Emergency Management Australia

Recovery

Australian Government

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Emergency Management Australia

EMA

'safer sustainable communities'

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Manual 10

RECOVERY

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THE AUSTRALIAN EMERGENCY MANUALS SERIES

The first publication in the original AEM Series of mainly skills reference manuals was produced in 1989. In August 1996, on advice from the National Emergency Management Principles and Practice Advisory Group, EMA agreed to expand the AEM Series to include a more comprehensive range of emergency management principles and practice reference publications.

The Australian Emergency Series has been developed to assist in the management and delivery of support services in a disaster context. It comprises principles, strategies and actions, compiled by practitioners with management and service delivery experience in a range of disaster events.

The series has been developed by a national consultative committee representing a range of State and Territory agencies involved in the delivery of support services and sponsored by Emergency Management Australia (EMA).

Parts I to III are available in full text on the EMA website at http://www.ema.gov.au under Publications. Limited print copies are distributed to State and Territory emergency management organisations, community organisations, and relevant government agencies. These manuals are also available free of charge on CD. Please send requests to ema@ema.gov.au.

Parts IV and V (skills and training management topics) are issued as training guides to State agencies through each State and Territory Emergency Service.

AUSTRALIAN EMERGENCY MANUALS SERIES STRUCTURE AND CONTENT

EMERGENCY SERVICES SKILLS SERIES

FOREWORD

The first edition of the *Australian Emergency Manual – Disaster Recovery,* was developed in 1996 by a steering committee which was representative of the range of professions and government and non-government organisations responsible for recovery management and service delivery throughout Australia. It provided a comprehensive guide and definitive text for planners, managers and workers involved in the direct delivery of recovery services.

In this, the first revision of the Manual, much of the content of the first edition is retained, however, there are also a significant number of changes. These changes reflect ongoing developments in both knowledge and practice, as well as the expanding nature of events to which recovery strategies are being applied.

Since the publication of the first edition of the Manual, EMA has also produced a series of Guidelines documents for specific aspects of recovery. These are:

- *Community and Personal Support Services Guidelines;*
- *Guidelines for Psychological Service Practice*
  - *Mental Health Practitioners Guide*
  - *Emergency Managers Guide;*
- *Community Development in Recovery from Disaster; and*
- *Economic and Financial Aspects of Disaster Recovery.*

This extensive range of recovery publications now provides detailed information on recovery theory, practice and services to assist and hasten the recovery of communities from the effects of emergencies and disasters.

The essential components of these publications have been incorporated into the revised Manual, which has been updated in terms of policy, procedures and professional practice developments, as well as now addressing emergency risk management and sustainability. Revisions also include expanded and updated chapters on physical and economic recovery, as well as community development.

Similarly to the first edition of the Manual it is intended that this updated version provide a useful and practical tool for use by planners, managers and workers from the range of organisations involved in the planning, management and delivery of recovery programs and services.

The Manual and each of the abovementioned publications are also available on the EMA web site (http://www.ema.gov.au).

Director General
Emergency Management Australia
6 October 2004

ACKNOWLEDGEMENTS

The quality of the material in this Manual is directly attributable to the voluntary input of a wide range of practitioners from the variety of organisations involved in recovery planning, management and service delivery. These include representatives from:

- Non-government organisations;
- Local governments;
- State/territory government agencies; and
- Australian government agencies.

The efforts of a number of individuals who contributed material on specific topics for inclusion in this Manual are also acknowledged. These are;

- Geoff Boughton (Physical Effects and Physical Recovery Services);
- Syd Smale (Vulnerability and Resilience); and
- Rob Gordon (The Social Dimension of Recovery).

The Disaster Recovery Sub-Committee of the Community Services Minister's Advisory Council (CSMAC), were also significant contributors to the development of the Manual. This group is made up of officers in the designated position responsible for recovery within each of the State and Territory community service departments throughout Australia. These positions have worked cooperatively as the Disaster Recovery Sub Committee (DRSC) of CSMAC since 1984. Originally the Department of Social Security was also a member. More recently, Centrelink and the Australian Government's Department of Family and Community Services (FaCS) have been represented. EMA also plays an integral part in the subcommittee's activities.

Activities of the group include:

- reviewing disaster/emergency recovery policies, practices and procedures;
- acting as a peak reference group to the Australian Emergency Management Committee on recovery issues;
- managing developmental initiatives and projects; and
- facilitating education, training and professional development opportunities in recovery (in conjunction with EMA).

In addition, the DRSC has an important role to play in the exchange of knowledge and expertise and provides a vehicle to ensure various jurisdictional developments are aligned and consistent. Much of the work of this group is undertaken in partnership between CSMAC and EMA.

Finally, it is also important to acknowledge the input of both Barry Grear AO and Barry McPhee. As chair of the steering committee charged with the development of the original *AEM – Disaster Recovery,* Barry Grear provided strong leadership throughout. Barry McPhee has also been a significant contributor to both editions of the Manual, through his role as Chair of the DRSC for many years and a direct editorial involvement in this edition of the Manual.

Andrew Coghlan

National Recovery Consultant

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SECTION A

Preface

CHAPTER 1

Introduction

The primary focus of Australian emergency management systems is to mitigate the effects of disasters (**Note:** the terms “Disaster” and “Emergency” as used in this publication are synonymous). Each of the internationally accepted elements of the Comprehensive Approach concept, comprising prevention, preparedness, response and recovery, are utilised in these emergency management systems. Within this context, recovery is defined as the coordinated process of supporting disaster affected communities in the reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical well-being.

The four elements of the comprehensive approach identified above are not sequential nor mutually exclusive. In practice each element has components of the other three and may, at least in part, be operational simultaneously. Those with responsibility for planning and management of each of the four elements must be involved in the planning and management processes of all four elements. Particularly, they must be included in all pre-disaster impact and post-disaster briefings.

Emergency management has adopted the Australian/New Zealand Standard for Risk Management (AS/NZS 4360: 1999), which, with refinements, is known as Emergency Risk Management. The major advantage of utilisation of the standard is that it provides a uniform approach to emergency planning while maintaining consistency with regular management practices. It also includes the treatment processes of prevention, preparedness, response and recovery, as well as addressing mitigation, resilience and vulnerability.

More recently, emergency management and, indeed, recovery have been extended from their historical sphere of natural events to include other events relating to technological and essential services failures, exotic animal diseases, acts of violence, insect infestations and provision of safe-havens for evacuees from strife-torn countries. This extension of responsibilities increases the need for flexibility of planning and management systems.

Regardless of these arrangements, it is not possible to protect communities from all hazards and there is a need for recovery activities for physical, social, emotional, psychological, economic and financial restoration.

Recovery is, however, more than simply the replacement of what has been destroyed and the rehabilitation of those affected. It is a complex social and developmental process rather than just a remedial process. The manner in which recovery processes are undertaken is critical to their success. Recovery is best achieved when the affected community is able to exercise a high degree of self-determination.

CHAPTER 2

Recovery – Purpose, Principles and Concepts

Purpose

The purpose of providing recovery services is to assist the affected community towards management of its own recovery. It is a recognition that where a community experiences a significant emergency or disaster there is a need to supplement the personal, family and community structures which have been disrupted.

Principles

In 1986 the Standing Committee of Social Welfare Administrators (now the Community Services Ministers' Advisory Council) endorsed principles of disaster recovery management, which have provided a successful management context for recovery managers.

An abridged version of those principles as utilised in the training context is that disaster recovery is most effective:

- when management arrangements recognise that recovery from disaster is a complex, dynamic and protracted process;
- when agreed plans and management arrangements are well understood by the community and all disaster management agencies;
- when recovery agencies are properly integrated into disaster management arrangements;
- when community service and reconstruction agencies have input to key decision-making;
- when conducted with the active participation of the affected community;
- when recovery managers are involved from initial briefings onwards;
- when recovery services are provided in a timely, fair, equitable and flexible manner; and
- when supported by training programs and exercises.

(For the complete text of the approved Principles of Disaster Recovery Management see Appendix A.)

Concepts

Underpinning the above recovery management principles are the following concepts, which provide the basis for effective recovery management:

- community involvement;
- local level management;
- affected community;
- differing effects;
- empowerment;
- resourcefulness;
- responsiveness, flexibility, adaptability and accountability;
- integrated services;
- coordination; and
- planned withdrawal.

The major themes of the Recovery Concepts are listed below.

(Full details of these concepts are contained in Appendix B.)

Community Involvement

Recovery processes are most effective when affected communities actively participate in their own recovery.

Local Level Management

Recovery services should be managed to the extent possible at the local level.

Affected Community

The identification of the affected community needs to include all those affected in any significant way whether defined by geographical location or as a dispersed population.

Differing Effects

The ability of individuals, families and communities to recover depends upon capacity, specific circumstances of the event and its effects.

Empowerment

Recovery services should empower communities to manage their own recovery through support and maintenance of identity, dignity and autonomy.

Resourcefulness

Recognition needs to be given to the level of resourcefulness evident within an affected community and self-help should be encouraged.

Responsiveness, Flexibility, Adaptability and Accountability

Recovery services need to be responsive, flexible and adaptable to meet the rapidly changing environment, as well as being accountable.

Integrated Services

Integration of recovery service agencies, as well as with response agencies, is essential to avoid overlapping services and resource wastage.

Coordination

Recovery services are most effective when coordinated by a single agency.

Planned Withdrawal

Planned and managed withdrawal of external services is essential to avoid gaps in service delivery and the perception of leaving before the task has been completed.

SECTION B

Recovery Environment

CHAPTER 3

Introduction

Emergencies and disasters, whether caused by essential services or technological failures, the extremes of nature, exotic diseases, insect infestations, acts of violence, human action or any other cause, disrupt communities. It is in this environment and the accompanying conditions of physical, psychological and economic restoration that recovery is conducted.

This section provides an overview of the physical, psychological and economic effects of emergencies and disasters on communities, as well as of the interventions that establish the environment in which recovery services are delivered.

While the physical, psychological and economic effects are presented individually, they impact upon each other both by cause and effect. This inter-relationship is evidenced in addressing all three areas.

CHAPTER 4

Physical Effects

Introduction

Infrastructure is broadly defined as anything that contributes to the normal function of a community and includes things, people and organisations. With the relatively high dependence of modern-day communities on physical infrastructure, large-scale disruption to these lifelines causes broad-ranging hardships for the community. Communications systems, transport systems and buildings are often damaged and, therefore, the infrastructure suffers and, along with it, the community. Recovery and support operations will also generally rely heavily on both services and accommodation, so loss of infrastructure may also significantly affect the management and delivery of a broad range of recovery services.

Damage

The extent of the damage to infrastructure is frequently large and may disrupt both the commercial and social life of the community. The cost of this disruption is often hard to establish and may be difficult to quantify in dollar terms. Damage to industrial and commercial facilities can cause loss of production, and damage to housing and infrastructure can cause personnel shortages as workers attend to their own losses.

Damage may be measured in a number of ways, depending on the end use of the data. Each measure has different relevance to recovery operations.

