Evacuation Planning





AUSTRALIAN DISASTER RESILIENCE HANDBOOK COLLECTION

Evacuation Planning

Handbook 4



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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
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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 Attorney-General's Department.

Access to the collection and further details are available at the Australian Disaster Resilience Knowledge Hub¹(the 'Knowledge Hub').

Australian Disaster Resilience Handbook Collection

Guideline 7-5 Flood Information to Support Land-use Planning

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Handbook 6	National Strategy for Disaster Resilience: Community Engagement Framework
Handbook 7	Managing the Floodplain: A guide to best practice in flood risk management in Australia
Guideline	7-1 Using the National Generic Brief for Flood Investigations to Develop Project Specific Specifications
Guideline	7-2 Flood Emergency Response Classification of the Floodplain
Guideline	7-3 Flood Hazard
Template	7-4 Technical Project Brief Template

Handhook 5 Communication with Popula with a Disability: National Guidelines for Emergency Managers

¹ www.knowledge.aidr.org.au

Guideline 7-6 Assessing Options and Service Levels for Treating Existing Risk

Practice Note 7-7 Considering Flooding in Land-use Planning Activities

Handbook 8 Lessons Management

Handbook 9 Australian Emergency Management Arrangements

Handbook 10 National Emergency Risk Assessment Guidelines

Guideline 10-1 National Emergency Risk Assessment Guidelines: Practice Guide

Handbook 11 renamed Guideline 10-1 National Emergency Risk Assessment Guidelines: Practice Guide

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Australian Emergency Management Manual Series

The current 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.¹

¹ https://knowledge.aidr.org.au/resources/manual-series

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Preface

Vision statement

The vision of this handbook is to maximise the efficiency and effectiveness of the emergency evacuation process through informed and principled planning and implementation.

Purpose and intent

The purpose of this handbook is to provide authoritative guidance to people within government and its agencies, non-government organisations and communities on how to plan for the orderly management of an evacuation before, during and after an emergency or disaster.

The five stages of the evacuation process support a seamless transition from one stage of the evacuation planning process to the next. Use of this handbook will help ensure the principles and concepts of evacuation planning are applied consistently across Australia.

Central to the handbook's intent is the safety of community members and emergency responders during the evacuation process, and the early return of evacuees to minimise any negative social and economic impacts for affected communities.

Disasters and emergencies: Several terms to describe the event that requires evacuation to be considered 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'.

Background

The first edition of this handbook was published in 1998, and revised in 2005 by a steering committee of emergency management personnel. A further revision in 2012 was coordinated by the former Australian Emergency Management Institute of the Australian Government Attorney-General's Department, and included representatives from a cross-section of agencies and jurisdictions as well as non-government organisations.

The 2012 revision enabled alignment with key messages of the Council of Australian Governments (COAG) *National Strategy for Disaster Resilience* (NSDR)¹:

- · disasters will happen
- disaster resilience is your business
- · connected communities are resilient communities
- know your risk
- get ready then act
- learn from experience.

These key messages underpin each of the five stages of evacuation planning: from the decision to evacuate, through to the warning, withdrawal, shelter and return stages. Evacuation can be a complex process; careful planning will enhance community engagement and minimise risks associated with evacuations during emergencies.

Shared responsibility: The NSDR recognises that disaster resilience is a shared responsibility for individuals, households, businesses and communities, as well as for governments; and is not solely the domain of emergency management agencies. The 2009 Victorian Bushfires Royal Commission advocated 'shared responsibility' that recognises the role of government agencies and notes that 'communities, individuals and households need to take greater responsibility for their own safety and to act on advice and other cues given to them'. Involving the community in the evacuation planning process can engage community and promote community responsiveness, which in turn will lead to a more successful evacuation operation.

Shared responsibility

The Commission uses the expression 'shared responsibility' to mean increased responsibility for all. It recommends that state agencies and municipal councils adopt increased or improved protective, emergency management and advisory roles. In turn, communities, individuals and households need to take greater responsibility for their own safety and to act on advice and other cues given to them before and on the day of a bushfire.

Shared responsibility does not mean equal responsibility...there are some areas in which the state should assume greater responsibility than the community. For example, in most instances state fire authorities will be more capable than individuals when it comes to identifying the risks associated with bushfire; the state should therefore assume greater responsibility for working to minimise those risks."

Victorian Bushfires Royal Commission Report 2010

This 2017 revision has again drawn upon expertise across jurisdictions, the emergency management sector, community, government and non-government organisations. This revision recognises the complexity of evacuations and human behaviour; the influence of technology and social media; and the importance of consideration given to evacuation planning for all hazards.

The primacy of life, and therefore the need to focus on public safety, is the primary consideration in managing disasters and the imperative for this handbook. Removal of people from the threat is often the most effective way to manage public safety.

This handbook recognises the existence of variations in legislative powers, arrangements and terminology across jurisdictions. It should therefore be used in conjunction with applicable state and territory legislation, plans, guidelines and local arrangements, as well as other handbooks in the Handbook Collection.

This handbook is available on the Knowledge Hub.²

¹https://knowledge.aidr.org.au/resources/national-strategy-for-disaster-resilience

² https://knowledge.aidr.org.au/resources/handbook-4-evacuation-planning

Introduction

Scope of the handbook

This handbook outlines the nationally agreed principles for evacuation planning, using the nationally recognised five-stage evacuation process as a framework. This handbook incorporates guidelines for developing evacuation plans that can be applied in emergencies and disasters impacting communities, that may arise from a wide range of hazards.

This handbook should be used to prepare evacuation plans before disasters arise, to maximise the efficiency and effectiveness of any evacuation that may be necessary. Evacuation plans may be specific to a hazard and a location, or more generic in nature, understanding that any generic plan will need to be adaptable and flexible to accommodate differences in the time, place and circumstance of a particular disaster.

This handbook is not intended for use in planning site-specific evacuations, for example, from high-rise buildings. This type of evacuation planning is addressed in *AS3745 Planning for Emergencies in Facilities*¹, and in relevant state and territory legislation and other publications available from state and territory emergency management agencies.

WHAT IS EVACUATION?

Evacuation is a risk management strategy that may be used to reduce loss of life or lessen the effects of an emergency on a community, prior to the onset of, or during, an emergency. It involves the movement of people threatened by a hazard to a safer location and, typically, their eventual safe and timely return. For an evacuation to be as effective as possible, it must be appropriately planned and implemented.

Depending on the hazard and its impact on the community, the evacuation process, including withdrawal and return, may take days, weeks or months to complete. Some evacuations may be carried out very quickly and over very short distances. For example, people may be warned to move to higher ground pending a potential tsunami impact, to avoid a flash flood, or to move two streets away from a rural-urban interface to avoid a bushfire. In other circumstances, people evacuated from an area may be relocated many kilometres from their

home and be unable to return for a considerable period of time

Types of evacuation

Types of evacuation described in this handbook are defined below. Evacuation plans should be developed to ensure that any evacuation, regardless of the form it takes, can be carried out effectively and efficiently.

PLANNED EVACUATION

An evacuation carried out in accordance with an evacuation plan. This includes:

Total evacuation

An evacuation when, due to the nature of the hazard, everyone in the affected communities is encouraged or directed to evacuate.

Partial evacuation

An evacuation of only some of the affected communities. For example, only residents living in low-lying areas of a community directly impacted by flood waters will need to evacuate.

Phased evacuation

Phased evacuation is a strategy used in either total or partial evacuation when, due to the slow onset of a hazard or to avoid congestion on roads, affected communities are encouraged or directed to evacuate at different times.

¹ Available through the Standards Australia website: www.standards.org.au.

Evacuation Strategies

COMPULSORY OR DIRECTED EVACUATION

An evacuation in circumstances where a relevant government agency has exercised a legislated power that requires people to evacuate.

RECOMMENDED EVACUATION

An evacuation where an evacuation warning has been issued but people have the option to remain.

SELF-EVACUATION

This is the self-initiated movement of people including individuals, families and other groups to safer places prior to, or in the absence of, official warnings to evacuate. Some people may choose to leave early, even in the absence of a hazard, but merely on, for example, a forecast of high bushfire danger or a flood watch. Self-evacuees manage their own withdrawal, including transportation arrangements. Most states and territories encourage people to evacuate early if they intend to evacuate.

Self-evacuation needs to be recognised in the planning process, particularly in the shelter and return stages.

Key message: The type of evacuation selected by decision makers will be influenced by whether the emergency is rapid onset, requiring immediate evacuation, or whether it is slow onset or pre-warned, allowing more time for the methodical implementation of evacuation strategies.

Remaining in place

Despite a direction or recommendation to evacuate, some people in a hazard impact area may remain and shelter in place.

Remaining and sheltering in place may be recommended by the agency managing the emergency for some or all the people in the expected hazard impact area, when it is considered safer to remain than to evacuate.

In some cases, steps may be taken by the agency managing the emergency to protect residents in place, particularly those at increased risk such as the residents of aged care and medical facilities. The agency managing the emergency should consult with and inform managers of such facilities of the decision to evacuate or shelter in place. The facilities' evacuation plans should be available to incident managers, preferably appended to the local emergency management plan and/or evacuation plan.

Alternatively, people may decide to remain in place (often where they live), even when an vacuation is directed or recommended. This may

be to protect homes, pets, livestock, crops, machinery and/or buildings, or because they believe it is too late or unsafe to evacuate.

Regardless of the reason(s) for remaining, information will need to be provided to those who remain in place, particularly during the warnings and return stages. Communication to those who remain in place should be coordinated with those managing the evacuation to ensure consistent messaging; for example, about recovery arrangements and risk mitigation strategies for returnees (see Message content).

