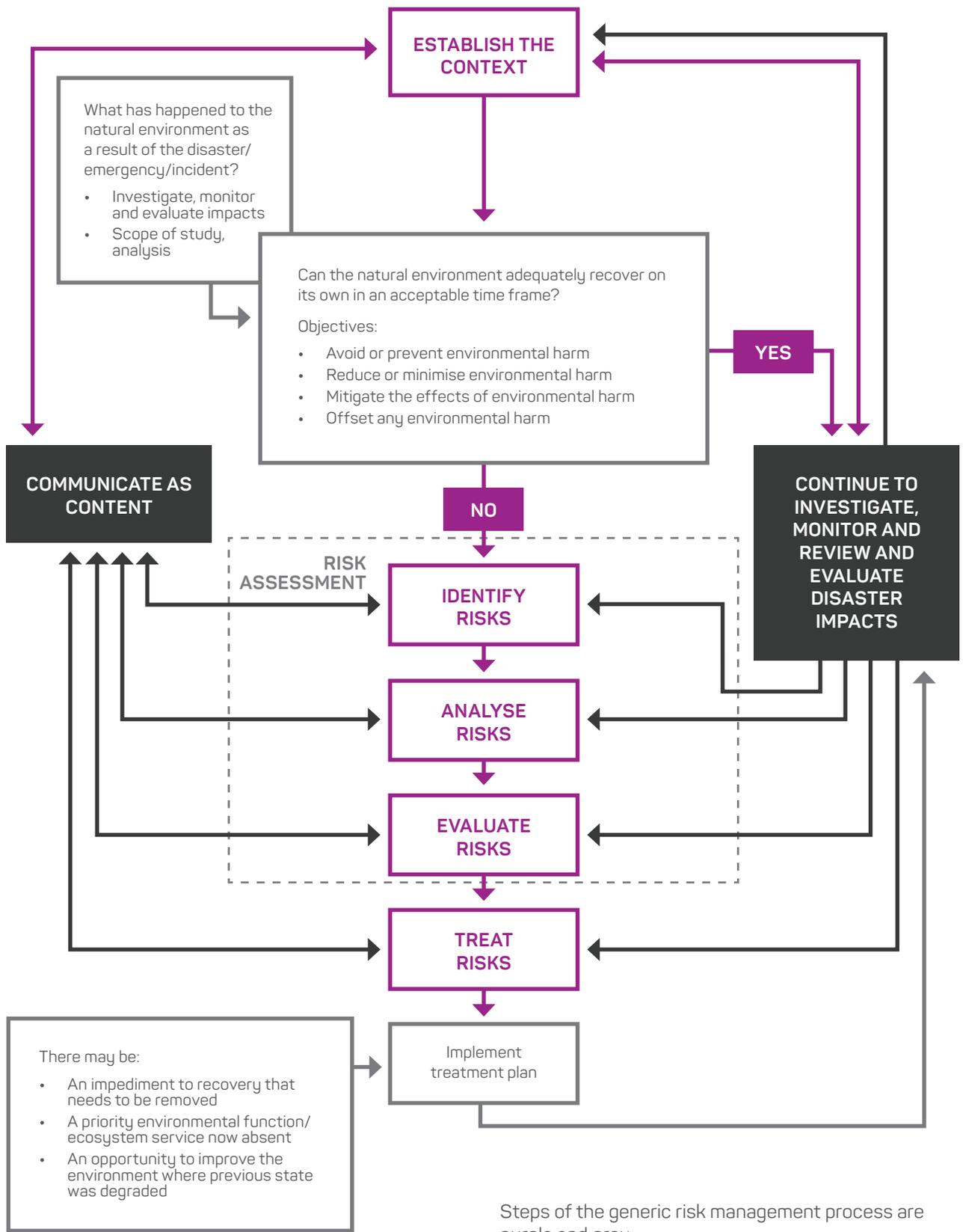
Action: continue to investigate, monitor the impacts (immediate and future) and evaluate the ability of the natural environment to cope.

- If the answer is 'no', the natural environment cannot adequately recover on its own.

Action: identify, analyse and evaluate the risks to the natural environment. (See 'Identify risks', 'Analyse risks' and 'Evaluate risks' below.) To do this, criteria for evaluating the risk need to be established.

Other questions that might assist in answering the question include:

- What was the state of the natural environment and how was the natural environment progressing (refer to the relevant State of the Environment report)?
- How is it now functioning?
- Can it be fully functional again?
- Do we need a different plan to achieve effectively functioning ecosystems?