- *The number of buildings or services affected* is useful information for those planning immediate restitution work or provision of tarpaulins etc. for temporary protection of property.
- The number of people rendered homeless is useful to those planning temporary accommodation or controlling social rehabilitation activities.
- *The cost of damage* is of interest to governments, relief agencies and insurance companies, as this indicates the scale of operation that must be undertaken to reinstate the status quo to the affected community.

Each of these provides an important measure of the effect of the event on the community, and the tasks and resources required to restore normal operations. However, it is important to recognise that first estimates of any of the above, made in the immediate wake of the event, may be quite different from later counts. Damage to transport and communication links may also contribute to feelings of isolation for those people affected and can hamper the efforts of response and recovery operations.

Physical Infrastructure

These elements are often referred to as the physical lifelines of the community. They may be privately run or owned and operated by public utilities. They include:

- power supply and distribution systems;
- communications networks;
- water, sewerage and drainage systems; and
- transportation networks.

All of these are, to a certain extent, taken for granted in normal day-to-day life but are sorely missed if they are disabled by any event—man-made or natural.

Support Infrastructure

A number of service and support networks that are operated from the public and private sectors are also part of our infrastructure. These include:

- food and merchandise distribution systems, which include markets, wholesalers and retailers;
- the building sector, which includes insurers, builders, sub-contractors and suppliers;
- the health-care sector, which includes health insurance, medical practitioners, pharmacists, pharmaceutical suppliers and hospitals;
- education and training functions; and
- housing, accommodation and catering systems.

These are very important networks for recovery operations.

Food and produce distribution will have come to a standstill at least temporarily. Many of our administration systems rely on computers, which may have been damaged as a direct result of the type of emergency (e.g. by ingress of water and sand in a cyclone) and, at a minimum, will not be able to operate until power is restored.

Health-care systems can generally function for short periods even when facilities have been partially damaged; however, temporary hospitals and clinics have a limited life. As well as the injuries from the event, there are additional problems for people whose regular life-support systems or drugs may not be available due to the loss of infrastructure.

Accommodation is a further, critical aspect of the recovery process. Cyclone Tracy in Darwin provides a well-known example of this. The repair of the city required a large workforce, but the loss of around 90 per cent of the accommodation meant that many people who performed vital infrastructure tasks had to be evacuated to ease the accommodation shortage.

A common element of all these infrastructure networks is that they are dependent on the physical infrastructure items listed above. They have operations that rely on buildings—to house employees, to store supplies, to retail goods and services, and to hold records and financial management systems. They also rely on transportation networks to enable distribution of needed goods and services, and telecommunications systems to ensure that customers can communicate their needs to industry.

Implications of Infrastructure Damage

Damage to infrastructure has important implications in respect to both response and recovery. Tasks that are normally quite simple and straightforward may become impossible after extensive infrastructure damage. It is particularly important to appreciate this in the planning of recovery operations. Plans must include strategies for re-establishing the vital infrastructure that enables other functions. For example, prior to opening a recovery centre, or ‘one-stop shop’, for delivery of human support services, power and computer network links need to be in place.

Loss of power will cause widespread inconvenience. Restoration of service is necessarily slow as all facilities are checked, repaired if necessary and introduced to the grid in a systematic manner. Alternative power systems may be required for some time, and need to be incorporated into recovery plans.

Community Involvement

One of the basic tenets of recovery management is the need to involve and support the community actively in its own recovery. This is particularly important in the context of infrastructure recovery. There are a number of issues with which the community can assist in strategic direction. This is often most important in the early stages of recovery when the community is particularly cohesive.

Strategies for Redevelopment of Lifelines

After an emergency or disaster, the re-establishment of power is something that everyone eagerly awaits. Depending on the extent of the damage, the entire process can take months. However, early in the recovery, the community can be invited at town or community meetings to assist in the reconnection strategy—e.g. hospital first, followed by shopping centre, then main distribution trunk and outwards from that. This will help minimise discontent with the order in which facilities are reconnected. A similar strategy applies for water services. Once this strategy has been decided, it will influence the location of recovery coordination centres (rather than the location of the recovery centres influencing the reconnection strategy).

Heritage Building Strategies

Two important policies have to be established before the first demolition of a building starts.

- Updating the heritage list will certainly involve the community. The definition of a heritage building needs to be refined and then buildings added systematically to the list.
- A strategy will be required to fund the repair and redevelopment of heritage buildings. If the community restrains a building owner's options for recovery, then the community must be prepared to contribute to the extra costs incurred in the redevelopment in order to keep the original character of the building.

Resolution of Planning Issues

Invariably, a number of land-use planning issues that will require resolution are highlighted. These may include areas prone to flooding or storm surge. Developments on swampy ground that suffered extra damage in an earthquake may also need to be reconsidered. Planning strategies are best made prior to the reconstruction of damaged facilities. As well, good strategies need to be retained so that planning decisions can be made some time after the event, when the community memory of the problems may have dimmed. This is most effectively achieved where the whole community is involved in the initial decisions.

Reconstruction

Appropriate standards for reconstruction may not always be clear. Buildings must conform to the current building regulations at the time of their construction. Over time, these regulations may change considerably, so that a partially damaged building which may only require small expenditure to be restored to its former condition, may require major work to conform to present building standards.

In addition, the supervision of the reconstruction may bring other problems.

- The staff required to approve and inspect building construction will be swamped with work. There will certainly be a need to boost staff levels during the recovery phase.
- Many people may not be aware of the need to apply for building approval for major repairs. They may try to start major repairs without approval. In the confusion of clean-up and general construction activity, their work may go unnoticed.
- Some repairs may be seen as temporary—just to keep the rain off—but become incorporated into the final structure without approval.
- In some cases, volunteers in the building industry may assist with reconstruction while not being familiar with the requirements for the particular area. Some training or explanation may be required to ensure that all building industry personnel have the appropriate understanding of the requirements of reconstruction to resist future events.
- Insurance companies may insist that the reconstruction only replaces what was damaged with similar construction. In many cases this construction is known not to work and, clearly, better reconstruction is called for to avoid future claims. Discussions with all the companies involved can help achieve an understanding that some improvement in structural performance is called for in all damage.

- Building materials made freely available require close supervision during reconstruction. There is a temptation to supply building materials but not the supervision necessary to ensure that reconstruction is of a suitable standard. In some places, the salvaged material presents other problems as it can be readily obtained and used for makeshift shelters that may become permanent.

Specific Physical Effects

Affected Persons

As outlined above, physical effects impact on the activities of all who are involved in recovery.

- The community is significantly affected by the physical effects of an emergency or disaster. It will be inconvenienced by damage to infrastructure and other services, which will frustrate efforts to effect speedy recovery. This may be reflected in community morale and in cooperation between all who are involved in recovery.
- Recovery workers, whether normally part of the community or not, may have to cope with compromises in operating conditions due to lack of power and other facilities as a direct result of the impact of the event.

The remainder of this chapter presents a number of physical consequences that may characterise parts of the recovery operation. An understanding of these effects will assist recovery managers from all disciplines to plan for compromised operational conditions and prepare them for some of the impacts on the community that will become the focus of the recovery efforts.

Infrastructure

Basic infrastructure is likely to be affected by major hazards, and may include damage to the following essential services.

Electricity Supply

Loss of electricity causes a significant interruption to normal activities and can hamper recovery operations. The consequences of loss of power include:

- food spoils in fridges and freezers;
- water supplies may fail as pumps stop;
- sewerage systems may back-up as sewer pumps fail;
- computers will not work;
- communication systems (e.g. public media) will be less effective as people will not be able to view television;
- commercial sales may be impossible without working scanners and merchandise databases;
- fuel cannot be pumped in service stations;
- a high demand will be placed on portable generators and many people may be using them for the first time;
- preparation of food may be affected where machinery or ovens are powered with electricity;
- industrial processes (e.g. electric arc smelting) may be compromised, with molten material cooling in crucibles;
- lack of lighting may contribute to security concerns and may curtail some recovery operations;
- loss of traffic lights and rail signals, which will compromise transportation and lead to higher community risks; and
- loss of heating and cooling in homes and commercial establishments.

Gas

Loss of gas supply will affect a number of commercial and private operations. This may have consequences including:

- loss of heating in homes and commercial establishments;
- loss of hot water for washing and cleaning;
- some industrial equipment may be damaged by lack of gas pressure;
- preparation of food may be affected where gas cooking is used;
- other commercial and industrial activities can be affected (e.g. commercial laundries and, in some cases, power generation);
- in some circumstances, gas pressure remains in the lines, which can lead to continuing supplies. However, where the gas pressure falls to atmospheric pressure, damage to valves, lines and control systems may make restoration of supply a very complex operation;
- domestic and industrial consumers may need to be told to shut off their gas equipment to preserve the line pressure and to enable an ordered resumption of supply. This may be difficult where consumers' facilities have been extensively damaged, or where the consumers have been evacuated; and
- where supplies of gas are limited, it may be possible to sustain a reduced supply to essential and vulnerable facilities, provided these can be identified and agreed upon.

Water

Supply of potable water is essential to human survival. As well as damage to the water supply system, which may impact on the quantity of water supplied, hazards can impact on the quality of water so that it cannot be used for certain functions. Impacts of loss of water include:

- drinking water may have to be imported to service the needs of the community and response and recovery workers. An alternative is to use temporary treatment (e.g. chlorine tablets) to deliver a local safe water supply;
- loss of water for washing may contribute to sanitation problems;
- water is needed for many commercial and industrial applications that may impact on employment and other normal community functions;
- firefighting may be compromised while there is a shortage of water;
- toilets will not flush without a water supply, so this may create health problems; and
- if the water quality is reduced, public health may be compromised and there may be fears of disease outbreak. There is a particular problem if communities are not made aware that the water quality is lower than they are used to.

Communications Systems

While many communications systems have back-up power, the communications systems can be vulnerable after a major hazard due to the following:

- towers for repeaters, mobile network base stations and transmitters can be damaged;
- disruption to power can affect handsets (some require power supplies) and mobile phone batteries will eventually need to be recharged;
- partially damaged systems may be overloaded by traffic during response and recovery stages of an operation;
- cabling may have been damaged by some hazards (e.g. ground movement in earthquakes, water in severe storms, fire etc.);
- computer networks that require larger bandwidth may be among the last services to be restored. Computer systems may have to operate independently of networks for part of the recovery process; and

- without access to mass media, other communication systems must be established to provide community-focused information.

Sewerage

There are many hazards that can affect the operation of a sewerage system:

- power is required for the operation of sewerage pump stations and treatment plants. Without power, there may be overflows of raw sewage. This poses a health risk;
- some sewer lines may have been ruptured;
- water may have found its way into the sewer system and contributed to flows; and
- inoperative sewers may cause sewage to back-up into houses or to spill into open spaces or waterways.

Storm Water

Blockage of manholes or fracturing of pipes may cause the storm water system to fail. Impacts of such failure include:

- overflows caused by blockages and local flooding as the overflowing water finds its own path, leading to water ingress to homes and businesses;
- where the water cannot get away, it may back-up into homes and commercial establishments;
- where sewers have ruptured or overflowed, sewage may find its way into storm water systems and pose health and environmental threats;
- water pipe or tank fractures can lead to the release of large volumes of fresh water which will eventually find its way into the storm water system. This can overload the system and cause flooding;
- tanker accidents or other accidental releases of toxic or industrial liquids can lead to contamination of the storm water system and any water body into which it discharges;
- firefighting runoff may contain residues of toxic substances that can also lead to contamination of the storm water system and any water body into which it discharges; and
- flooding associated with the hazard may cause damage to the storm water system by overloading it or by scouring at inflow or outflow points.