Apart from the direction or recommendation to remain in place – and communications to those who remain in place – arrangements for people who remain in place is outside the scope of this handbook, which is focussed on the movement and management of people away from a hazard impact area.

People who initially remain in place and later decide to evacuate may need assistance with withdrawal and shelter, and should be managed in the same way as other evacuees.

Stages of the evacuation process

The key consideration in evacuation planning is to address the five-stage evacuation process, namely:

- Decision to evacuate
- Warning
- Withdrawal
- Shelter
- Return

These stages are covered in more detail in the following pages.

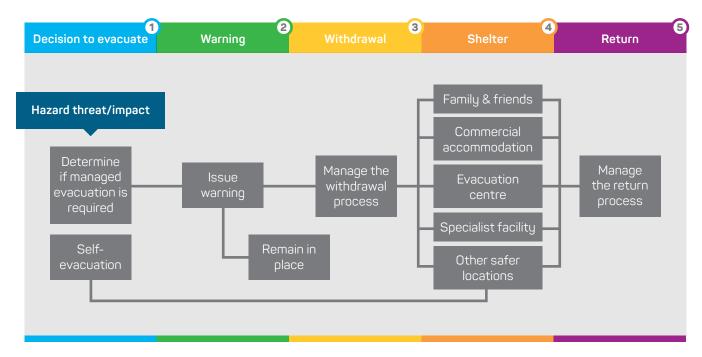


Figure 1 Evacuation process

The need to plan for evacuation

Evacuation management is a complex and demanding activity that may be carried out under hazardous and time critical conditions, sometimes over several days or, occasionally, over several weeks.

Evacuation can be stressful for people. In addition to the (imminent) risk of harm to their own life, other factors may impact behaviour and decisions made in an emergency such as the need to protect property and/or care for dependents and animals, family circumstances that may create additional requirements during evacuation, and the influence of social media commentary.

Further, managing an evacuation may involve the movement of large groups of people; traffic congestion issues often present a challenge to manage.

Careful planning, and working with communities well before a disaster situation arises, can help to alleviate some of the factors that may otherwise jeopardise the success of an evacuation operation. Effective evacuation management relies on detailed planning and exercising.

Planning for evacuations is a key responsibility of government, its agencies and relevant non-government organisations. Engaging all relevant stakeholders – including the community – to develop, exercise and continually improve evacuation plans is likely to enhance evacuation planning and evacuation management outcomes.

Evacuation planning

The purpose of this section is to describe in general terms principles for developing an evacuation plan.

Introduction

WHAT IS PLANNING IN AN EMERGENCY OR DISASTER CONTEXT?

Emergency or disaster management planning is the development of arrangements between people and organisations to meet the needs of the community before, during and after emergencies or disasters. The written plan becomes a record of the arrangements made by these stakeholders regarding their roles and responsibilities, resources required, and linkages between various functions.

The process of developing an emergency plan is detailed in Australian Disaster Resilience Manual 43 Emergency Planning¹ (AIDR 2004) (Manual 43).

Evacuation planning is an integral part of emergency management planning; an evacuation plan should supplement and complement, and be consistent with, the emergency management plan. Development of an evacuation plan should consider the context and capability of the individuals and community at risk, together with an emergency management plan that identifies evacuation as an appropriate risk management strategy.

PLANNING AND COMMUNITY ENGAGEMENT

An evacuation plan may be generic, or hazard, location or community-specific. For example, a generic plan may be developed for the evacuation of a community

or multiple communities in the event of a threat by any one of several hazards. A more specific plan may be developed for a specific hazard, to provide a greater level of detail regarding the management of an evacuation for a specific community or communities.

The approach chosen will depend on emergency planning arrangements within the jurisdiction(s) in question, and the nature of the hazards faced by the communities therein. Other considerations may include the cultural, social and geographic characteristics of communities.

Hazard-specific plans are likely to be more detailed, and should involve input from a diverse range of community members with detailed local knowledge (such as availability of public transport, likely egress routes, appropriate community facilities for shelter, local businesses, impact on local economy). Community members may be able to provide useful local context to location and hazard-specific evacuation plans, especially if they have experience in emergencies and evacuations.

Further information on community engagement can be found in Australian Disaster Resilience Handbook 6 National Strategy for Disaster Resilience: Community Engagement Framework² (AIDR 2013) (Handbook 6).

¹https://knowledge.aidr.org.au/manual-series

²https://knowledge.aidr.org.au/community-engagement-framework-handbook-6

The planning process

Evacuation planning generally occurs as part of the emergency planning process; typically as part of the 'Develop arrangements and systems' step (see Figure 2), covered in detail in Manual 43. Matters that may be specific to evacuation planning are addressed below.

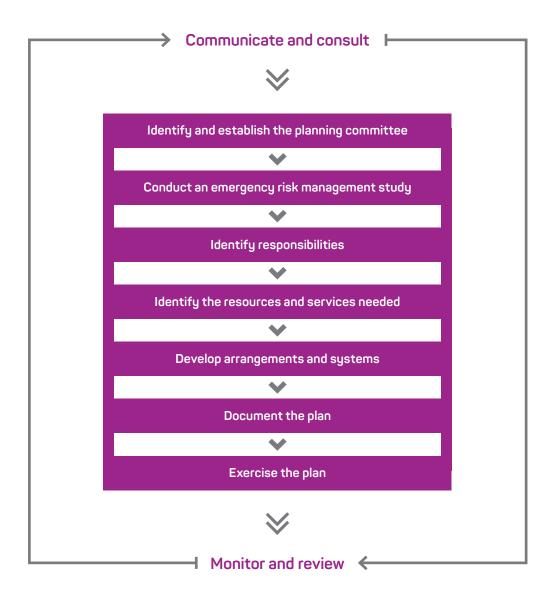


Figure 2 Emergency planning process

RESPONSIBILITY FOR PLANNING AN EVACUATION

In some jurisdictions, the emergency management planning committee undertakes evacuation planning. In other jurisdictions, a separate evacuation planning committee may be formed, or responsibility assigned to an individual.

Those responsible for developing evacuation plans should be aware of and familiar with any overarching emergency management plans, procedures and guidelines with which their evacuation plan needs to align. They should work collaboratively with relevant stakeholders, and consult with all agencies and organisations that have a role in an evacuation; including community representatives, who represent the diversity of the community and may include members from the groups listed on page 15. This consultation is essential to leverage local knowledge, expertise and resources, and to gain commitment to and understanding of what is required of stakeholders during an evacuation. Some or all of these key stakeholders may form part of an evacuation planning committee.

The evacuation plan should detail the strategies and arrangements for all five stages of the evacuation process, including who is responsible for carrying out each stage:

- 1 Decision to evacuate
- 2 Warning
- 3 Withdrawal
- 4 Shelter
- 5 Return

The evacuation plan should also identify who is responsible for informing the community and broader public about ongoing evacuation-related matters, particularly following the warning stage, such as the reopening of roads, the opening of recovery centres and the closure of evacuation centres. A communications sub-plan may be developed to support this function.

Other incident-related matters to be communicated to the public that are not evacuation-related may be the responsibility of the emergency management committee or another government agency. In jurisdictions where this is the case, the emergency management committee should ensure that public communications about matters not directly related to the evacuation process are managed in accordance with their overarching communications arrangements.

THE RISK MANAGEMENT STUDY

An emergency risk management study completed by an emergency management committee should address all potential risks including specific known risks (such as the regular flooding of a town on the Richmond River) as well as other less predictable, yet foreseeable, events (such as a bushfire threatening a rural-urban interface). The risk management study may identify the need to develop an evacuation plan or plans for a particular hazard or community, and the need to convene an evacuation planning team. Approaches may differ within and across jurisdictions.

RESPONSIBILITIES

It is essential the community and all agencies and organisations involved in evacuation planning have a clear understanding of relevant authorities, roles and responsibilities for each stage of the evacuation, and that these are clearly identified in the evacuation plan. Authorities, roles and responsibilities may vary between stages in the evacuation process.

The evacuation plan should describe how the activities of each agency will be coordinated to ensure an evacuation can be implemented effectively and efficiently. It is therefore important for the plan to clearly reflect the roles and responsibilities of all agencies involved.

The management structure for each stage of the evacuation should be agreed and documented in the evacuation plan.

RESOURCES AND SERVICES NEEDED

The evacuation plan should identify all resources and services required to carry out an evacuation, and detail how these resources and services will be obtained.

As some critical resources (equipment or personnel) may be sourced from local businesses or community groups (for example, local bus companies may be engaged to assist in the withdrawal stage), local community providers should be engaged in evacuation planning, and agreements documented in the evacuation plan. Scarce local resources may need to be prioritised or shared across areas of operation.

Resources required of key agencies and organisations should be identified, and any shortfalls addressed. Those preparing the evacuation plan should adopt a collaborative approach to planning, and seek to ensure sufficient resources across different agencies are available during an evacuation.

ARRANGEMENTS AND SYSTEMS

Those preparing the evacuation plan should identify and develop specific management arrangements, addressing each of the five stages of evacuation. The points covered in this handbook should be considered carefully so that specific arrangements and systems to address all stages of an evacuation can be developed. Local community representatives should be engaged, so as to capitalise on their local knowledge, ensure the plan is relevant, foster a sense of shared responsibility and gain local acceptance of the plan.