Steps of the generic risk management process are purple and grey

See also Principles of ecologically sustainable development

Figure 14 Key questions to assist with determination of recovery actions for the natural environment

Some guiding objectives that might be appropriate to the process of answering these questions and establishing the context after disaster include:

- avoid or prevent environmental harm
- reduce or minimise environmental harm
- mitigate the effects of environmental harm
- offset any environmental harm.

Question: what are the criteria against which the risk to the natural environment is to be evaluated?

Decisions may be based on operational, technical, financial, legal, social or natural environment or other criteria.

For example, from a legal perspective, the criteria against which the risk is to be evaluated may be based on Australia's key national environmental law—the *Environment Protection and Biodiversity Conservation Act 1999*—which is designed to protect nationally significant matters.

Under the legislation, any action likely to have a significant impact on these matters needs to be referred to the federal environment department for assessment.

Examples of activities that might need to be assessed

- Building a new road through a listed threatened ecological community, to replace a road that was washed away during the flooding.
- Bulldozing debris in a World Heritage Area or known critical habitat of a threatened species.
- Dredging a heavily-silted port following floods

Australian Government 2011.

Other references/resources

Various state/territory and national State of the Environment reports are available via the 'State of the Environment (SoE) reporting' page of the Department of Sustainability, Environment, Water, Population and Communities.

4.4.7 ACTIONS TO SUPPORT RECOVERY

Identify risks

Identify the risks (threats and opportunities) that result from the disaster and impact on the natural environment and ecosystem services.

Questions that might need to be considered include:

- Is there an impediment to the environment recovering on its own (for example, contaminated soils or bare soils at risk of weed invasion might prevent regeneration of native species, which can result in reduced agricultural productivity)?

- Is a priority environmental function (or an ecosystem service) now absent and unable to recover quickly, that needs steering or hastening through the recovery process (for example, contaminated and reduced water supplies after a fire because the damage to the catchment has reduced the capacity of the landscape to filter the drinking water)?
- Is there an opportunity to improve the natural environment where the previous status was degraded?

Analyse risks

Analyse the extent of the risks to the natural environment (the likelihood and the consequence of risks) so that a level of risk can be estimated:

- How big are the risks?
- Are the risks tolerable?

Evaluate risks

Making decisions about the ability of the natural environment to cope depends on pre-established assessment or evaluation criteria and objectives.

Evaluate the risks in order to prioritise treatment options:

- What risk treatments are required?
- Should the management of these risks be prioritised?

Treat risks

Treatment options include actions to:

- monitor and observe
- prevent or avoid environmental harm
- reduce or minimise environmental harm
- mitigate the effects on the environment and community
- offset the damage.

Table 10 gives examples of options or strategies for treating risk in the natural environment (under the components of air, water, land and soil, and plants and animals).

Options and strategies for treating risk can be assessed in terms of:

- Their potential benefits
- Their effectiveness in reducing losses
- The cost to implement the option(s); and
- The impact of the control measures on other stakeholder objectives, including the introduction of new risks or issues.

Standards Australia 2006.

Often decisions are made considering comparison of the cost (dollar and environmental) and economic impacts.

Table 10 Examples of recovery activities (risk treatment options) in the natural environment listed by component

	Air	Water	Land and soil	Plants and animals
Monitor/observe	<p>Emissions (source) air monitoring program</p> <p>Ambient (community) air monitoring program</p> <p>Personal (recovery worker) air monitoring program</p> <p>Deposition (fall out) monitoring program</p>	<p>Flora/fauna surveys</p> <p>Drinking water sampling program</p> <p>Recreational water body sampling</p> <p>Natural water body sampling program</p>	<p>Soil stability and erosion potential surveys</p> <p>Soil contamination assessments and environmental and health risk assessments</p> <p>Topsoil capability for regeneration of flora</p>	<p>Establish survival of and current threats to important species (for example, threatened or iconic tourism/cultural species)</p>
Prevent/avoid	<p>Aerial incendiary practices</p> <p>Whether or not to put a hazardous materials fire out—let it burn out and get the oxygen out or stop it burning so it doesn't contaminate the air?</p> <p>Extinguish fires</p> <p>Let certain fires burn to minimise ground-level impacts on environment</p> <p>Prevent dust lift off by stabilising land/use of fencing, mulching etc</p> <p>Manage wastes to prevent emissions</p> <p>Manage pesticide applications to prevent spray drift</p>	<p>Keep people out of a contaminated waterway so people don't end up eating fish from that particular waterway</p> <p>Remove oils, fuels etc from wrecked vehicles etc</p> <p>Recycling of wastes to minimise discharges or impacts on water resources</p>		<p>Implement hygiene protocols to prevent spread of disease to/within the natural environment (for example, boats might be prevented from dropping anchor in an area infested with marine pests)</p> <p>Keep livestock out of sensitive areas by fencing (to avoid grazing impact, improve recovery of plants)</p> <p>Hygiene protocols</p> <p>Controlling where machinery goes so it doesn't impact on certain/threatened species</p> <p>Temporary relocation of native fish species (e.g. Barred Galaxias, Macquarie Perch) to safe refuge</p> <p>Replacement of nesting boxes where they are a part of a monitoring or research program (e.g. for Leadbeater's Possum at Lake Mountain, Brush-tailed Phascogale at Kinglake)</p> <p>Supporting the welfare of fire-affected wildlife</p>
Reduce/minimise	<p>Treat air emissions (e.g. apply water sprays, filters, containment) to reduce the volume and/or render the emission less harmful</p> <p>Minimise impact on the environment through response techniques/practices</p> <p>Minimise exposure to humans and animals by keeping them away from the area where the air is contaminated</p>	<p>For oil spills—use booms, filters (e.g. all actions after the Gulf of Mexico oil spill in 2010 aimed to minimise damage)</p>	<p>Rehabilitating control lines minimises the potential for erosion</p>	<p>Control of introduced predators at key sites to protect threatened species and livestock</p> <p>Conduct works to minimise the potential for invasion of weed species to ground made bare from wildfire and along waterways</p>