Transport Networks

Transport networks are vulnerable to most types of natural hazards:

- earthquakes can cause damage to bridges and subsidence of road surfaces and rail lines. This may cause them to become unpassable;
- strong winds and earthquakes can cause debris from trees and buildings to block transportation links. In some cases, partially damaged buildings near to a road can cause the road to be closed for quite some time after the event;
- smoke from fires can close transportation links temporarily. Afterwards, it may take quite a long time to reopen the link for normal traffic due to damaged powerlines, trees, bridges or other facilities overhanging the road;
- accidental release of chemicals can cause temporary closures and, if the decontamination process is protracted, the link may remain closed for more than a week;
- floods can erode roads and bridge approaches, and this type of damage can take months to repair fully. For the interim period, disruption will occur; and
- power failure impacts on traffic signal operation, and this causes increased risk of traffic accidents and delays for motorists.

The damage can have implications for the community and for recovery efforts. Disruption can be a complete stoppage of transport, introduction of load limits, detours or delays, and can lead to the following consequences:

- any loss of transportation capacity causes higher traffic densities, with a general increase in level of risk, stress and community disruption;
- where transport links are broken, it will prove very difficult to get essential supplies and help to communities which may need them. Evacuation of people will also be hampered;
- where detours are established, traffic volumes may not match the design capacity of the roads or the community expectations along the detour. This leads to the potential for accidents and further stress;
- detours lead to delays, which need to be factored into the time taken to complete recovery tasks. The delays also lead to a heightening of community stress and aggravation;
- load limits can hamper the delivery of some items required in the physical recovery. These may include generators, transformers and supplies of food, water and building materials; and
- transportation inconvenience can cause changes to where people choose to live or work, and may significantly affect the way a community regards itself.

Health Services

Hazards will inevitably cause stress and extra load for health facilities. Hazards are often associated with injuries and death. The aftermath of a hazard may lead to an increase or a perception that there will be an increase in disease. Hazards and associated risks include:

- earthquakes—deaths and injuries, mainly due to building collapse;
- flooding—drownings and injuries;
- storms and cyclones—deaths and injuries due to debris impact or building collapse, drownings;
- fire—deaths and injuries due to burns, smoke-inhalation or respiratory failure in vulnerable people;
- explosions—deaths and injuries due to building collapse, burns;
- chemical spills or leaks may cause a range of injuries from burns to respiratory problems;
- the perceived risk of epidemics will place significant extra load on health-care facilities in some cases;
- primary health-care services must be maintained while the stress levels associated with an emergency or disaster may actually increase normal rates of heart attacks, strokes, childbirths, psychological effects etc. immediately after the event; and
- lack of power may increase loads on health systems by:
  - use of naked flames for heating or lighting, with increased fire risk and respiratory problems;
  - use of generators with inadequate ventilation may cause suffocation or respiratory problems. Handling generator fuel may cause fire risks;
  - eating contaminated foods or out-of-date foods may lead to gastric disorders; and
  - lack of power for in-home care of disabled or ill people may lead to these people seeking in-hospital care.

As well as increased loading on the health-care system, the hazard itself may have reduced the capacity of the system to provide its service. This can be due to the following:

- damage to buildings housing the facilities that makes them unsafe for continuing service;
- water damage, cladding damage or smoke damage that makes the facility unserviceable. Equipment may have been damaged, records lost or cleanliness compromised;
- while most hospitals have emergency power generation facilities, some hazards may damage the back-up generators. Other health-care facilities may not have emergency power and may be unable to provide services;

- staff shortages can sometimes follow hazards, as casualties elsewhere in the community, damage to transportation and general community disruption may mean that normal staff cannot come to work;
- some equipment may have been affected by the hazard itself. Mobile or portable equipment is vulnerable to damage in earthquakes. Equipment that makes use of gas or gases may be compromised by leaks in pipes or lack of supply. Some equipment (e.g. boilers and autoclaves) may have emergency shut-out valves or switches. In the event of the hazard, such equipment may have been shut down, and restarting it may be a lengthy process or require specialist staff that may not be available; and
- many of these effects have the added complication that the staff and patients of these facilities must be evacuated, placing extra load on surrounding facilities, and also risking the safety of people who require continuous care or specialised equipment.

Commercial Activities

A number of essential services are provided by commercial entities. These may include:

- security services—response may be compromised by faults in equipment, staff shortages and blocked or restricted roads;
- transport including buses, trains, taxis—response may be limited by availability of staff, fuel or vehicles, and demand for services may be greater than usual; and
- where utilities are operated by commercial entities, the rebuilding may require prior approval by an insurer, and this may delay recovery.

Sanitary Facilities

Quick restoration of basic sanitary facilities may reduce risk of infectious disease outbreak or spread. (Bodies rarely pose a health threat.) Disposal of waste is an important activity after many hazards and includes:

- disposal of food waste and wasted food. After power loss, refrigerators must be emptied. This can be complicated by:
  - access to the building. Where the owner or operator is not available, it may be difficult to gain entry to remove food;
  - access to the food. Partial building collapse may make it difficult to open the refrigerator;
  - disposal of contaminated materials. Contamination from the rotting food may have also affected soft furnishings, papers, even building materials. All of this must be disposed of as though it was rotting food;
  - staff to perform the work. Disposing of rotting food is a particularly unpleasant job. It can only be sustained for short periods; and
  - disposal areas. The disposal of food can be by burning or burial. This requires an appropriate area where the smell is not a problem, where supervision is provided to prevent food removal by rodents or feral animals, and where equipment is available to cover the remains;
- disposal of building waste. Building waste is generally benign and can be put into landfill quite close to residential or commercial areas. It requires equipment to compact the materials and cover them;
- disposal of water, ponded effluent and backed-up storm water. Ponded liquids can harbour insects that can act as vectors for disease. The liquids can either be removed, or the vectors killed by use of various insecticides;
- disposal of human bodies. This is covered by legislation and may require involvement of the coroner. Death certificates and identification will require coordination with other professionals. Medical experts say that there is little likelihood of the spread of infection from dead bodies. They should therefore be handled with the care that you would bestow on one of your own loved ones; and

- disposal of dead animals. In many respects, pets, which can be much-loved family members, should be treated with similar respect. Death of farm animals may require mass burials or burnings. Caution must be exercised where the deaths are a result of contagious diseases.

Residential

Residential losses after hazards can contribute significantly to community disruption. Residential damage affects:

- provision of shelter for the community and other people involved in the recovery operations;
- accommodation for a community or a workforce—without this, there will not be a workforce;
- protection of household contents. People are very attached to their possessions, as often they have become part of their own character;
- the feeling of belonging that is 'home';
- the tourism industry which is based on the provision of accommodation for visitors;
- vulnerable sectors of the community, which are more difficult to assist if they cannot be easily located. While people reside in their normal accommodation they are easier to contact; and
- coordination of recovery and reconstruction operations. In many communities, the ownership of residential accommodation is very widely spread. It can prove quite difficult to make contact with all of the property owners and their insurers.

Residential losses can occur in the following categories:

- houses, home units, apartments, flats;
- nursing homes, hostels, aged-care facilities; and
- boarding houses, hotels, motels, caravan parks.

In each case, the damage may be a combination of:

- structural damage that may render the residence dangerous for entry. This will cause problems for occupants, who may want to retrieve personal items and treasures from the damaged building and will feel resentful at being kept out of their own premises;
- structural damage that may allow entry, but prevent occupation of the building. This will allow possessions to be recovered, but will leave the occupants homeless. Alternative accommodation must be found;
- structural damage that can be repaired. In some cases the building can be occupied, but the damage will require a builder to reconstruct part of the structure. This represents a significant inconvenience and resentment of the slowness of the return to normal may result;
- non-structural damage that will require building repairs. In some cases, linings such as ceilings and wall linings may have been damaged and require repairs. (This is often the case if water has penetrated the building.) In the long-term, this can cause as much disruption to the occupiers as structural damage;
- non-structural damage that can be fixed by minor work. This may include patching cracks and painting. The amenity of the residence is not significantly affected, and the work is not unusual. (This type of operation is required even in normal times.) However, this type of repair usually has a low priority and the time taken to effect it can cause resentments; and
- damage to contents. The value of the contents relative to the value of the building is increasing from year to year. The vulnerability of the contents is also increasing, with more items incorporating electronics and the use of more expensive soft furnishings. Damage to contents can often cause more distress to the occupants than damage to the structure itself.

Commercial Facilities

Our communities function with the aid of a large range of commercial facilities. Much community employment is in the private sector: if it is not functioning, there will be problems with unemployment. Much of the recovery and reconstruction will be undertaken by the commercial sector. Affected commercial facilities after a hazard may include the following.

Banks and Financial Institutions

These are a necessary part of the money cycle.

- Without operational banks and teller machines, there may be a currency shortage after an emergency or disaster.
- In some cases, the reconstruction expenses will lead to increased applications for credit. This can be a problem if employment has contracted in the aftermath of the event.

Supermarkets, Warehousing and Transportation Offices

Supermarkets, warehousing and transportation offices are links in the food supply chain. Where any of these facilities are not operating as normal, food supplies can be in short supply.

- A major problem for supermarkets is loss of power. Not only does this compromise perishable food items, it also means that the normal databases to support sales processes are not operational.
- Where supermarket buildings have been damaged, the community may demand a high priority on the reconstruction so that normal trading can resume as soon as possible. The size of the building inevitably means that the reconstruction involves significant work, and generally takes considerable time. Insurance disputes may further delay reconstruction.
- Pricing policies can cause significant feeling in the community. Where prices rise in response to demand, there may be calls of profiteering. Where food aid is provided, prices of commercially available food must fall and trading may not prove economical.
- Supermarkets are commercially vulnerable where freely available aid is delivered to the community. The distribution of food aid needs to be handled with some sensitivity for the local food distributors.

Food is a basic community need and without the infrastructure to supply it at a reasonable price and in normal quantities the community will be severely disrupted.

Fuel Outlets

Service stations and fuel depots require power for normal operation, both to pump the fuel and to make the transactions. When disrupted, the inconvenience can be significant.

- Power failure can prevent supply of fuel, even if there are available stocks.
- Transportation disruption can limit availability of fuel, which will start to cause inconvenience some time after the event. News of low stocks can cause panic-buying and lead to ill-feeling in the community.
- Portable generators use fuel and there can be stress if shortages occur.
- Flooding can contaminate fuel by introducing water. This may prove very frustrating to the community, as precious fuel stocks must be wasted. Conversely, where fuel escapes into water bodies, there is potential for ecological damage.
- Fuel outlets present higher risks of fire.
- Fuel supplies are necessary for vehicle-based evacuation.

Hardware and Building Supply Outlets

Hardware and building supply outlets are very important facilities for any physical reconstruction after an emergency or disaster.