For example, assembly points, egress routes and traffic management points (TMPs) need to be identified, and effective warning arrangements developed. Community representatives with previous relevant experience or good local knowledge can help identify assembly points and egress routes, and provide critical advice (such as telephone blackspots and poor coverage, suitable radio stations, and effectiveness of evacuation routes in previous events). Local knowledge may also assist in identifying groups with specific needs in the affected communities.

Contingency plans should be developed for all stages, to mitigate risks if the evacuation plan or elements of the plan cannot be implemented.

DOCUMENTING AND PROMOTING THE PLAN

The evacuation plan should be documented and made available to the relevant community(-ies), and all agencies and organisations with an identified role in evacuation. The existence of the plan should be promoted to the wider community using a variety of means such as libraries, websites, community notice boards and social media. A broad knowledge and understanding of the plan will assist communities to become better prepared and more responsive to evacuation warnings.

EXERCISING THE PLAN

For continuous improvement in readiness and response, the evacuation plan should be reviewed, updated and exercised regularly. Different approaches to exercising may be used, including tabletop and field exercises. Local community representatives should be involved in exercises where possible to provide feedback and promote shared responsibility and public awareness.

Following any exercise and subsequent evaluation, a report should be prepared with appropriate recommendations to improve the evacuation plan. Those responsible for maintaining the plan should consider the report and adopt relevant recommendations into a revised plan.

Further information about managing exercises can be found in *Australian Disaster Resilience Handbook 3 Managing Exercises*¹ (AIDR 2017) (Handbook 3).

MONITORING AND REVIEW

Those responsible for maintaining the evacuation plan should ensure that it is regularly monitored, reviewed and updated in accordance with the emergency management plan review process. Consideration should be given to lessons learned after activation of the plan; agreed recommendations from inquiries or reviews; evaluation reports from exercises; changes in risk assessments; and changes in contact details. Appropriate representatives from affected communities should be involved in any review process. Data to inform improvements to the plan may be gathered during the evacuation process (for example, by surveying evacuees accommodated at evacuation centres). Appropriate version control protocols should be developed and implemented.

LEGISLATION

Emergency planners need to be familiar with the legislation governing their agency, and emergency or disaster management within their jurisdiction.

The authority to recommend or direct communities to evacuate will be found in relevant emergency services and emergency management legislation. An evacuation plan must consider, and be consistent with, those legislative provisions to ensure recommendations and directions are made with appropriate authority. Where mandatory evacuations are considered, agencies will need to be aware of the circumstances that must exist to trigger the authority to issue mandatory evacuation orders, and whether any people are exempt from any obligation to comply.

Where there is a legal duty to consider evacuations, legal liability might arise if any aspect of the evacuation, from the decision to evacuate; the drafting and issue of any warning; the management of the evacuation; the provision of shelter; and the decision to return is not managed in a 'reasonable' way. State legislation may set out specific factors to be considered as well as provide limits on liability, particularly for state agencies.

¹ https://knowledge.aidr.org.au/managing-exercises-handbook-3

Stage 1 Decision to evacuate

The purpose of this section is to guide planning to make an informed decision about evacuation. The need to document the decision-making process and communicate the decision to stakeholders is also covered.

Introduction

The decision to evacuate (or not) is the first of the five stages of the evacuation process. Many complex issues need to be considered in making this decision, often with only limited information and time available. When an emergency occurs and the time comes to make the decision, the people and the agencies involved are in a better position to make informed decisions when they have planned for such an occurrence.

Authority to decide

The evacuation plan should identify which agency and/ or position has the authority to decide to evacuate. This agency or position may vary depending on the nature of the hazard threat, and may not be the same agency or position that is responsible for managing other stages of the evacuation process. Reference should be made to relevant state or territory legislation, documented emergency management arrangements and emergency management plans to identify the agency or person who has the authority to make the decision.

In some cases, the relevant legislation, arrangements or plans delegate this authority to whoever is in command or control of the incident. For agencies that have adopted the Incident Command and Control System Plus¹ (ICCS+) or the Australasian Inter-service Incident Management System² (AIIMS), this will be the Incident Controller. These arrangements ensure that a decision-maker is available when needed.

A decision not to evacuate is just as important as a decision to evacuate.

Key steps

- 1 Identify authority to make decision
- Identify relevant stakeholders
- Develop an appropriate risk assessment process to support the decision to evacuate or not
- Decide how to let people know that a decision has been made
- 5 Communicate the decision
- 6 Document the decision

¹http://www.anzpaa.org.au/about/general-publications/a-commonapproach-to-incident-management-iccs-plus-iccs-plus

²https://www.afac.com.au/auxiliary/shop/product-category?ID=11

Considerations

ASSESSMENT OF RISK

The need to develop an evacuation plan has already been determined by the relevant emergency management plan. However, the existence of an evacuation plan does not mean that it will be implemented under all circumstances. Before deciding to undertake an evacuation for a particular hazard threat, an assessment of the risk occasioned by the expected hazard threat should be undertaken. Due to time constraints, this assessment will often be brief, although if time permits, relevant stakeholders should be consulted before making a decision. The plan should identify the relevant stakeholders, typically including police, other relevant emergency service agencies, local government and community representatives from a diverse cross section of the community.

The National Emergency Risk Assessment Guidelines (NERAG) – Australian Disaster Resilience Handbook 10 National Emergency Risk Assessment Guidelines¹ (AIDR 2015) (Handbook 10) – provide guidance on risk assessment. Risk assessment applying NERAG should include the following steps:

- Establish the context
- · Identify the risks
- · Analyse the risks
- Evaluate the risks
- Identify risk treatment options

Details on how to address these steps are outlined below.

Where time is insufficient to undertake a detailed risk assessment, or an event falls outside the parameters adopted for a defined event (for example, if a flood level is higher than expected or a cyclone is of a lower category), a dynamic risk assessment using an abbreviated version of NERAG, or an alternative dynamic risk assessment, will be necessary.

Further information about risk management can be found in AS/NZS ISO 31000: 2009 Risk Management - principles and guidelines.²

For further information about approaches to dynamic risk assessment adopted by Australian emergency services, see Further reading.

ESTABLISH THE CONTEXT

To inform a decision about evacuation, the evacuation plan should document the context with reference to the following:

- nature and severity of the threat being planned for, the boundaries of the area under threat and the capacity of agencies to manage the threat (including its impact on people and their assets)
- time required to complete the warning and withdrawal stages for the area under threat

- potential risk to life if people remain, and if they evacuate
- time of day (it is advisable to evacuate during daylight hours if possible)
- · potential loss of infrastructure or assets
- existence and adequacy of an evacuation plan
- existence and adequacy of resources and networks (e.g. transport options, egress routes)
- community characteristics demographics, values, mobility, presence of vulnerable people (e.g. isolated elderly, residents of nursing homes, tourists etc.), community experience with similar threats, preparedness for the threat in question, familiarity with the evacuation plan, likely responses to the threat (with and without a warning to evacuate), resilience.

IDENTIFY THE RISKS

To inform a decision about evacuation, the relevant risks should be identified, including but not limited to the following:

- time available until the threat impacts
- potential harm (both physical and psychological)
 to people remaining, including any who may be particularly vulnerable to the hazard, and potential harm to people evacuating
- potential harm to emergency services personnel undertaking different mitigation strategies, including evacuation
- potential cost of social and economic impacts of evacuation (e.g. interruption to social networks, loss of unprotected homes and businesses, loss of income, looting of unsecured property)
- potential loss of telecommunications infrastructure, which may limit capacity to warn
- potential for impact sooner than anticipated, and/or more severely than anticipated
- number of people likely to be unaware of the threat
- number of people unlikely to respond to warnings
- number of people who do not have the capacity to respond to the threat or to warnings, or with increased vulnerability (e.g. lone parents with babies and small children, pregnant women).

ANALYSE THE RISKS

Analysis of the risks should consider the risks relevant to the hazard being addressed (e.g. flood, bushfire, cyclone) and how those risks vary with different hazard levels (e.g. flood levels, fire danger ratings or cyclone categories respectively). The degree of confidence will vary according to the quality and relevance of information available, the convergence of views of those consulted, and the time available to make a decision.

¹ https://knowledge.aidr.org.au/national-emergency-risk-assessmentquidelines-handbook-10

² Available through the Standards Australia website: www.standards.org.au.

EVALUATE THE RISKS

Evaluation of the risks should quantify the risks with respect to likelihood and consequence based on different impact severity (such as flood level, fire danger rating or cyclone category) so that risks may be ranked and those requiring treatment identified.

IDENTIFY RISK TREATMENT OPTIONS

If evacuation is identified as an appropriate risk treatment option, the most appropriate type of evacuation in the circumstances will need to be determined; for example, whether it is compulsory or recommended, and total, partial and/or phased.

In circumstances where evacuation is an appropriate strategy but insufficient time is available to evacuate all those at risk, consider partial evacuation or increased efforts to protect at-risk people in place. If evacuation is an appropriate strategy and there is no time to evacuate anyone, the Incident Controller should take steps to warn affected residents, and, where necessary, act to protect them in place.

COMMUNICATE THE DECISION

The evacuation plan needs to incorporate a means of communicating the decision to agencies and organisations with responsibility for subsequent evacuation stages; and a means of making the risk evaluation available to those managing the withdrawal stage. The decision also needs to be communicated to people likely to be affected by the decision; that is, potential evacuees (see Stage 2 Warning).

The evacuation plan should also identify who will continue to update those responsible for subsequent stages about the progress of the incident, its implications for warnings and for managing the withdrawal stage.

MOBILISE RESOURCES

The evacuation plan needs to identify the resources required for subsequent stages, where they will be sourced from, and how they will be activated. Of critical importance at the decision stage is the capacity to mobilise sufficient and appropriate resources for the warning and withdrawal stages.