	Air	Water	Land and soil	Plants and animals
Render harmless		Filter contaminated water to remove suspended solids, chemicals, biological hazards	Interventions between hillsides and creeks (such as straw/wire) to stop hill creep and sedimentation in creeks	
Mitigate the effects	<p>Limit the exposure of people and animals to areas of air contamination</p> <p>Decontamination of plants, animals, buildings, equipment</p> <p>Provision of suitable protection and safety for recovery volunteers</p>	<p>Composting practices for disposal of carcasses—less impact on the water table</p> <p>Wildlife rescue</p> <p>Temporary habitat construction and feeding</p> <p>Cleaning of rain water tanks, replacement water supplies and filtration</p>		<p>Translocate key (e.g. highly threatened) species to safer refuge (including into captive breeding facilities if necessary) to ensure survival of the species (e.g. Murray Hardyhead, Yarra Pygmy Perch, plus the previous examples of Barred Galaxias, Macquarie Perch)</p> <p>Replacement of protective fencing around threatened plants to exclude browsing and grazing animals such as rabbits, deer and kangaroos</p>
Offset the damage				<p>Where an event causes irreversible damage to high-priority vegetation, selecting a separate patch of land for restoration (or deferring activity in a logging coupe) may be an acceptable offset</p> <p>Provision of artificial nesting boxes can provide temporary habitat for displaced animals (shelter from weather and predators, provide safe breeding etc.)</p> <p>High-priority vegetation that has been devastated by a bushfire—select a separate patch of land for reforestation (or perhaps a logging coupe) over a period until the initial area has recovered</p>

Some activities will have benefits for many natural environment components. For example, fencing to exclude livestock from key areas can improve native vegetation recovery (by reducing grazing impacts), improve water catchment qualities (through less faecal material in waterways), reduce risk of soil erosion (more vegetation cover equals less sediment run-off) and, in the longer term, impact on maintenance of water quality.

offers a conceptual comparison for an approach to protect and preserve 'place' following the impacts of a disaster.

Monitor and review

Rapidly changing circumstances post-disaster require ongoing investigation, monitoring and evaluation. In light of this, the risk management process should be reviewed regularly to ensure the risk treatment plans/recovery plans remain the best option.

Communicate and consult

To attain maximum effect, it is important to ensure engagement by all aspects of community and all levels of government, and a broad range of subject matter expertise as the risk management process or the recovery planning proceeds.

The natural environment is a highly complex area to assess and engaging the appropriate expertise is essential. In Australia management and governance of the natural environment is conducted by a mix of public and private and non-government organisational entities, with varying standards and regulations. Engagement with these is critical to any natural environment recovery activity.

For a checklist for recovery managers working in recovery of the natural environment, see Toolkit 2-1 Community recovery checklists – Checklist 16 Natural environment

Other references/resources

Regional natural resource management strategies provide benchmarks and insight into perceived current conditions. Some have methodologies for decision-making and tools for prioritising treatment options.

Standards Australia publications cover the processes, principles and considerations for planners working to manage risk prior to a disaster and the risk of the impacts of disaster. See Risk management—principles and guidelines (Standards Australia 2009) and Environmental risk management—principles and process (Standards Australia 2006).

To evaluate environmental losses and benefits from flooding, see 'Rapid appraisal method for assessing the environmental effects of flooding' in Disaster loss assessment guidelines (EMA 2002b).

Annotated guiding principles for post-tsunami rehabilitation and reconstruction (UNEP & GPA 2005)

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