- A number of building products may be adversely affected by inundation. Flooding and storms may destroy stocks of cement, plasterboard and paper products, and cause erosion in tools and other steel products such as roof sheeting and fasteners. Water can also affect electrical stock such as power tools.
- Fire in the premises will certainly cause loss of stock and mean that the business is unable to trade.

- Power failure can prevent sales, even if there is available, undamaged stock.
- Building supply stockists are commercially vulnerable where freely available aid is delivered to the community. The distribution of building supplies needs to be handled with some sensitivity for the local distributors. Even tradespeople from out of the area bringing in materials can have an impact on local business.

Chemists and Suppliers of Other Controlled Substances

Prescription medicines may be required to service the community during the recovery phase. In order for this to happen, the chemist outlet must be functioning, there must be the necessary links to databases, and the appropriate drugs must be in supply and in good condition. However, damage may prevent the normal operation of the facility.

- Stock could be damaged. Water penetration may ruin many chemist shop supplies.
- Equipment necessary to link into the appropriate databases may have been damaged or communication lines may be down. Without power, none of the modern records systems will be operational.
- Damage to the building may compromise the security of the building.
- Damaged stock cannot be disposed of in the normal manner. Facilities for the special disposal of damaged medicines may not be able to cope with the large load from a damaged chemist shop.

Other Commercial and Retail Outlets

Other commercial and retail outlets include department stores, clothing stores, newsagencies and other specialist stores.

- All of these may lose business due to damage to stock, staff not being available due to their own personal losses, power failure, and damage to the premises.
- All may have concerns about security if the building perimeter has been damaged.
- All may have to dispose of damaged stock.
- All will be commercially vulnerable where freely available aid is delivered to the community. The distribution of donated goods needs to be handled with some sensitivity for the local distributors.

Other Community Services and Facilities

Damage and loss can be sustained by all community facilities that make use of buildings in one form or another. Damaged facilities can include:

- community/neighbourhood centres;
- schools;
- kindergartens;
- churches;
- sporting clubs;
- cultural centres;
- entertainment venues; and
- restaurants and cafes.

Each of these facilities has the potential to help considerably during the recovery phase, but if damaged would be unable to perform their community functions. The damage may be structural damage to buildings or damage to furnishings and contents, or both.

- Structural damage has the potential to cause risk of injury or risk to life for occupants at the time of the incident. In some cases, a partially damaged building may pose a continuing threat if later collapse is a possibility.

- Structural damage almost certainly compromises the function of the building. Damage to the cladding can mean that ingress of water, cold or heat may make the building unsuitable for protected activities. Collapsed materials may inhibit movement in the building and present risk of injury to people using it.
- Damage to windows, doors or building linings will also affect the function of the building in the same way as damage to the cladding. Water ingress can have significant ramifications on the amenity of the building. Mould and fungal growth may cause health risks some time after the initial water penetration. This problem may require significant remedial action to alleviate.

Environment

Emergencies and disasters can have serious effects on the environment. This can, in turn, cause community hardships. Tourism activities may be affected, and general amenity will certainly be compromised by environmental damage. The affected systems can include:

- air quality—release of dust, smoke, chemicals or unpleasant smells during or after a hazardous event can cause degradation to air quality. This can have affects on visibility, cause health problems or reduce the amenity of the environment;
- water quality, which can be affected by dust, sediment, rotting organisms, disease or pollutants. Where the water is used for drinking, the degradation directly impacts the community. In other cases, changes in the water quality may affect dissolved oxygen levels and lead to changes to the biota in the water. This may lead to fish kills, development of algal blooms, weed kills or the choking of waterways with weed or algae. The degradation of water quality can pose health risks to communities or decrease the quality of the environment for commercial activities such as tourism, agriculture and aquaculture;
- soil contamination, which can result from spillage of toxic chemicals during a hazard or in the consequences of a disaster. Spilled chemicals (including fuel) can result in transport accidents or industrial accidents. Water used for firefighting can wash toxic residues into the soil. Isolation of the contamination is required to prevent long-term effects of the incident;
- general amenity (pleasantness) of an environment, which can be compromised by hazards. This reduces the quality of life for a community and the potential for tourism and other commercial activities; and
- aesthetics, which are difficult to measure. Devastation following a severe bushfire may take many decades to recover. Damage to coral during a tropical cyclone may also take decades to recover, and scars from landslides, explosions and fault-thrusting may never recover. The effect of the longer-lasting change to landscape can also delay many other aspects of recovery.

Conclusions

In general, Australia's building regulations have seriously addressed risk associated with predictable hazards. We can be certain of substantial damage if a major centre with aging infrastructure is located close to a hazard such as a tropical cyclone or earthquake. The damage will include damage to buildings, contents and infrastructure, including power, water, and communication and transportation links. All of these types of damage will cause serious disruption to normal community life and must be prepared for. As well, the normal support infrastructure including food and service distribution will be affected.

In planning recovery after such events, emergency managers must be aware that few functions in the infrastructure will be performing well, and there should be contingency plans that will allow work to be done in spite of reduced transportation and communication service availability.

Recovery managers should recognise the strong links between infrastructure response and human response to emergencies and disasters.

- People will be traumatised if they feel that their buildings have not protected them or if they have suffered loss as a result of the event.

- These feelings of loss and deprivation will be heightened if the normal community structures for support are not in place, and if the damage to infrastructure places further threats on their survival.
- Natural human reactions of self-preservation and concern for family well-being may hinder a rapid return to 'normal' of the whole community.
- Reconstruction of the infrastructure by external parties can alienate the community unless they are involved in the formulation of recovery strategies.

This section and Chapter 16 (Physical Recovery) were written by Dr. Geoff Boughton.

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CHAPTER 5

Psychological Effects

Introduction

Emergencies and disasters typically have a wide range of impacts on individuals and communities. These may include the impacts of evacuation, damage to community infrastructure, personal loss and financial hardship. There is a psychological component to each of these impacts which may require local attention as well as attention at the management level.

In all phases, the planning, management and delivery of emergency services have the potential for serious psychological consequences for individuals and affected communities as a whole. Positive consequences can be enhanced and negative ones avoided, or at least alleviated, by managers being informed by specialist psychological consultancy of the psychological consequences of their decisions.

Indeed, it is critical that the psychological dimension informs understanding, planning, training, assessment, decision-making and service delivery components of emergency management. This should occur in an integrated way, from local to regional, state, national and international levels as required. In addition, psychological services may be utilised by managers to deal with secondary stresses within their own sub-systems.

Definition

For the purposes of this publication, the term 'psychological services' refers to those specialist psychological services that apply skills ranging from psychological first-aid to long-term clinical treatment provided by personnel trained to the level appropriate to the task.

Psychological Effects

Emergencies and disasters cause major environmental, societal and personal upheavals. Most disturbances are in the nature of strains and distress and are often called *stresses*. Situations which give rise to stresses may be called *crises* or *critical incidents*. Stresses may be curtailed or reversed by adaptive *stress responses*. Stress responses may be part of *survival and preservation strategies* such as fight, flight, rescue and attachment. When stress responses are insufficient or inappropriate, stresses may 'give' and irreversible disruptions of various magnitudes, called *traumas*, may develop. The event in which traumas develop is a *traumatic event,* and the situation in which this occurs is a *traumatic situation*. *Stressors* are particular agents in emergencies and disasters, which lead to stresses and traumas. Those that lead to traumas are called *traumatic stressors*. As these events are stressors, which, almost by definition, lead to trauma, they are often implied to be traumatic stressors.

Stresses and traumas have biological, psychological and social (actually integral biopsychosocial) ripple effects. Like ripples from a pebble in the pond, they radiate through the different dimensions of disasters.

Myths and Reality

Recovery workers of all types need to be aware of the potential impacts and likely reactions that may be experienced by individuals affected by emergencies or disasters. In particular, they need to be aware of the ways in which individuals may react to the event to ensure that services are delivered in the most supportive and effective ways possible.

The following table details a number of myths concerning individual and community reactions to an emergency or disaster. As can be seen from the second column, the reality is somewhat different to the myth.

Myth	Reality
1. *People panic.*	People behave quite rationally and responsibly except where there is a threat to life and no escape, no information or no leadership.
2. *People cannot look after themselves.*	People generally care for each other, helping those in need where possible.
3. *Too much information is bad.*	People respond appropriately to sound information from a reliable source. They may try to check it with those they consider credible before acting.
4. *Children are too young to be affected.*	After the immediate responses, children may hold back needs until after the crisis. Children often require special attention and counselling.
5. *If people don't 'crack up', they are not affected.*	Few people 'crack up' but everyone is affected and suffers stress in varying degrees.
6. *Communities never recover.*	Communities may undergo trauma and permanent change may result, but they can recover. This can be a positive development if improvement desired by the community is recognised and facilitated in the post-event period.
7. *Emergency workers are not affected.*	Emergency workers are also victims of disaster-related stress in varying degrees.

In addition to the realities outlined above, it should also be noted that disaster 'victims' are normal people, usually capable of functioning effectively, but who have been subjected to severe stress, and some of their reactions to the stress may show as emotional strain. This is usually transitory—it is to be expected and does not imply mental illness. Most often people affected need concrete help such as information about available services, how to get insurance, benefits or loans, assistance with completion of applications to government agencies, health care, babysitting, transportation, etc. Often the most important help for emotional distress may be simply listening, providing a ready ear, and indicating interest and concern.

For the most part, people perform quite capably considering the amount of stress endured. However, frustration may accumulate, especially as people encounter misinformation, red tape and bureaucratic tangles while seeking government help. Feelings of anger and helplessness may result.

People undergoing great stress and pressure often tend to feel isolated and alone. Their ability to cope may be limited. An interest in their concerns helps restore their sense of identity and forestalls much more severe subsequent emotional distress. Where workers expect healthy responses, pathological responses are much less likely to occur.

Many people find it difficult to accept assistance from beyond their normal networks and may reject help because of a sense of pride and altruism, believing that there are people with greater need in the community. Consequently, tact and sensitivity are required in bringing assistance into the community.

Common Experiences and Feelings

The effects of emergencies and disasters are very real. Strong feelings may arise when the experience is talked about. Increased worry may interfere with day-to-day living and the experience may leave people shaken and worried about the future. 'Getting back to normal' can be difficult after an experience of this kind.

Everyone's reactions will not be the same; however, detailed below are some of the common feelings.

SHOCK	- disbelief at what has happened - numbness—the event may seem unreal, like a dream - no understanding of what has happened
FEARS	- of damage to self, or death - of a similar event happening again - awareness of personal vulnerability - panicky feelings - other apparently unrelated fears
ANGER	- at 'who caused it' or 'allowed it to happen' - outrage at what has happened - at the injustice and senselessness of it all - generalised anger and irritability - and 'why me!'
HELPLESSNESS	- crises show us how powerless we are at times, as well as how strong
SADNESS	- about human destruction and losses of every kind - for loss of the belief that our world is safe and predictable
SHAME	- for having been exposed as helpless, emotional and needing others - for not having reacted as one would have wished
GUILT	- that some have not lost as much as others

Effects on Behaviour

The effects of disaster on behaviour can be expressed in many ways.