Documentation

To assist in documenting the decision to evacuate or not, the evacuation plan might include a template to facilitate the risk assessment process, to facilitate the recording of relevant information considered in the decision, such as who was consulted; the decision itself; which stakeholders were informed; and the dates/times these actions occurred.

Stage 2 Warning

The purpose of this section is to guide the development of arrangements to warn people about the need to evacuate and the steps they should take.

Introduction

Warning is the second of the five stages of the evacuation process. A warning is the dissemination of a message signalling an imminent or existing hazard threat, and includes advice on appropriate protective measures. Its purpose is to prompt an appropriate response from those at risk. Evacuation is one possible protective measure.

The primary intent of issuing a warning to evacuate is to protect life. Experience from many recent disasters shows that lives have been lost when decisions are left until the last minute. For this reason, evacuation warnings should be communicated as early as possible.

It is acknowledged that in some emergency situations, the risks of evacuating may be greater than remaining in place (for example, if there is not enough time to coordinate an effective evacuation).

The purpose of a warning in the context of an evacuation is threefold:

- to provide information to those likely to be impacted by the event about the nature and timing of that impact
- to provide specific advice about the evacuation, including who it applies to and why; when people should evacuate; where and when they should go; and how to get there
- to provide information about the potential consequences of not evacuating, and protective measures to take if not evacuating.

Given there is often limited time available to warn people of impending impacts, warnings are more likely to be effective if the factors that may impact warnings have been considered; specific arrangements for warnings have been developed for delivery before, during or after an incident; and warning messages are written in advance.

Key steps

- 1 Identify authority and responsibility
- 2 Do it early
- 3 Identify relevant stakeholders
- Construct warning message templates
- Determine warning delivery methods

- 6 Ensure the message tells
 - The right people
 - · When, how and where to go
 - Why
- 7 Document it

Factors that may influence the effectiveness of warnings include the nature and timing of the hazard impact; the sense of urgency or relevance the warning creates; technology limitations; previous experience with emergency situations; commentary in traditional and social media; and visual and auditory cues. For example, the more immediate and more obvious the threat, the greater the likelihood that people will accept and respond to a warning.

The warning arrangements for an anticipated hazard threat should identify the trigger for warnings, content of warning messages (such as specific actions people should take, location of assembly areas, evacuation centres, and egress routes) and the methods for delivering warnings to the community. How these matters are addressed may vary with the nature of the hazard, its severity and the lead time available to prepare and issue warnings (see Considerations below).

Authority and responsibility to warn

The evacuation plan should identify which agency(-ies) and/or position(s) have the authority and responsibility to issue evacuation warnings. These agency(-ies) and/or position(s) may differ depending on the nature of the hazard threat and local arrangements. As such, reference should be made to relevant state and territory legislation, documented emergency management arrangements or emergency management plans which identify the relevant agency(-ies) and/or position(s).

While the authority to issue an evacuation warning rests with the relevant agency(-ies) and/or position(s), the total warning system (comprising relationships between scientific agencies, government agencies, emergency services and the community) is the system that ensures accurate, timely and relevant information is included within warnings that are issued (see *Australian Disaster Resilience Manual 21 Flood Warning*¹ (Manual 21) as an example of the total warning system in relation to flood warnings).

The evacuation plan should include reference to any collaborative arrangements that exist between key agencies (such as the Bureau of Meteorology) and relevant state and territory agencies, and identify arrangements to ensure message content relating to evacuations is consistent.

In many cases, the relevant legislation, arrangements or plans are likely to delegate the authority to issue evacuation warnings to the person in command or control of the incident. For agencies that have adopted ICCS+ or AIIMS, this will be the Incident Controller. These arrangements ensure that the person with the appropriate authority is available when needed.

Considerations

GENERAL

Across Australia, some hazards such as bushfire and tsunami have nationally agreed warning frameworks that set out different levels of alert and message content. In some jurisdictions, there are agreed warning frameworks that are used across multiple hazards. Where relevant, the plan for issuing evacuation warnings should be consistent with these frameworks.

Warnings about evacuations should, where possible, be issued in a timely manner so that people who receive them have enough time to confirm the message and respond to the information it contains.

Warnings are most effective when underpinned by community education and engagement prior to an emergency, so that people understand their responsibilities before, during and after an emergency; what preparations to undertake; what to expect; and what action they may need to take. Therefore, the evacuation plan should identify opportunities to educate communities about emergency warnings.

MESSAGE CONSTRUCTION

In making a decision to evacuate, the person making that decision should consider who needs to be warned, the timing of those warnings, and what they need to be warned about (for example, what actions need to be taken and the time to take those actions before it is too late to leave). When constructing warnings, these decisions need to be considered.

Example 1: The risk assessment conducted during Stage 1 may have identified that it is safer for the residents of nursing homes and hospitals to remain in place rather than evacuate. Those who manage these facilities will need to be informed of this decision so they can take appropriate steps to enact their facility emergency management plan and protect their residents in place.

Example 2: The decision-maker may have determined that the withdrawal stage is to be phased, with aged and frail people living at home to be assisted to evacuate first, followed by residents of community A, then residents of community B. The warning message should include appropriate advice about these arrangements.

¹ https://knowledge.aidr.org.au/media/1964/manual-21-flood-warning.pdf

A warning message should be relevant to the receiver and their location and, if possible, tailored to their situation

A warning message should be constructed so that people can easily identify that it applies to them, and that there is clear action to take that will reduce their risk from the hazard.

Warning messages should have the following characteristics:

- authority
- credibility
- accuracy
- clarity
- consistencu

Warning messages should provide guidance and sufficient detail, including identifying the impact area and addressing the specific needs of all people at risk. They should also be timed appropriately and repeated sufficiently.

The evacuation plan should include message templates and prepared scripts to help ensure these characteristics are included. Pre-prepared templates and scripts will also help ensure warnings include critical message content, and can be issued promptly when required.

MESSAGE FORMAT

For many hazards, there are agreed standard messages or templates that should be used. The evacuation plan should identify and include these standard messages and templates, and stipulate that warnings will use a consistent format. In Australia, the Common Alerting Protocol – Australia (CAP-AU) format should be used.

The purpose of CAP-AU is to ensure message content is appropriate and unambiguous, and message format is consistent, so that messages can be broadcast across a variety of communication systems.

Further information about the CAP-AU is available online.1

MESSAGE CONTENT

The evacuation plan should identify diverse community groups, businesses and organisations that may need to be reached. Different message content may need to be tailored to meet the specific needs of these groups. These may include:

- hospitals and aged care facilities
- rehabilitation facilities and other supported accommodation
- people with psychosocial disabilities
- people with disabilities affecting mobility, sight, speech, language or hearing
- people receiving home-based treatment or with specific health care needs
- a parent travelling alone with babies and small children, and pregnant women

- · childcare centres
- preschools, primary, secondary and tertiary schools and institutions
- special schools
- school camps
- correctional facilities
- commercial and industrial precincts
- people in boats and ships, in bays/marinas or at sea
- recreational and sporting facilities
- churches
- transport hubs including train and bus stations, airports
- critical infrastructure operations (e.g. electricity generating plants, fuel depots)
- owners of pets and companion animals
- owners of assistance animals
- farmers and others with animal welfare responsibilities (e.g. boarding kennels, horse racing or agistment facilities)
- people who are homeless or socially isolated
- unaccompanied children
- remote communities
- tourists
- people attending mass gatherings and major events
- Aboriginal and Torres Strait Islander communities
- members of culturally and linguistically diverse (CALD) communities
- · self-evacuees.

It may not always be possible to tailor customised messages to every sector of the community. Consideration should be given to sending messages to community and social service organisations that are in regular contact with and support these groups of people, particularly those that are hard to reach (such as Aboriginal and Torres Strait Islander communities and CALD communities), people facing homelessness, people who are isolated or those with complex needs (such as people with or facing intervention orders).

Further information about working with people with disabilities can be found in *Australian Disaster Resilience Handbook 5 Communicating with People with a Disability: Guidelines for Emergency Managers*² (AIDR 2013) (Handbook 5).

Information about communicating with CALD communities can be found in *Australian Disaster Resilience Manual 44 Guidelines for Emergency Management in CALD Communities*³ (AIDR 2007) (Manual 44)

¹https://data.gov.au/dataset/cap-au/std

²https://knowledge.aidr.org.au/communicating-with-people-with-a-disability-handbook-5

³ https://knowledge.aidr.org.au/media/1969/manual-44-guidelines-foremergency-management-in-cald-communities.pdf

Warning messages should contain:

- the name of the agency issuing the warning
- the date and time of issue
- · a description of the hazard and its potential impacts
- · when and over what area it is likely to impact
- the area to be evacuated, including a reference to specific 'evacuation zones' for phased or partial evacuation if they have been identified and used for public education prior to the event
- safe evacuation routes and available evacuation centres
- how or where to validate the information and/or gain further information
- · the consequence of not responding to the warning
- the time the next warning will be issued, or advice that no further warning will be issued.

Other content that should be considered for evacuation-specific warnings includes:

- the expected duration of absence
- · what essential items to take
- the need to secure one's home/business before leaving, and arrangements made to maintain security of evacuated communities
- · how to manage pets
- · how to manage assistance animals
- how to protect or where to relocate livestock
- safe egress routes
- what means are available, or should be used, to evacuate
- the locations of assembly areas and evacuation centres, and registration processes
- the availability of assistance to evacuate, and assistance following evacuation
- advice to avoid using telephones unless necessary
- · what is being done to control the hazard
- what arrangements may be made to allow temporary re-entry to property
- advice for people not at home at the time of the warning
- the need to inform friends and/or relatives of plans.

Consideration should be given to providing additional information for those remaining in place about personal safety and self-sufficiency, including:

- the potential consequences of remaining
- the need to be physically and psychologically prepared to remain
- protective measures to take
- how to shelter safely
- the need to source food, water, power and other essential services, now and/or later
- the need to inform friends and/or relatives of plans.

CROSS-REFERENCE BETWEEN AUTHORITIES

In situations where relevant information is included from more than one authority, each authority should be identified in the warning. For example, tropical cyclone warnings or tsunami warnings might include hazard information from the Bureau of Meteorology together with evacuation instructions from the relevant state or territory emergency authority.

DISSEMINATION METHODS AND TOOLS

The evacuation plan should identify a range of warning methods to be used to ensure maximum penetration in the target community; not everyone has access to or uses mobile technology. There may be limitations to some of these warning methods including the absence of or failure of technology such as loss of power or telecommunications. The plan should identify contingencies in case preferred media are unavailable. Options are briefly described below.

Websites

Agency websites can deliver warnings to the community, can usually handle high traffic loads and have in-built redundancy. In many cases, these websites may provide warning messages in a range of formats including text (sometimes in multiple languages) and maps.

Some jurisdictions have adopted a centralised website for the dissemination of warnings to the community across multiple hazards.

Mass media

Collaboration with mass media outlets (such as radio, television and newsprint) can be an effective way of alerting the community about current warnings as well as awareness and education activities outside of the warnings stage. Specific arrangements are in place with ABC Radio and some commercial and community networks (known as emergency broadcasters). The evacuation plan should include reference to any such arrangements.

Telephone

Telephones can be an effective method to provide tailored evacuation warning information, either through telephone trees or Emergency Alert. Telephone trees are effective to communicate tailored evacuation warning messages to people from a trusted source, however these must be established before emergencies occur. The Emergency Alert telephone and text-based alerting system is a national system that can deliver messages to mobile and fixed telephones in an identified warning area.

There are some limitations to Emergency Alert, including the length of text messages; limited number of campaigns nationally at any one time; processing efficiency; and reliance on telecommunications

infrastructure that can often be impacted during an emergency. Given the limited length of text messages, additional sources of information should be advised in these messages so recipients can obtain further information. Failing to do this can mean recipients do not receive vital information, and cause adverse impacts on Triple Zero services.

Standard Emergency Warning Signal

The Standard Emergency Warning Signal (SEWS) is a siren that can be played on radio and television that is immediately followed by a warning message with a clear action to take. SEWS may be used to increase the urgency of a warning message.

Further information about SEWS can be found online¹, including an audio sample of the siren.²

Social media

Social media allows for the dissemination of warnings to affected communities quickly, and gives people the opportunity to share information with family and friends.

Many agencies use social media for the delivery of warnings and other information, including relocation options. The character limit of Twitter must be considered when using this medium for warnings. Within a tweet, the inclusion of shortened hyperlinks to additional information sources is recommended.

Social media also provides an opportunity for real-time monitoring of warnings and their effectiveness.

The warnings arrangements should identify how social media will be used to issue evacuation warnings.

Face-to-face

Face-to face interactions (such as door knocking, community meetings and speaking to community leaders) are arguably the best method to convey evacuation warning messages because they emphasise urgency and the message can be tailored to the recipient. Although speaking directly to people is an effective method for conveying information, it is also highly time-consuming and may not be feasible in all circumstances

Community sirens

Community sirens (if installed within the affected community) produce a loud sound when activated that can be heard by people in the surrounding area. These sirens can be effective in notifying people that an emergency is occurring.

Documentation

To assist in documenting the warnings stage, the evacuation plan should include:

- warnings templates
- · pre-prepared scripts
- details of who needs to be warned for different hazards
- relevant contact details
- locations of sites for face-to-face warnings and briefings
- hannels to be used to warn people
- tools/templates to record dates/times that warnings were issued, the nature and content of those warnings, and details of who was warned.

¹http://www.emergencyalert.gov.au/frequently-asked-questions/whatis-emergency-alert/75-3-what-is-the-standard-emergency-warningsignal.html

 $^{^2\,}http://emergencyalert.gov.au/images/stories/public_msg_w_tone.mp3$

Stage 3 Withdrawal

The purpose of this section is to guide the planning to withdraw people safely from an emerging threat following a decision and a warning to evacuate.

Introduction

Withdrawal is the third of five stages of the evacuation process and involves the organised movement of people from a dangerous or potentially dangerous area to one that is safer.

While some people in the hazard impact area will selfevacuate and others will choose to remain, there is a responsibility to ensure those who choose or are directed to withdraw and need guidance and/or assistance are able withdraw safely.

Managed withdrawal is likely to be more effective if it is carried out in accordance with a prepared plan. The arrangements for withdrawal should be developed in consultation with relevant stakeholders. These may include local government and community representatives, local police, and managers of local facilities. Some facilities and groups of people whose withdrawal may need to be managed are listed Stage 2 Warnings.

Withdrawal arrangements should be consistent with any advice provided to people affected by the evacuation warning, which in turn should be consistent with the decision to evacuate.

Evacuation planning may involve the use of computational models (or 'agent-based models') to help predict how people/vehicles ('agents') behave under different circumstances. The Community Emergency Response Model¹ (CERM) is an example of a model that seeks to predict the response of communities (based on demographic characteristics) to warnings of different hazards and different intensities.

Key steps

- 1 Identify authority and responsibility
- Identify relevant stakeholders
- 3 Plan for different types of withdrawal
- 4 Plan for contingencies
- 5 Link to resources needed and routes to take
- Consider traffic management points and plans
- 7 Consider security measures
- 8 Plan communications for the withdrawal stage
- 9 Prepare maps for withdrawal management
- 10 Document it

¹https://www.afac.com.au/docs/default-source/ru/communityemergency-response-model-validation-project.pdf

Authority and responsibility to manage withdrawal

The evacuation plan should identify which agency(-ies) and/or position(s) have the authority and responsibility to manage the withdrawal stage. These agency(-ies) and/or position(s) may vary depending on the nature of the hazard threat. Reference should be made to relevant state and territory legislation, emergency management plans or documented emergency management arrangements to identify the agency(-ies) and/or position(s).

The evacuation plan should identify arrangements necessary to ensure those managing the withdrawal remain well-informed about the progress of the incident, particularly any aspects that impact on the capacity to safely complete the withdrawal stage. For example, the plan should identify how updates on the progress of the incident will continue to be received, and any impacts on egress routes.

Considerations

The following factors should be considered in withdrawal planning:

TIME AVAILABLE

The evacuation plan should include realistic estimations of how long the withdrawal stage will take to complete for different scenarios. This information should inform the person making the decision to evacuate.

In some circumstances, evacuation may be the only safe option but the time available may be less than the time required to complete the withdrawal stage. The evacuation plan should include contingencies for such circumstances that may focus on partial evacuation for people most at risk, or increased efforts to protect them in place.

PEOPLE AT HIGHER RISK

The evacuation plan should identify people at higher risk than the general population, for whom more detailed withdrawal or shelter in place arrangements may need to be prepared (some of these groups are listed on page 15). For some of these people, specific transport arrangements and destinations may need to be identified.

For places such as aged care facilities, schools and medical facilities, where the risk to occupants is high during an emergency, the facility's evacuation plan should be appended to or referenced within the emergency management plan. These plans should guide how people at these facilities will be managed during all stages of the evacuation process.

THOSE WHO CHOOSE TO REMAIN

The person responsible for the withdrawal stage should focus on managing the withdrawal of those who have chosen or been directed to withdraw, and who need guidance and/or assistance to do so. Some people will self-evacuate before, during or after the withdrawal stage, and while they may present at evacuation centres, they will often self-manage their withdrawal.

Others may choose to remain in place. This may be to protect their property, care for their animals or simply to shelter in place. Others will remain to wait and assess the situation before deciding whether to evacuate. Seeking to influence any of these people to withdraw can be time-consuming and fruitless and, if protracted, may endanger personnel managing the withdrawal. Only in circumstances where it is clearly unsafe for people to remain should efforts be made to remove them to safety. The evacuation plan should identify the relevant legislation and formal plans or arrangements that exist to inform how people in these circumstances should be managed.

FAMILY GROUPS

The evacuation plan should seek, whenever possible, to move groups of people familiar with each other (such as families, residents and staff of care facilities) as a complete unit, to minimise, as much as possible, the sense of dislocation likely to be experienced during an evacuation.

Exceptions, however, must also be planned for; for example, some cultural practices don't allow certain family members to travel unaccompanied or travel and be accommodated together. These cultural practices may be set aside in certain situations, such as emergencies. Also, intervention orders issued by the judiciary or police may restrict the capacity of some individuals to travel unaccompanied or be accommodated with specified others.

ANIMAL MANAGEMENT

While the focus of evacuation is on the protection of human life, animals are important to people and need to be considered when planning the withdrawal stage. While individuals are likely to make their own decisions about their pets and animals, they may be constrained by the evacuation withdrawal timings, capacity to move their pets or animals, and an appropriate location to move their pets or animals to.

The evacuation plan should recognise that people who have pets and animals in the hazard impact areas 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 evacuating without them.

People with assistance animals need special consideration in the evacuation plan; to separate them from their animal unnecessarily will not only disadvantage them but stands contrary to the *Disability Discrimination Act 1992* (Cth). While this may not present a significant burden for those managing the withdrawal stage, those managing the next stage – shelter – may need to plan for the management of any evacuated animals.