TENSION	- more easily startled, general nervousness—physical or mental
SLEEP DISTURBANCES	- unable to sleep, thoughts that keep the person awake - reliving the event
DREAMS AND NIGHTMARES	- of the event or other frightening events
MEMORIES AND FEELINGS	- interfere with concentration, daily life - flashbacks - attempts to shut them out which lead to deadening of feelings and thoughts
IRRITABILITY	- frequent swings in mood
DEPRESSION	- about the event, past events or loss of personal effects - guilt about how you behaved

SOCIAL WITHDRAWAL	-	a need to be alone
PHYSICAL SENSATIONS	-	tiredness, palpitations, tremors, breathing difficulties, headaches, tense muscles, aches and pains, loss of appetite, loss of sexual interest, nausea, diarrhoea or constipation and many other symptoms
DELAYED EFFECTS	-	any of these may occur after months or years of adjustment

These physical and emotional symptoms are normal. They develop in people facing stress, threat or loss, and are responses that help the person cope. They can be unpleasant and distressing.

Family and Social Relationships

New groups and friendships may be formed following a disaster. However, strains in relationships may also appear. As well as the good feelings of giving and receiving, there may be conflict, anger and jealousy. Individuals may feel that too little or the wrong things are offered, or that they are unable to give as much of themselves as expected by others. Changes may occur in the way families, friends and the community relate to and need each other.

Children's Reactions

These are some of the changes that can be seen in infants and children under stress:

- sleep problems, nightmares;
- changes of dressing, eating and toilet habits;
- irritability, uncooperative, listless, bored;
- clinging to family or familiar things, needing objects for security;
- unable to cope with change or ordinary problems;
- reverting to habits of behaviour previously outgrown;
- changes in relationships with parents, either more demanding, possessive or becoming withdrawn, uncommunicative, rejecting;
- relationships with brothers, sisters and peers become more difficult with conflict, competition, aggression or withdrawal;
- pre-occupation with the trauma, wanting to talk about it, playing it out, wanting to see where it happened;
- excessive concern for others, holding back their needs to protect adults;
- reduced school performance, concentration or ability to play constructively;
- over-active behaviour, restlessness, dissatisfaction;
- small ailments or injuries used to get comfort and security;
- transitions such as from preschool to school may be more difficult; and
- exaggerated reactions to small crises may express their distress over the incident which they don't yet understand.

Immediate, Medium and Long-term Effects

Immediate Effects

Some reactions may occur immediately after the crisis has passed and continue for some time, including the following.

- Spouses/parents may feel fear about their partner's/child's safety while away from home.
- Children may develop nightmares, fears or think a fresh crisis will occur to them or the family member involved.
- Family members may be angry because of the fear and distress they were put through—these feelings may be directed at the involved member, at each other or at people outside the family.

- Family members may lose trust and confidence in themselves and other people. The world may no longer feel safe, their own welfare may seem uncertain and everything may seem difficult to manage.
- Children may express their insecurity by naughtiness, bed-wetting, changes in eating and sleeping habits, grizzling or by reverting to behaviour they have previously outgrown.
- Emotional turbulence, anger, guilt, upset, sadness and unpredictable or unreasonable reactions may occur in any family member.

Medium-term Effects

Some families cope well with the crisis and immediate aftermath. Later changes, including those below, may not be obviously related to the crisis. It may be some weeks or months before the effects are felt.

- Routine and work patterns, ambition or motivation in the affected member may change—work efficiency and concentration may be reduced.
- Spouses/parents may be short-tempered, irritable or intolerant, leading to friction in relationships.
- Young children can be clingy, attention-seeking or disobedient.
- Teenagers may become more rebellious or demanding.
- Child or adult family members may be overly concerned to help, try not to do anything wrong, and postpone their own needs to support the affected member.
- Family members' feelings for each other may change by becoming more detached, uninvolved or preoccupied with personal problems.
- Spouses may experience changes in their sexual relationship.
- Children's and teenagers' school performance and concentration may be lowered and they may lose former interests.
- Family members may lose interest in leisure, recreation or sport.
- Teenagers may turn outside the family for emotional support.
- Immediate responses may persist or appear for the first time.

Long-term Effects

Sometimes effects, for example those below, become evident months or even years after the event.

- The event may come back for family members in another crisis, although it was dealt with at the time.
- Family members, including children, need to go over the events again when they grow into new stages of maturity and understanding.
- People may find future crises harder to handle, particularly when similar feelings are aroused, even if for different reasons.
- Family members may cover up or cope with difficult feelings until all the fuss is over and things have returned to normal.
- Any immediate or medium-term effect may occur as delayed reactions, or become habits.
- Problems often appear in the form of everyday frustration and, by retracing the way they developed, the connection to the crisis becomes clear. It is wise to assume that a major change or problem in family members in the next few years has some relationship to the crisis.

These problems are all normal reactions to an abnormal event that has touched the lives of the whole family. It is important not to blame others for their behaviour. It is part of a changed pattern of family life arising from the crisis. Try to understand how members affect each other.

Adjustment

The following checklist provides affected people with a number of suggestions for coping with the experience.

ACCEPTANCE

Recognise your own reaction and acknowledge that you have been through a highly stressful experience. Excessive denial or lack of acceptance of your feelings may delay the recovery process.

SUPPORT

Seek out other people's physical and emotional support. Talk about your feelings to other people who will understand. Sharing with others who have had a similar experience helps.

GOING OVER THE EVENTS

As you allow the memories of the event more into your mind, there is a need to think about it and to talk about it. Facing the reality bit by bit, rather than avoiding reminders of it, will help you come to terms with what has happened.

EXPRESSING FEELINGS

It is important not to bottle-up feelings but to express them. Talking with others about our experiences and feelings is a natural healing method and helps us to accept what has happened.

TAKING CARE OF YOURSELF

During a period of stress, we are more prone to accidents and physical illness. It is important that people look after themselves by:

- driving more carefully;
- having sufficient sleep;
- maintaining a good diet; and
- taking opportunities for relaxation.

The Positive Side

After an emergency or disaster people can become wiser and stronger. At a community level, bonds between people can be strengthened by sharing an intense experience together. The experience of this event may help coping with the everyday stresses of life. It can also be a turning point where people re-evaluate the value of life and appreciate the little things often overlooked. They should be encouraged to identify the positive aspects for themselves and for those who are close to them.

CHAPTER 6

Economic Effects

Introduction

The economic effects of emergencies and disasters are mostly seen as physical damage to infrastructure and stock. More often than not, loss of income through loss of trading activity and the time taken to re-establish such activity, particularly for agricultural industries, are overlooked.

The consequences of extended periods of downtime in trading or production can result in bankruptcy, forced sale, business closure, loss of experienced workers, a depleted customer base and population shrinkage. These consequences are exacerbated by community losses resulting in a reduction in disposable income. The flow-on through the affected community has been likened to the domino effect.

The range of economic effects and consequences on an affected community is relative to the specific nature of the event and the economic demographics of the affected community.

Economic Consequences

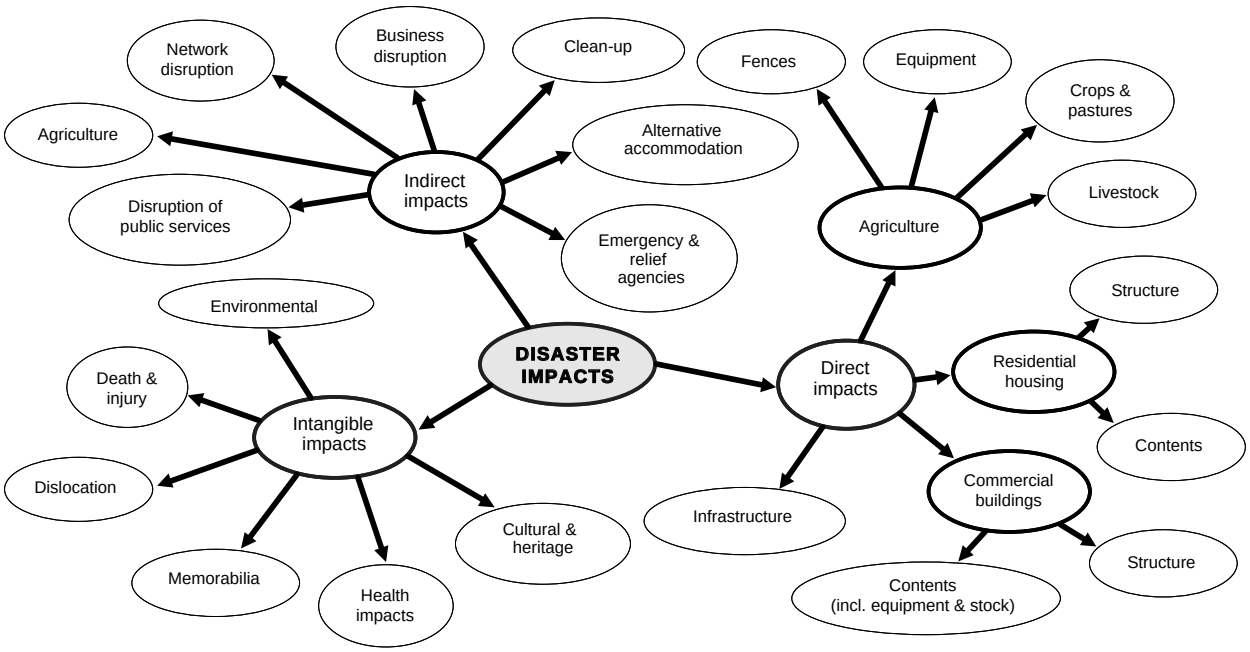
The economic effects of emergencies and disasters can be devastating and widespread. When disasters strike, houses, businesses and community infrastructure get damaged or destroyed and people's livelihoods are temporarily and sometimes permanently disrupted. Physical damage is the most visible economic impact. However, the less visible impacts such as lost income, through being unable to trade, are just as significant and the consequences often last longer than the physical damage (for example, bankruptcy and business closures). The flow-on effects through a community can be pervasive.

The range of economic effects and consequences for an affected community varies greatly and depends on both the nature of the event and the economic health of the community. It is also important to recognise that communities are diverse. In some cases, affected communities recover and prosper; in others, the adverse economic impact has a domino effect that spreads throughout the community.

What makes some communities recover and prosper and others decline in the aftermath of a disaster? What are key characteristics of disaster-resistant communities? These are important questions and are critical to understanding the economic recovery process. The principles and strategies identified later in this chapter provide a starting point for considering these questions.

The economic consequences of disasters can be classified in a variety of ways. No single framework will cover and prescribe every possible impact a disaster might have. Each event has unique characteristics and, consequently, in any attempt to classify these impacts there will always be impacts that do not fit neatly within the classification. Nevertheless, a classification framework is a useful guide or tool we can use to tackle these issues.

Almost all impacts have an economic dimension, even if this economic effect cannot be measured. Economic impacts are typically divided into two categories: tangible (those impacts to which we can assign a dollar value) and intangible (impacts which are not easily expressed in monetary terms). These impacts are then further subdivided into direct and indirect impacts. Direct impacts are those that result from the physical destruction or damage to buildings, infrastructure, vehicles and crops etc. Indirect impacts are due to the consequences of the damage or destruction. The following diagram illustrates the impacts of disasters using three main categories—direct, indirect and intangible.