Evacuees accompanied by animals should be advised of the location of any evacuation centres able to accommodate animals.

For further information about the management of pets, companion animals, assistance animals and livestock, see Further reading.

PARTIAL AND PHASED EVACUATIONS

If partial evacuation is possible based on the risk assessment in the decision stage, the evacuation plan should describe who is likely to be withdrawn and not withdrawn, and the arrangements for each of these two groups. For example, to avoid traffic congestion, some at-risk groups may be withdrawn before the general population is encouraged to withdraw, and some may be protected in place.

Similarly, if phased evacuation is appropriate, the evacuation plan should identify how this should unfold. For example, for a flood, upstream communities may be encouraged to evacuate before downstream communities. Similar arrangements may be made for communities in the path of an advancing bushfire. The plan should estimate timelines likely to apply during phased evacuation for hazard impacts of varying intensities.

TRANSPORTATION OPTIONS

The evacuation warnings issued during the warnings stage should include advice about transport options for withdrawal. Often, evacuees will have been encouraged to make their own arrangements to withdraw before the hazard impacts. Typical options include walking, own or friend's car, taxi and public transport. This will minimise the number of people for whom other transport arrangements need to be made.

Evacuation on foot should only be encouraged where distances to be travelled are short; either to immediate safety (such as a nearby hill when a tsunami threatens) or to a nearby assembly area.

Transportation arrangements may need to be made for some at-risk groups (such as those groups identified on page 15). The evacuation plan should identify the resources that are needed, and the arrangements that have been or need to be made to transport these people to an appropriate destination. There may be a need to arrange specialist transport such as buses (in some cases, wide-aisle buses), wheelchair-accessible vehicles, cars with child restraints, ambulances, boats or aircraft, to help people most at-risk or those who may be isolated or otherwise in need of assistance. The likely extent of

self-evacuation should be considered as this will affect the amount of transport resources required, or the prioritisation and use of limited resources.

For some communities or families, the only transportation option may be by air or water, such as for isolated communities and farms cut off by floodwaters or linked by temporarily impassable roads. Plans should be made for these circumstances. Implications for air traffic control should be considered where aircraft converge near evacuation centres – consider seeking Civil Aviation Safety Authority (CASA) assistance in planning for and managing the withdrawal and return stages, and the additional risks posed by the hazard for air and water transport.

EGRESS ROUTES

The evacuation plan should identify safe egress routes that should be announced in evacuation warnings. For some hazard impacts, alternative routes should be identified where planned routes may be or become compromised. In cases where egress routes may not be obvious to evacuees, the plan should identify arrangements to signpost them clearly. Egress routes that can accommodate expected traffic volumes need to be identified. Where the numbers of evacuees may be large, use of a traffic management model may be appropriate. Egress routes for pedestrian traffic, as well as road traffic, should be identified.

TRAFFIC MANAGEMENT

The evacuation plan should identify the location of appropriate places for traffic management points (TMPs) to help control the flow of traffic leaving the hazard impact area and avoid bottlenecks, and to restrict the entry of traffic into the impact area until it is safe.

Traffic should be managed, often by police or contracted traffic management personnel, to facilitate entry for emergency response vehicles while the hazard is being controlled, and later for people and vehicles supporting the restoration of facilities and services.

The evacuation plan should identify who will staff these TMPs, including relevant contact details. Any traffic management plans should be attached to the evacuation plan. To reduce the risk of high-speed collisions, consider making egress routes one-way, supported at each end by appropriate signage and/or TMPs, and/or introducing lower speed limits.

ASSEMBLY AREAS

In some instances, it may be necessary to escort people from the hazard impact area to ensure they are safe. For this purpose, the evacuation plan should identify assembly areas (in some jurisdictions, transit areas) where people in cars, buses and other transport can assemble in safety before being escorted from the hazard impact area.

The evacuation plan should identify who will attend assembly areas to marshal, brief and escort those gathering there.

The identification of egress routes, assembly areas and TMPs should be done in consultation with community representatives, as they will be able to readily identify the routes and places that locals are likely to use.

At assembly areas, plans should be made to register evacuees (identifying name, address, contact details, destination, mode of transport and vehicle registration number), as well as provide toilet facilities, refreshments, and relevant information about the hazard threat, the evacuation process, shelter options and locations, likely duration till the return stage, and how/where to access further information.

CONTINGENCIES

The evacuation plan should identify available contingencies to deal with vehicle breakdowns, road blockages and where vehicle fuel can be accessed if necessary. Again, relevant contact details should be included in the plan.

DESTINATIONS

Potential destinations for people evacuating from the area affected are detailed Stage 4 Shelter.

As a principle, during the warning and withdrawal stages, communication with evacuees should encourage them to make their own shelter arrangements, such as staying outside the affected area with family or friends or at commercial accommodation facilities such as hotels, motels, B&Bs and the like.

For those who are unable or unwilling to make their own arrangements, the evacuation plan should encourage them to be transported or directed to evacuation centres or specialist facilities depending on their needs and circumstances. The plan should identify where these centres and facilities are, as well as alternatives in the event they are unavailable due to ongoing hazard threats, overcrowding or other reasons.

SECURITY

Evacuation warnings should have encouraged evacuees to secure their premises and belongings before departure. Nonetheless, some see the evacuation or partial evacuation of communities as an opportunity to loot vacated buildings. Whenever circumstances permit, the security of vacated communities should be arranged. These arrangements, such as routine police patrols, should be made in consultation with local police and detailed in the evacuation plan so that details can be announced during emergency warnings. This will discourage theft and further encourage people to leave in the knowledge that their possessions are likely to be safe from theft. The plan should describe how security will continue to be provided, at least until Stage 5 is well-advanced.

While marking premises in some way to indicate that they have been vacated can help identify other places where remaining people may be sheltering, such arrangements also readily identify vacant premises to would-be looters. Consider marking vacated premises only where adequate security measures are in place.

COMMUNICATIONS

The evacuation plan should include a communications sub-plan that identifies how communication about relevant withdrawal matters will be undertaken with those managing the withdrawal stage, and how, if necessary, this will also be communicated to evacuees. For example, information that planned egress routes have become unusable due to bridges being damaged, or large trees downed by strong winds, will need to be communicated to evacuees.

In some circumstances, the time evacuees spend en route may be considerable, and plans should be made to communicate with them, for example, via broadcast radio, about where to access fuel, water and other services. In more remote locations, communication may be via two-way radio.

The communications sub-plan should address how to access information from evacuees about, for example, the existence of compromised egress routes (such as road blocks and water hazards), and vehicle breakdowns.

Documentation

To assist in documenting the withdrawal stage, the evacuation plan should include:

- details of the specific plans to manage at-risk groups (including plans to evacuate and/or shelter people in place, prepared by facilities managers), location of facilities housing at-risk groups, and relevant contact details
- location of egress routes including alternate routes
- location of TMPs and assembly areas
- transportation arrangements including contact details
- security arrangements
- · communications sub-plan.

The evacuation plan should facilitate the recording of details of the evacuation plan as it unfolds. These details should include who was evacuated, at what time and to where.

Maps (preferably digitised to readily enable sharing) should clearly identify the location of at-risk groups, (including those where shelter in place arrangements have been made), preferred egress routes, and the locations of assembly areas, evacuation centres and TMPs.

Stage 4 Shelter

The purpose of this section is to guide the development of a plan to provide adequate shelter for any evacuees who seek it. This may include self-evacuees, as well as any animals accompanying evacuees.

Evacuation centres: The term 'evacuation centre' is used in this handbook and includes relief centres and welfare centres.

Introduction

Shelter is the fourth of the five stages of the evacuation process and involves the provision for basic needs of people affected by the emergency, away from the immediate or potential effects of the hazard.

Shelter provides temporary accommodation of evacuees who cannot remain home due to a hazard impact or potential impact. The shelter needs of individuals may vary over time; the types of shelter they seek, or that can be provided, may also vary.

As a principle, evacuees should be encouraged where possible to make their own accommodation arrangements. This promotes self-efficacy consistent with the concept of shared responsibility, and supports more rapid recovery. This approach may also reduce the amount of shelter that the sheltering authority needs to source.

Authority and responsibility to manage shelter

The evacuation plan should identify which agency(-ies), organisation(s) and/or position(s) have the authority and responsibility to manage the shelter stage. These agency(-ies), organisation(s) and/or position(s) may vary depending on the nature of the hazard threat. Reference should be made to relevant state or territory legislation emergency management plans or documented emergency management arrangements to identify the agency(-ies), organisation(s) and/or position(s).

In many cases, legislation, arrangements or plans delegate this authority and responsibility to local government or a state government agency. The Australian Red Cross often also plays a significant role.

Considerations

When developing the evacuation plan, the following should be addressed:

Key steps

- 1 Identify authority and responsibility
- Identify relevant stakeholders
- 3 Identify shelter options
- 4 Agree on responsibilities and cost arrangements
- Consider goods and services needed and routes to take
- 6 Plan for animals
- 7 Plan for contingencies
- 8 Register. Find. Reunite.
- 9 Plan communications for the shelter stage
- 10 Document it

SHELTER OPTIONS

The evacuation plan should describe the range of shelter options available and how they may be used:

Self-shelter options

The evacuation plan should include arrangements to promote self-shelter options, encouraging evacuees to make their own accommodation arrangements away from the hazard impact area. This promotes self-efficacy and reduces the burden on the responsible agency, particularly where assisted accommodation options may be in short supply.