The economic impact of a disaster

Source: Adapted from Bureau of Transport Economics 2001, Economic Costs of Natural Disasters in Australia, Report (BTE Report 103)

An alternative approach is to examine the impacts of disasters in terms of who or what is affected. Three groupings are common:

- public infrastructure and community facilities;
- business enterprises (commercial, industrial, retail, service, agricultural etc.); and
- residents and households.

A brief discussion of the direct, indirect and intangible impacts on each of these three groups follows.

Direct Economic Impacts

Business Enterprises

Business enterprises include commercial, industrial, retail, service and agricultural business types. The economic impact of disasters on agricultural enterprises is often treated separately from other business types. Essentially, however, the impact on businesses can be viewed as falling into three main areas.

- Structural damage to buildings such as shops, factories, plants, sheds, barns, warehouses, hotels etc. This includes damage to foundations, walls, floors, roofs, doors, in-built furniture, windows etc.
- Contents damage to fixtures and fittings (e.g. carpets), furniture, office equipment, farm equipment, records, product stock (finished manufactured products, works in progress and input materials), crops, pastures, livestock etc.
- External damage, for example to motor vehicles and fences.

Residents and Households

The residential sector includes houses, flats, unit, townhouses and so on. The break-up of direct damage into structural (e.g. roofs, walls etc.), contents (e.g. furniture, floor coverings etc.) and external (e.g. swimming pools, gardens etc.) is equally useful for this category.

Public Infrastructure and Community Facilities

Lifelines (such as water and sanitation systems, electricity, gas, telecommunications and transport) are vulnerable to all types of disasters. Direct damage to lifeline infrastructure includes the immediate physical damage (e.g. roads cracked or washed away, destroyed electrical transformers etc.) and the damage that may take some time before becoming visible (e.g. accelerated road deterioration due to the effect of water intrusion under road pavements).

Public buildings include schools, childcare centres, kindergartens, hospitals, nursing homes, neighbourhood centres, churches, entertainment/art/cultural centres, museums, clubs and so on. Direct damage to public buildings can also be thought of using the break-up into structural (e.g. roofs, walls etc.), contents (e.g. furniture, floor coverings and specialist items like sound systems and paintings etc.) and external (e.g. playground equipment, swimming pools etc.) damage.

Indirect Economic Impacts

Indirect impacts are those that are incurred as a consequence of the event, but are not due to the direct impact. Many indirect impacts are common to the household, business and public/community sectors (for example, disruption and clean-up).

Disruption Effects

The disruption to households, businesses and the community caused by disasters is pervasive. The economic impact of disruption and its consequences for community recovery is often overlooked, as economic recovery can tend to focus on the highly visible direct physical damage. The following categories list the common forms of disruption relevant to each area.

Sector/Area of impact	Disruption examples
Business	Lost or deferred production (e.g. manufacturing, agriculture, services etc.)
	Lost or deferred income/trade/sales/value added (e.g. tourism operators, retail traders etc.)
	Increased costs (e.g. freight, inputs, agistment)
Public services and networks	Transport (traffic delays, extra operating costs etc.)
	Loss of computer-controlled systems
	Loss of other lifelines (e.g. electricity)
	Government services (e.g. education)
Households	Additional costs (e.g. alternative accommodation and transport, heating, drying-out costs, medical costs etc.)

Natural disasters can cause serious disruption to affected businesses. Businesses may not be able to operate during the event, and for some time afterwards, while the premises are being cleaned and equipment repaired. Business lost during this period can have devastating financial consequences and, in some cases, businesses may not recover at all.

Loss of farm income due to a natural disaster can affect the economies of country towns. For example, the Australian Bureau of Agriculture and Resource Economics (ABARE 2000) estimates that farm expenditure represents at least a third of the economies of towns with less than 1000 people. Disasters that reduce farm expenditure can therefore have a major effect on the economies of small towns.

Clean-up

Cleaning up after a disaster is another obvious area of indirect impact. The impact for businesses, households and for public and community infrastructure is essentially the time it takes and the costs of cleaning materials.

Clean-up activities typically include removal of mud and debris, disassembly and cleaning of machinery and equipment, removal of destroyed household and business contents items and so on.

Response Costs

The time and effort of emergency services and volunteers in responding to disasters are other forms of indirect impact. Costs typically include those associated with dealing with the disaster agent, rescue, evacuation and other immediate relief measures.

Intangible Economic Impacts

Intangible impacts are often described as a 'catch all' that includes all those costs that are very difficult to estimate, for which there is no agreed method of estimation and for which there is no market to provide a benchmark.

Examples of intangible impacts are listed below for each of the three main areas.

Sector/Area of impact	Intangible impact examples
Business	Loss of confidence
	Loss of future contracts
	Loss of experienced staff
Public/Community	Health impacts (deferral of procedures, reduced quality of care etc.)
	Death and injury
	Loss of items of cultural significance
	Environmental impacts
	Heritage losses
	Lack of access to education, health, defence, art galleries and museums etc.
Residents and households	Loss of personal memorabilia
	Inconvenience and disruption, especially to schooling and social life
	Stress-induced ill-health and mortality
	Pets
	Quality of life
	Dislocation

Evidence suggests that the size of intangible costs is substantial and, although most cannot be quantified, in many cases they do still have an economic impact that should not be ignored.

CHAPTER 7

The Recovery Environment

The environment in which the recovery of communities is conducted is most usually one of physical damage, psychological need and financial loss, as well as the disruption caused by the response and rebuilding processes.

While these effects have been dealt with in the preceding chapters, there are many other factors that affect the recovery environment. The prevailing environment is one of intense media activity, visits by very important persons (VIPs), claims on insurance policies, applications for financial assistance and the needs, desires and demands of the affected community and, in particular, special needs groups.

This chapter briefly addresses each of these factors to depict the environment in which recovery management and activities are conducted.

Media

During emergencies and disasters the press, radio and television have a legitimate interest in obtaining prompt and accurate information. If media access to accurate information is unduly restricted, rumour and speculation may be substituted for fact. Consequently, there is nothing to be gained by attempting to restrict media access. The media are also a vital link between recovery agencies and the public, and provide an effective means of disseminating information. It is recommended that regular and scheduled media briefings be negotiated to suit the publishing and broadcasting timetables of the media.

Due to the fact that the recovery process will generally involve a range of different organisations, there is a need for coordination of information to the media to avoid confusion or conflict. The most effective means of dealing with this issue is through the nomination of a media liaison officer to represent the overall recovery process.

Visiting VIPs

In addition to the level of media interest, there is also likely to be a number of visits to the affected area and a high level of interest in the recovery process from VIPs from government and a range of other agencies.

There are a number of issues that need to be considered by the recovery manager involved with, or responsible for hosting, such visits.

- Effective briefings should be provided. These should include accurate and up-to-date information about estimated losses, assistance programs and financial assistance packages. This will ensure that any information relayed to the affected community or the media is accurate, reducing the risk of falsely raising expectations regarding such things as assistance measures, and reducing the risk of embarrassment. Some pre-visit briefing is also desirable to ensure that the visitor is well informed of the necessary information prior to arrival.
- Briefing of any visitors should also include details about the current state of the community, including the various emotions they may be experiencing as a result of the event, as well as identification of any existing sensitivities.
- Visitors should have a clear understanding of emergency management arrangements and protocols.

- Visitors should also be clearly briefed on the potential impact of their visit and their subsequent role in the recovery process. In particular, it should be emphasised that any information provided must be accurate, as the effects of inaccurate or ill-founded information on an affected community may reinforce the impact of the event.
- In the case of a disaster affecting more than one geographic area, care should be taken to ensure that communities are treated equitably and visits are arranged accordingly.

Insurance

Many people will have their insurance claims settled quickly; however, there will be a number who are under-insured, not covered for the particular loss, have let their policies lapse or are experiencing delays in settlement. It may be necessary for recovery workers to advocate with insurers on behalf of those not able to represent themselves effectively. In any case, these matters provide further disruptive effects.

Financial Assistance

Financial assistance payments, subsidies and concessional rate loans are provided in a range of circumstances to those affected under certain eligibility conditions. The financial assistance measures are jointly funded by the state/territory and Commonwealth Governments and administered by state/territory governments. The availability of financial assistance and other forms of relief may cause convergence at application centres and some confusion and disappointment regarding eligibility. Although most helpful to those in need, this is another element of disruption.

Special Needs Groups

There are a number of groups with special needs in any affected community, including indigenous populations, those with particular cultural or spiritual needs, non-English speaking people, as well as the aged and infirm. Each of these groups is likely to experience greater disruption than that of the general community.

CHAPTER 8

Vulnerability and Resilience

Introduction

Vulnerability assessment is now widely accepted as an integral part of risk assessment and as a necessary part of the planning for effective emergency management.

The acceptance of vulnerability as a key concept in risk management and emergency management reflects a clear movement forward from the traditional (and, in some cases, still dominant) approach to emergency management that focused on the hazard agent to the neglect of the people and communities that were harmed or damaged by the event.

Vulnerability is a common word. When used in everyday speech it evokes a common understanding. However, when used in the context of emergency management, 'vulnerability' takes on a contextual meaning that requires definition.

With the introduction of a risk management approach to emergency management, the need to identify 'vulnerability' and its opposite, 'resilience', has been given added impetus.

There are many definitions of vulnerability. Here are three.

- The degree of susceptibility and resilience of the individual, family and community and environment to hazards.
- Vulnerability is a measure of the extent to which a potential event is likely to deplete or damage available resources such that the reestablishment of usual living conditions cannot be achieved within a reasonable period. In this sense, vulnerability can be measured as a ratio of damaged to undamaged resources (resources include physical goods and assets, services and utilities, sources of income, personal coping strategies, and social and community networks).
- Vulnerability is a measure of the ability to recover from the damage and resilience is a measure of the capacity to resist damage.

Vulnerability, then, in its simplest sense refers to a potential for loss, some measure of what a person or community has to lose if they are affected by an emergency or disaster, and the likelihood of them being actually affected. In this sense, vulnerability, or how vulnerable a person is, is closely linked to the notion of risk. Other associated notions are resilience and capacity (in some ways, the other side of the coin to vulnerability). These refer to the skills, knowledge and resources that a person or group has to prevent or recover from a disaster.

Vulnerability Assessment

Until recently, vulnerability has been taken to be an attribute inherent to certain groups of people and long lists were prepared to assist in definition. Typical vulnerable groups were the aged, the young, the poor, the disadvantaged, the socially marginalised and migrants for whom English was not their first language.

However, it is clear that there is also the issue of social and economic context to consider. A person is not necessarily vulnerable because of age; in fact, the 1998 gas crisis in Victoria demonstrated that the older person was much more able and accepting of the lack of heating, hot water and cooking facilities than the young. In dismissive terms, the comment 'why, in my day when I was young' was heard frequently from the aged. Their experiences in a series of events such as wars, the Depression, bushfires, floods and droughts, which demanded great self-reliant

resources, gave them the strength to not only cope with a crisis such as a gas shortage but to also be dismissive of the notion that there was a crisis.