Self-help options may include evacuees:

- · using their holiday home
- staying with family or friends
- using commercial accommodation (e.g. hotels, motels).

Use of self-shelter options is less likely for low income households, isolated and solitary people and for communities already experiencing overcrowding.

Plans should be made to communicate with those who have elected to make their own accommodation arrangements to help manage the return stage and recovery (see Communicating with evacuees and others).

Assisted accommodation options

For those who cannot make their own shelter arrangements, plans should be made to provide the following options:

Evacuation centres (see Evacuation centres: Purpose and features) – the evacuation plan should document the arrangements that have been made with the owners of facilities to be used as evacuation centres, including how and by whom they will be activated; what responsibilities remain with the facility owner; and what responsibilities the agency responsible for the shelter stage shall have.

Commercial accommodation – evacuees may be redirected to commercial accommodation. The plan therefore should identify commercial accommodation providers who have been identified for this purpose, including relevant contact details and any agreed arrangements.

Specialist facilities – the plan should identify where evacuees who are unable to care for themselves or who require special care will be accommodated. Options may include, for example, hospitals and aged care facilities. The plan should identify the capacity of these facilities to house evacuees with special needs (including, for example, survivors of family violence), and may need to identify alternative facilities. The plan should include address and contact details for all specialist facilities, and describe the arrangements that have been made with these facilities.

EVACUATION CENTRES

Purpose and features

The purpose of an evacuation centre is to temporarily house evacuees who have limited capacity to find alternate accommodation following withdrawal. Evacuees may be feeling vulnerable, stressed and even traumatised by the emergency experience. The evacuation centre should be a safe and secure place of shelter that provides for their basic needs and where they can start their recovery.

Unlike other shelter options, an evacuation centre is often not purpose-built for accommodation, but is adapted for this purpose infrequently, or as required.

To ensure evacuation centres are fit for purpose, they should:

- be located outside the expected hazard impact area
- be available for the duration of the shelter stage, confirmed in formal agreements with owners
- have sufficient space and appropriate bedding (which may be brought in) to enable evacuees to sleep comfortably
- have electric power and water connected, or the ability to connect to emergency supplies
- have adequate heating, cooling and airflow
- have adequate toilet and washing facilities (consider family and non-gender specific facilities)
- have laundry facilities (or arrangements if occupied for an extended period)
- have adequate provisions for dining and recreation
- be accessible to people with disabilities
- have safe spaces for children and people with special needs
- be safe for survivors of family violence and for people of diverse gender and sexual identities
- accommodate a range of assistance services
- have arrangements in place to safeguard children and vulnerable adults from harm (e.g. power point covers, fenced water areas, stair rails)
- be secure
- · have sufficient parking
- have access to transport to local population centres
- have insurance appropriate for the intended use.

Children and people with special needs may be particularly vulnerable in an evacuation centre as their normal safeguards, routines and support structures have been interrupted or altered. The evacuation plan should consider how their needs could be met, including:

- access to health and wellbeing support, including for people who need psychosocial support
- additional measures to ensure the safety and protection of children, including the establishment of 'child-safe spaces'
- provision of age-appropriate activities and recovery support programs.

For further resources to assist in establishing child-safe spaces, see Further reading.

Examples of facilities that may be suitable as evacuation centres include sporting complexes, community centres and schools.

Further resources for establishing and managing evacuation centres, including details of essential, recommended and desirable features, are available on the Australian Red Cross website.¹

Health, safety and security

The evacuation plan should identify measures to ensure the health, safety and security of shelter staff and evacuees, addressing:

- appropriate induction of staff and evacuees into the premises
- environmental health issues including food safety and the prevention and control of communicable diseases
- fire safety
- · safe work practices
- site security, perhaps involving police, private security services or other authorised persons.

Consider undertaking a risk assessment using AS/NZS ISO 31000: 2009 Risk management - Principles and guidelines.²

Management

Several agencies and organisations often deliver services simultaneously at evacuation centres. The evacuation plan should identify which agencies and organisations will deliver these services, the names and contact details of key personnel, and arrangements for ensuring these services are provided seamlessly, possibly for an extended period. The services required at an evacuation centre are likely to change over time, and accommodation for some or all evacuees may be shifted off-site as more suitable accommodation options become available.

To ensure effective communication and to minimise disruption to service delivery as evacuation centre services evolve, reporting lines should be detailed in the evacuation plan, as well as arrangements for communicating between service providers and for managing disputes.

The evacuation plan should identify sources for all goods and services that will be required for the duration of the evacuation centre, including food, hygiene, pharmaceutical and other necessary supplies, and health and welfare services. In some circumstances such as widespread damage by a cyclone, food supplies may be in short supply for a period. The plan should identify arrangements that may have been established between Australian and state and territory governments and supply chain managers to address these circumstances.

Further information can be found in *Australian Disaster Resilience Handbook 2 Community Recovery*³ (AIDR 2011) (Handbook 2).

Evacuation centres often bring large numbers of people unknown to each other into proximity, sometimes for extended periods. Managing the vagaries of human behaviour in these circumstances can be a dynamic and challenging process. The evacuation plan should include communication of expected behaviour to shelter staff and evacuees, and contingencies to manage unwanted behaviour.

Animal welfare

Some people may be reluctant or refuse to evacuate if they are unable to bring their pets and companion animals to an evacuation centre or commercial accommodation. The evacuation plan should consider at least one site that will cater for pets. Owners of pets and companion animals should be advised that they retain responsibility for the welfare of their animals including feeding, cleaning up and control.

Assistance animals

Assistance animals are not pets, but rather highly trained disability support services that enable a person with a disability to safely participate in personal and public life activities. An assistance animal with an evacuee should not be denied access to any form of emergency shelter including evacuation centres; all plans, therefore, should consider how evacuees with assistance animals are supported and serviced during an evacuation. The Disability Discrimination Act 1992 (Cth) sets out the legal definition of an assistance animal and provides other relevant supporting information.

Contingency arrangements

A shelter may become compromised or exceed capacity; an alternative shelter site with the appropriate capacity, infrastructure and support services should be identified in the evacuation plan. Plans should also account for the situation escalating to a point where additional resource requirements are beyond the capacity of the existing services and agencies.

Exit strategy

The evacuation plan should include an exit strategy that includes consultation with evacuees about the planned closure of the evacuation centre, and advice about alternate accommodation options, and how to access ongoing recovery services and support (see Stage 5 Return).

¹ http://www.redcross.org.au/agencies.aspx

² Available through the Standards Australia website: www.standards.org.au.

³ https://knowledge.aidr.org.au/community-recovery-handbook-2

ADDITIONAL SERVICES FOR EVACUEES

Registration

Australia has a nationally-agreed registration system – **Register.Find.Reunite** – to enable people displaced by emergency events to re-establish contact with family and friends, and to facilitate access to community workers, welfare and support services. The register is operated by the Australian Red Cross and available online.¹

The evacuation plan should identify the necessary arrangements for use of the register during the shelter stage, and for its promotion across a range of media. This will enable all those affected by the hazard impact, including self-evacuees, those who remained, and those who are seeking to establish contact with them, to register their contact details.

Arrangements should be made to enable people to register using several options, including, for example, telephone and internet. People at assembly areas and evacuation centres should be able to readily access the register.

Keeping evacuees and others informed

Information will be highly sought-after by evacuees, no less so during the shelter stage. Hence, the evacuation plan should include a communications sub-plan that identifies how evacuees will be kept informed about shelter and recovery matters.

Plans should be made to keep evacuees informed about:

- the evolving emergency
- known impacts on the community
- road closures and access restrictions
- any risks associated with early return, and how to mitigate them
- services, resources and financial assistance available to evacuees
- recovery plans and progress
- expected closure date of any evacuation shelters, and plans and dates for return
- opening of a recovery centre and access to recovery support services.

Evacuees in an evacuation centre may be communicated with using a notice-board or regular face-to-face briefings. The communications sub-plan should identify how more widely-dispersed evacuees, and those who chose to remain in place, will be kept informed, such as through social media. It will be particularly important to communicate with self-evacuees during this stage, so they can be informed about the return stage. While an emergency continues, communication with evacuees and those who remain in place should be coordinated with those who are managing the emergency, to ensure consistent messaging.

All communications should be open, honest, relevant and up-to-date. Any information about damage to specific homes and properties should be dealt with sensitively,

and only directly with affected property owners and occupants.

In addition to evacuees, messages should be tailored to meet the needs of the owners of any facilities being used, and their staff, as well as those managing the evacuation centre. Plans should also be made so that relevant information from agencies responsible for evacuation stages can be shared with the surrounding community and emergency management personnel.

Key message: People under stress may struggle to receive and process information. Further guidance on effective communication is available on the Red Cross website.²

Transition to recovery

The services available to evacuees in a shelter should be consistent with those available under local recovery plans and arrangements. This will assist with a seamless transition to recovery, noting that recovery centres may be established in separate facilities during the shelter stage to provide recovery assistance.

Documentation

To assist in documenting the shelter stage, the evacuation plan should include details (including floor plans) of the facilities available for sheltering evacuees; agreed arrangements with the owners and managers of those facilities to set up, activate and operate those facilities as shelters; and relevant contact details. A template document or software application for registering evacuees should also be included.

A communications sub-plan should be prepared to ensure appropriate information continues to be communicated to evacuees via suitable media.

Additional supporting documentation may include:

- a register of supplies required to support shelter operations (with recommended quantities of, for example, bedding, furnishings, food, hygiene products, cleaning supplies)
- shelter management templates including:
 - sign in/out sheets
 - registration and intake forms
 - incident report forms
 - resupply request forms
 - situation reporting templates.