Recent studies have shown in contradiction to the 'types' theory that all types of people may suffer some sort of loss and also that all types of people, groups and communities may, collectively, be more or less vulnerable and more and less resilient.

It is also clear that all social elements, systems (such as economies), production systems and processes (such as agriculture), the environment, infrastructure and even intangible systems such as norms, values and beliefs can be exposed to risks and may be vulnerable, so it is not only people who are vulnerable.

The links and interrelations between these social elements and systems can be complex. All can be affected and, therefore, may be vulnerable. All can resist or can be developed to resist impacts and can, therefore, be more or less resilient. All can be investigated and dealt with individually. Yet it is necessary to remember that all may have an affect on each other.

It is clear, therefore, that when considering vulnerability (and resilience), three questions are clearly specified.

- Which element or elements are being considered?
- Which hazards or set of risks are they being set against?
- What is the social and historical context within which they are set?

Vulnerability is better viewed and understood as process rather than state, for a state may change over time. That is, any given individual, family, group or community may be vulnerable to a range of different hazards and types of loss and this vulnerability may change over time, as does their experiences of vulnerability and their capacity to cope.

For example, the 2003 fires in the north-east of Victoria and in East Gippsland, in which whole communities and towns were threatened over a long period of time (40 days), are the same groups and towns that in 1997 were threatened with or experienced flooding. The flooding caused some damage but didn't destroy homes, sheds etc. (but did impact on the economy of the farmers): the fires did both.

So, managers and other staff who operate in a pragmatic world and who are confronted with the expectations of their masters to balance needs against budget and political opportunism against community expectations will have to factor all these different, changing aspects of vulnerability into their recovery planning. They will also want to ensure that agency staff who carry out the initial needs analysis have a clear understanding that these primary assessment visits are to people who have experienced severe emotional shock; in their assessment of damage and loss they must not omit consideration of the emotional states of the people whom they visit.

Lists of vulnerable people and groups, however valuable they may be, are only guides at best. Vulnerability is not necessarily a condition or attribute of age, poverty, lack of education, health or an ability to speak the predominant language such as English. It is a consequence or attribute of a life or lifestyle, reflecting whether the people affected can prevent and resist the potential damage of the experience of fire, flood, shooting or chemical spill and whether, if damage does occur, they can recover successfully.

Clearly, age, frailty, poverty, language or other factors may suggest a level of vulnerability, but in themselves will not definitively show whether a person or family or group is vulnerable. An aged person with a strong family and social network may be less vulnerable than, say, young parents with a poor or limited family and social network.

However, we can identify certain aspects and facets of vulnerability and examining these may throw some light on the issue of vulnerability. These are detailed below.

Aspects and Facets of Vulnerability

The level of social aggregation that is assessed for vulnerability.

For example individual, family, group, agency, community, ethnicity, social cohesion.

The type of loss, damage or consequence, potentially or actually suffered.

For example death and injury, damage to home or destruction of possessions (e.g. photographs, trauma, damage to income-earning assets, damage to infrastructure, damage to community assets).

Change of vulnerable status over time.

For example prior to the event, immediately after the event, an extended period of time after the event.

Characteristics of the hazard agent.

For example rapid onset, level of predictability, frequency, destructiveness.

Capacity to recover (resilience).

For example access to important resources (e.g. finance), capacity and ability to manage one's own affairs, access to information, communication.

The capacity, interests and responsibilities of the people who were making the assessments of vulnerability.

For example managers, politicians, members of the affected communities, local mayors and councillors, local individuals and community leaders.

A clear understanding of the importance of each of these categories is of vital importance for a positive and professional response to vulnerability, resilience and recovery.

Towards a Fuller Understanding

Vulnerability and resilience are, respectively, indicators of loss potential and capacity to recover from loss and are, as such, still directly linked to a hazard agent. There is a need to move beyond this fairly narrow approach and give more attention to the adaptive capacities of communities. What capacity do they have, for example, to learn and invent and implement long-term positive responses to risk? In the end, recovery agents should be concerned not only in reducing vulnerability and increasing resilience, but also in viewing these measures as steps to producing sustainable levels of health, well-being and livelihood; in other words, community development.

The Place of the Community

A vital part of the development in understanding and acceptance of the concepts of risk, vulnerability and resilience is an increasing acknowledgment of the right of the community to be involved in the emergency management process and of the contribution that the community can make to emergency management thinking and practice. The direct experience of many people working in the field of emergency management is that community engagement is an indispensable tool in effective management and policy development.

The Benefits of an Understanding of Vulnerability and Resilience in Recovery Planning

Vulnerability is one of the indicators of the needs that a person or a group may have prior to, during and after an emergency or disaster. Clearly, identifying and understanding these needs is essential if recovery programs are to be developed to meet the specific needs of an affected community.

While preparedness, action guidelines and generic packages of assistance measures have a value, they must be seen and used only as guidelines. Each community is different, so each community will have needs that are specific in type or scale to itself. For a better understanding

of these needs, and for an appropriate response in times of disasters or emergencies, a careful analysis of the affected community is necessary.

Local government information on vulnerable groups and information from community networks, churches and other faiths, voluntary organisations and census data will all prove valuable. However, the quality and immediacy of the response to the emergency will be dependent on the resources previously made available to staff responsible for response and recovery planning. Time allocation to do the necessary work is vital, as is an acceptance by those in authority that day-to-day work in emergency management planning is never an add-on task to be given attention only when the need arises.

Summary

Vulnerability and Resilience

- Vulnerability and resilience must be viewed and assessed in a social context.
- Vulnerability and resilience need to be applied to processes and systems as well as categories of people.
- The capacity to recover, resilience, includes individual ability, previous experiences, and financial resources.
- The community has a right to be involved in the recovery planning process.
- Each community is individual and each community and each group of people within a community faces a specific set of risks. History, geography, demography, economics and access to resources make every setting and experience unique.
- Risk perception is a social construction and what constitutes risk will differ between agencies, people and groups.
- Risk management has to be seen as a part of community recovery, and community recovery as an opportunity for community building.
- Agencies and government departments need to further develop ongoing staff training and programs that build upon past experiences.
- All government departmental staff involved in community recovery, and who may be the first on the scene after an event, require training in personal support skills if the well-being of the person affected is to be addressed.

Community Capacity Building and Principles of Assessment and Planning

Many of these principles already exist but are worth repeating as a checklist and indicative framework that can be applied to the specific circumstances of each community building program.

- **Good governance**
  This addresses the extent to which programs and the policies they reflect conform to accepted community standards and values.
- **Inclusiveness**
  Across many social dimensions, gender, ethnicity, religion, age, occupation and wealth. Programs that are not inclusive often mirror existing conditions of wealth and power and can be counter-productive.
- **Transparency**
  Communities not only have a right to be involved in the planning process, the process itself needs to be fully revealed and clearly understood, especially programs that cover many and different social categories.
- **Agreed and defined priorities**
  Competing interests and expectations will always exist at local levels and can be (and often are) the source of hostility and divisiveness. As far as possible, priorities need to be defined, agreed to and continuously refined and updated between government agencies and community representatives if cooperation is to be achieved.

- **Adequate resourcing support**
  Although seemingly obvious, often the fact that resourcing support is taken for granted results in it being assumed that the resources will be both adequate and continue for the duration of the program. Financial resources need to be sufficient for the program to be achieved, and so that the program also can be self-sustaining. Resources include more than money; they include adequate and skilled staff, local knowledge, and the standing and acceptance of community representatives, agencies and local contributors. Enthusiasm, though important, is no substitute for skill.
- **Integrated development**
  Any capacity-building program that aims to deal with risks, vulnerabilities and emergency management capacity needs to deal in an integrated way with the following four elements:
  - *social*, the links between people, groups and communities whether on a formal, personal or regulated basis;
  - *livelihoods*, the economic factors that determine well-being, wealth distribution, lack of access and exploitation;
  - *environmental*, the relations between human society and activity and the natural world; and
  - *cultural*, the values, norms, beliefs, faith systems, diets, behaviours, clothing and aspirations of the variety of people which represents a multi-cultural nation such as Australia.
- **Self-sustaining and continuous assessment**
  Programs, activities and the changes that they achieve need to be sustainable as well as self-sustaining so that they have a capacity to endure over a lengthy period of time. They also need to be flexible enough to adjust to the external variables that are always present. For this reason, they must also be continuously assessed and critically evaluated to ensure that the program continues to aim at the agreed outcomes and objectives or, if they have deviated, that this reflects different, new and more appropriate aims and objectives.
- **Effectiveness**
  Any program needs to be effective in meeting its goals and cost-effective to enable the program to continue. Key attributes include:
  - *effectiveness*, the capacity-building program must achieve its aims—to fail to do so may further diminish the social capital of the affected community;
  - *efficiency*, the capacity-building program must use the minimum resources available to achieve its outcomes;
  - *cost-effectiveness*, the costs should be proportionate to benefits and, if possible, agreed to prior to the commencement of the program; and
  - *multi-lateral*, multi-lateral benefits should be maximised and should be opportunities to share resources, information and skills with other programs as long as the cost of the collaboration is not to the detriment of any program.

These principles, which may be used as a framework for assessing the effectiveness of capacity and community-building programs, can also be used to assess emergency management arrangements. This applies especially in the areas of mitigation where many programs focus on land-use planning, economic development, infrastructure development and maintenance, and which have applicability to a wide range of social and community priorities. These principles also apply to recovery activity, which hopefully will be linked to mitigation to reduce future risks; they will also be linked to development to take advantage of the resources that emergencies and disasters may attract and the opportunities they give the community and the government to think about future directions in which the community could move.

This chapter was written by Reverend Sydney Smale, Lth., BA, M..Soc. Sc.

As a Minister of the Uniting Church, Syd has worked in the area of recovery management for a number of years, including the role of Central Coordinator of the Victorian Council of Churches Disaster Recovery Visitation Program. He has researched and published numerous articles on vulnerability in the recovery context and co-lectured at R.M.I.T University Melbourne in the subjects;

- *Disaster Recovery and Risk Management*
- *Community Recovery, From Vulnerability to Resilience.*

This section has addressed the effects of emergencies and disaster and the environment in which recovery is conducted—from the disruption caused by the response and rebuilding processes to the psychological and economic effects, as well as a range of other factors impacting on the environment. It is this environment that needs to be borne in mind when considering the planning and management activities in the following section.

SECTION C

Recovery Planning and Management

CHAPTER 9

The Emergency Risk Management Context

This section addresses both planning and management processes involved in the recovery of communities affected by emergencies and disasters. It aims to provide information for recovery managers at a range of levels in both the government and non-government sectors. It is also intended to be useful to other managers and workers, particularly recovery workers, as well as to members of affected communities who become involved in management of the recovery of their communities.

Methodology

The Australian/New Zealand Standard for Risk Management (AS/NZS 4360: 1999) has been adapted for use by the emergency management sector and has become known as Emergency Risk Management. These processes are used in emergency management Australia-wide. The advantage of utilising the Emergency Risk Management process is that it provides a uniform approach to disaster planning and management, while maintaining consistency with regular management practices. The Emergency Risk Management process is an important tool in identifying options for prevention, preparedness, response and recovery.