Examples of shelter management templates are available in the *Queensland Evacuation Centre Field Guide*².

¹https://register.redcross.org.au

² http://www.redcross.org.au/communicating-in-recovery.aspx

³http://www.disaster.qld.gov.au/Disaster-Resources/Documents/ RED647%20Field%20Guide_FA_Web.pdf

Stage 5 Return

The purpose of this section is to guide the making of an informed decision about the safe and timely return of evacuees to their homes and businesses, and the development of a plan to manage the return effectively and efficiently.

Introduction

Return is the fifth of the five stages of the evacuation process; the period during which those who have left the hazard impact area and have been unable to return are now able to do so, more or less permanently (see also Temporary Re-entry).

For many, return is the beginning of the recovery process and therefore should commence as soon as possible after withdrawal, providing the health and safety of returnees is not unduly compromised. Returning is not without risk, but to delay return in the hope that all risks will be eliminated is not realistic. To delay return itself carries risks, as delay can have negative impacts on the recovery of returnees, including increasing frustration or stress if unable to return to secure property, attend to pets or livestock, or restore business activity. Early return will help minimise negative social and economic impacts on affected communities.

Community support for the commencement or delaying of return will be enhanced if appropriate community representatives are involved in developing the evacuation plan and informing the decision to and timing of the return.

The return stage should be a planned and managed process to ensure that it is carried out as soon as possible and as safely as practicable. Return can be

stressful, particularly for people who have lost loved ones and/or property. There may also be misinformation or tension due to differing experiences of the emergency. Different people will respond to stress differently, which may, during the return stage, result in increased conflict. Conflict may arise:

- among returning evacuees
- between evacuees returning and those who stayed
- between evacuees and supporting agencies
- between evacuees and other community members not directly affected by the hazard impact
- between evacuees and media who have an increased presence in hazard impact areas.

The evacuation plan should therefore include strategies to promote reconnection and to minimise and manage the potential for conflict, including the provision of timely and accurate information to promote shared understanding; support services available; and the meaningful engagement of community in the return process.

Not all evacuees will return permanently to their home or business. Some will choose to relocate, and others may be resettled elsewhere at the directive of government (for example, as followed the Christchurch earthquake in New Zealand).

Key steps

- Identify authority and responsibility
- Do it early when safe to do so
- 3 Identify relevant stakeholders
- 4 Develop risk management processes for return
- 5 Identify return options
- Plan communications for the return stage
- 7 Link with recovery plans
- B Document it

Authority to decide on and responsibility to manage return

The evacuation plan should identify which agency(-ies) and/or position(s) have the authority and responsibility to decide when the return stage can commence and to manage the return. The agency(-ies) and/or position(s) may vary depending on the nature of the hazard threat. Reference should be made to relevant state or territory legislation, emergency management plans or documented emergency management arrangements to identify the agency(-ies) and/or position(s).

Considerations

CONTEXT

The managed return of people suggests that evacuees have remained outside the hazard impact area pending a formal decision that will enable them to return. Experience, however, demonstrates many will have returned earlier, often despite the maintenance of TMPs to prevent this. Such behaviour suggests that people undertake their own risk assessment based on their particular needs and risk appetite. For example, farmers and people with animal welfare responsibilities may need to return quickly to attend to their stock, and business owners will be keen to restore as quickly as possible their means of making a living. Even many householders who have lost most of their possessions will want to return to see what remains, and to secure it.

In these examples, the desire to return outweighs the perceived risk of return. Given this, it is incumbent on the agency responsible for managing the return stage to ensure people can make, as early as possible, informed choices about the risks they may face and how those risks may be mitigated. The communications sub-plan of the evacuation plan should address the need to inform people about personal risks and mitigation strategies, with efforts to communicate these risks and strategies to evacuees commencing as soon as possible after the warning stage.

Such an approach recognises that many people are capable and self-reliant, and helps acknowledge and build community resilience.

RISK ASSESSMENT

When to start the formal return stage should be based on a risk assessment similar to those described in Stage 1. The evacuation plan should include a template that facilitates the conducting and documentation of the risk assessment. Once the risk assessment has been completed and the risks treated to the extent required, the return stage should commence.

The evacuation plan should detail arrangements to have properly trained and equipped teams in the field gathering data, to enable risk assessment as soon as the

agency(-ies) managing the incident authorise it. Teams should include representatives of government agencies, infrastructure owners and affected communities whose local knowledge and diverse representation will add value to assessments and credibility to analysis and evaluation. The evacuation plan should document how data will be captured, and include either data capture forms or an electronic application to enable data capture and analysis.

Risks to be assessed may include:

- the residual hazard, or the possibility of the hazard returning
- new hazards (e.g. ground, air or water contaminated by asbestos, sewerage, dead animals)
- risk mitigation measures
- safety of access and egress routes
- safety of structures
- safety of electrical and gas facilities and infrastructure, fuel storage and other hazardous facilities
- the capacity to reconnect services to damaged buildings and treat contaminated water supplies
- the availability of facilities, utilities, services, food and water necessary to sustain returnees
- · contamination of evidence of crime.

TEMPORARY RE-ENTRY

The evacuation plan should provide for the temporary reentry of people (such as householders, business owners, and farmers) to the hazard impact area prior to opening the area to the broader community. Temporary re-entry may be enabled to assess damage, collect belongings or attend to livestock, and should only follow an appropriate assessment of the risk. Consider issuing permits to those temporarily re-entering (see Permit system).

PHASED RETURN

Phased return should be considered in the evacuation plan. Depending on circumstances, access may be restricted until essential infrastructure has been restored and remaining hazards addressed.

Enabling those with homes and businesses (for example, agricultural and commercial) to return as soon as it is reasonably safe to do so should be facilitated, while continuing to restrict access to those who merely want to visit the hazard impact area. In instances where entry is restricted to some people, TMPs may be used to assess the bona fides of people seeking to return to the hazard impact area.

To inform staged return and speed up the return process, the evacuation plan should identify the range of services and infrastructure that may be interrupted by the hazard impact. The plan should also include details of key contacts to enable service providers to enter impacted areas to restore services and infrastructure as soon as practicable following risk assessment and the

implementation of necessary risk treatments applicable to their operations.

PERMIT SYSTEM

A permit system may be appropriate to facilitate the re-entry or return of some people prior to complete resolution of the hazard. For example, farmers and people with animal welfare responsibilities such as boarding kennels, stables, agistment facilities and feedlots may require urgent access to attend to injured animals, locate and contain wandering stock and to provide water and feed. Permits should only be issued following an appropriate assessment of the risk in the area to be accessed. In addition to elements listed above (see Risk assessment), the following should be considered:

- the physical and mental capability of the person seeking a permit
- the identification of high risk 'no-go' areas
- times of entry and exit
- mode of transport and speed restrictions
- confinement of activities to specific properties and access/egress routes
- any limitations due to infrastructure restoration activities
- legal indemnity and responsibility for safety.

Any existing emergency management arrangements that guide the process of permitted access to hazard impacted areas should be appended to the evacuation plan.

See Further reading for examples of permit systems.

RESTRICTED ACCESS TO HIGH-RISK AREAS

Risk treatment may include identifying areas that cannot be accessed by the general public until the risk has been eliminated (such as reas contaminated by asbestos), but enabling access to other parts of the hazard-impacted area as soon as possible.

The evacuation plan should identify how to restrict access to those areas that still pose a threat to health and safety. Signage, road blocks and/or TMPs may be appropriate.

COMMUNICATION

To help evacuees make well-informed decisions before returning and remaining in hazard impact areas, the evacuation plan should include a communications subplan for sharing relevant information with returnees prior to and after their return.

Information should be provided about:

- what to expect when they return (e.g. what they will see, smell, feel, impacts to essential services such as sewage and power)
- the residual risks returnees face

- mitigation strategies that agencies have put in place, and additional strategies returnees may put in place to augment them
- travel and accommodation arrangements for those requiring assistance to return
- location of and reason for restricted areas
- support services available in the vicinity (e.g. health, welfare, banking, insurance, education, childcare)
- food and water supplies, access to fuel, hardware stores.

Evacuees should be encouraged to weigh up this information and consider if and when they will return given their own needs, capacities and circumstances.

How this information is delivered should be described in the communications sub-plan. Returnees should continue to be consulted about their information needs, which will vary over time. This consultation should identify when communication is no longer required.

Documentation

To assist in documenting the return stage, the evacuation plan should include a template to enable risk assessment to be undertaken quickly, as well as a template or software application to facilitate data collection and analysis of risks. It should identify critical infrastructure likely to be impacted, and key contact details for infrastructure owners/managers. TMPs should also be identified in the plan, including location information.

A communications sub-plan should be included, to ensure appropriate information continues to be communicated to returnees via suitable media.

Transition to recovery

Some elements of the return stage may overlap with components of the recovery plan. Hence the return should be coordinated between the person(s) responsible for managing the return stage and the person(s) responsible for recovery. The integration of return and recovery should be described consistently in both the evacuation plan and the recovery plan. The point at which the return stage is completed should be agreed between those managing return and recovery.

Not all who left the hazard impact area will be able to return permanently until their home or business is restored or rebuilt; there will be some who do not wish to return at all. The needs of these two groups will remain a strong focus for those managing the recovery process.

Further information about the recovery process can be found in *Australian Disaster Resilience Handbook 2 Community Recovery*¹ (AIDR 2011) (Handbook 2).

 $^{^{1}\,}https://knowledge.aidr.org.au/community-recovery-handbook-2$

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