The following is a brief outline of the Emergency Risk Management process.

Establish the context

- Identify issues and establish risk management framework
- Develop risk evaluation criteria

Identify risks

- Identify and describe hazards, community and environment
- Scope and analyse vulnerability
- Establish risks

Analyse risks

- Determine likelihood
- Determine consequence
- Estimate level of risks

Evaluate risks

- Compare against criteria
- Set risk priorities

Treat risks

- Identify prevention, preparedness, response and recovery options
- Evaluate options
- Select options

Plan and implement treatment

Monitor and review

Detailed information on Emergency Risk Management is available on the EMA web site (http://www.ema.gov.au).

The aim of Emergency Risk Management is the mitigation of the consequences of emergency and disaster events. However, it is not possible to totally prevent disaster consequences in all circumstances in all events and it is therefore necessary to develop comprehensive recovery plans.

CHAPTER 10

Recovery Planning

Planning for the recovery of affected communities requires the development of recovery plans. There is a need for such plans at each operational level—local, regional and state/territory.

Before embarking on the development of recovery plans, it is important to keep in mind the purpose for which they are intended.

Purpose

Recovery aims to assist the community towards management of its own recovery and to hasten the process.

When developing recovery plans, it is also important to appreciate that they do not stand alone but, rather, are one in a set of plans in the continuum from prevention to preparedness and response to recovery. They are part of the Emergency Risk Management process and interface with other emergency management plans as well as recovery plans at other levels.

It is important for recovery plans to be incorporated into the overall local, regional or state/territory management arrangements. It is also important for recovery plans to be developed within the confines of the existing legislation or practice norms.

Planning Process

Having considered the purpose of the recovery plan, the interface with other emergency management plans, the need for incorporation into the appropriate level, and the legislative or other parameters, there is need to consider the planning process.

The recovery planning process is not dissimilar to that of general management; however, the following checklist will assist in the development of recovery plans.

Recovery plans should:

- set out to develop and formalise arrangements for the effective management of the recovery process;
- facilitate the recovery of affected individuals, communities and infrastructure as quickly and practicably as possible;
- describe the organisational networks and structures appropriate to recovery from a range of different types and scales of events;
- involve all agencies with a role to play in the recovery process, including response agencies;
- only be detailed for specific functions, such as contact and resource listings;
- be developed by all agencies responsible for providing specific recovery services;
- be based on normal management strategies (agency recovery roles should preferably require only minor deviations from their normal functions);
- be reviewed on a regular basis;
- cater for a wide range and scale of events;
- ensure community participation in the recovery process;
- identify responsibilities and tasks of key agencies;
- set out appropriate resourcing arrangements;

- outline recovery management structures and management processes; and
- be as simple as possible.

The following is an outline of the process generally followed in developing recovery plans.

Authority

Obtain the appropriate authority for development (or revision) of the plan.

Scope

Obtain detail of the scope to be covered by the plan. This is particularly important to ensure that the plan covers all required functions.

Stakeholders

Detail the stakeholders. These should include those stakeholders from other emergency management functions, as well as recovery agency personnel including those from other operational levels.

Aim

Define the aim of the plan. Generally the broad aim of any recovery plan is to facilitate the recovery of affected individuals, communities and infrastructure as quickly and practicably as possible (identifying the scope of the plan will assist greatly in developing the detailed aim of a particular plan).

Consultation/Communication

Consultation with stakeholders and communication with the community is essential to increase understanding, participation and ownership.

Plan development

A recovery plan should, as a minimum, include:

- activation mechanisms;
- responsibilities and tasks;
- recovery services;
- resourcing arrangements; and
- management structures and processes.

Approval/Endorsement

It is essential for the plan to be approved or endorsed by the emergency management authority and incorporated into the appropriate level of emergency management plans.

Publication/Circulation

The plan should be publicly available and circulated within the community to gain awareness, acceptance and participation.

Review

The plan should be reviewed regularly employing a similar process.

Plan Development Format

A format for the development of the content of recovery plans is set out below.

Authority

The plan should advise authority and approval/endorsement details.

Scope

The scope of the plan's functions needs to be advised.

Functions

The plan's functions need to be detailed and include detailed aims.

Definitions

The plan needs to define recovery-specific terms and define others in accordance with emergency management usage.

Interface with other plans

The interface with other plans as well as representation on, and liaison arrangements with, other emergency management committees needs to be detailed.

Member agencies

Member agencies and their roles need to be specified as well as those of agencies emerging at the time of emergency or disaster. Inter-agency coordination arrangements need to be clear.

Activation procedures

Detailed activation procedures, particularly by whom and in what circumstances, as well as subsequent action, need to be specified.

Services

The services to be delivered, and by which agency or agencies, need to be clear.

Frequency

The frequency of, and arrangements to call, meetings needs to be included.

Review/Exercises

Specific mention of frequency helps maintain conduct of the essential functions of review and exercises.

Contact list

An up-to-date contact list is most important to any emergency or disaster plan, as it is not able to function if members and resources are not able to be activated. Because of the constant need for amendment, as well as privacy reasons, the contact list is most often an attachment to the plan.

Ongoing Planning

Planning does not finish with the development of the plan. It is essential for all committee meetings to address planning for activations and updating of the plan, as well as planning exercises and review.

The plan needs to be seen as an instrument for ongoing planning, rather than as an end in itself.

CHAPTER 11

Recovery Management

The objective of recovery management is to provide effective and efficient coordination and delivery of programs and services to assist and hasten the recovery of affected communities. Recovery management embraces the measures taken before, during and subsequent to any event.

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

Key Recovery Management Tasks

Each emergency or disaster has specific recovery management requirements dependent on the physical effects and the biopsychosocial characteristics of the community affected. However, the recovery management tasks involved will fall within four classifications:

- preparedness;
- needs assessment;
- resources management; and
- information management.

Preparedness

The recovery management tasks involved in preparedness refer to the planning tasks and development of recovery plans dealt with in the previous chapter, as well as those tasks necessary to maintain preparedness to activate those plans when required.

In the main, the tasks required to maintain preparedness for activation involve:

- liaison with local, regional and/or state emergency management authorities;
- liaison with recovery committees and agencies;
- maintenance of preparedness for activation of recovery agency personnel (both government and non-government);
- updating and maintaining recovery plans;
- exercising of recovery plans; and
- updating of contact lists.

Needs Assessment

A critical element in the management of an effective recovery program within any community is needs assessment. The specifics of the event indicate different needs related to the type, size and effects of the event. The demographics of the community also greatly affect needs, as does the availability of local resources and the psychological state within the community. Consequently, initial needs assessments look at effects, community demography, available resources and the pre-existing psychological state of the community.

Often, initial needs assessments are limited by the requirement to establish recovery services expeditiously and only give a general indicator of needs. However, they provide a reasonable

indicator of the quantum and mix of services required. In any case, the context in which recovery is undertaken is a rapidly and ever-changing environment, which requires the frequent and continuing assessment of community need.

The sources of data to determine the needs within a community are many and varied and, again, change over time. The most likely sources for gathering needs data include emergency service personnel, police, local government, ambulance, hospitals, doctors, social workers, mental health workers, psychologists, psychiatrists, recovery workers, welfare workers, recovery agencies, community agencies and, most importantly, affected persons and the local community.

Care needs to be taken to avoid over-servicing some groups to the detriment of others.

Resources Management

Resources management involves the management of all physical and human resources needed to deliver effective recovery services. Such resources include locations, equipment, vehicles, office supplies, records, finance, staff, agency personnel and volunteers.

Physical Resources

Adequate physical resources are essential for recovery workers to be able to perform the tasks required of them. Management of these resources involves their continuing availability and accountability for their purchase, hire, maintenance and return.

Two of the most important tasks in resources management are avoidance of wastage and record-keeping to ensure efficient cost recovery.

Human Resource Management

Recovery management is human-resource intensive over an extended period and workers are engaged in stressful duties in disrupted circumstances. It is therefore necessary that staff, agency personnel and volunteers are provided with high levels of care and support. The level of support must be extended to agency personnel and volunteers, not only directly employed staff. Care should also recognise, and be extended to, those personnel continuing to deliver agency services during the absence of their colleagues while delivering recovery services.

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

The following extract from the AEM *Guidelines for Psychological Service Practice* lists the issues likely to affect workers, as well as the support aimed at their well-being and effectiveness.

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

- Overcommitment (given the long term nature of services).
- Blurred boundaries (confusion of role differentiation, professional v friend).
- Personnel seeking help from clients.
- Emotional involvement.
- Professional/organisational well-being.
- Cost effectiveness of caring for staff.
- Obligation to maintain staff health/effectiveness.
- Staff support/welfare, including –
  - Provision of debriefing/peer supervision.
  - Monitoring.

- Secondary level support.
- Personal/professional needs.
- Mental health needs.
- Self monitoring and self referral must be acceptable and positively promoted within all agencies, and
- Awareness of biopsychosocial effects on workers.

A range of approaches may be used to address these issues and ensure the well-being of all personnel involved in the provision of psychological services. These include –

- Peer support.
- Defusing.
- Debriefing.
- Mentoring.
- Feedback/recommendations.
- Operational review/accountability.
- One on one counselling.
- Recognition.
- Rostering/staff management, and
- Establishment of sound operational policy, standards and procedures.

Information Management

Information management is a key function of the recovery manager. Much of the success of the recovery process is dependent upon how well information is managed.

Information management is not only concerned with disseminating information, but also with gathering information from authorities and emergency management agencies as well as from the affected community. Provision of information in recovery not only provides the affected community with information about the availability of recovery services and plans, but is also the basis for important social processes such as bonding between individuals, groups and communities. It engenders a sense of belonging and caring, and provides a sense of control and predictability of events.

The effective management of information following an emergency or disaster can be utilised to promote and hasten community recovery.

Recovery Information Management—Definition

Recovery information management develops timely, effective communication channels to gather, process and disseminate information relevant to the recovery of the affected community.

Information Management Principles

The principles of effective recovery information management rely heavily on the premise that an affected community has a right to all information relevant to its recovery. The capacity of the community to participate in its own recovery is directly dependent on communication of information. In this regard, it is essential that information is provided in an appropriate range of languages to ensure accessibility by people from non-English speaking backgrounds.

- Information is the right of an affected community.
- Information enhances the capacity of an affected community to manage its own recovery.
- Information should be timely, factual and disseminated through a range of communication channels. In the case of events affecting people from non-English speaking backgrounds, this includes provision of information through a range of ethnic media.
- Information should be repeated frequently in the early stages following an event.
- Information needs change during the course of the recovery.

- Information should aid recovery as well as inform.
- Information credibility is enhanced through delivery by a known, credible person or organisation.
- Information is the basis for effective decision-making.
- Information management involves gathering, processing and disseminating information.
- Information is needed by disaster workers, managers and authorities, as well as by the affected community.

Communication Management

The management task is to identify what needs to be communicated, to whom and when, and to develop information gathering, processing and dissemination channels. The information that needs to be communicated in the recovery process depends upon the characteristics of the event in terms of type, location, severity and effects on the community. To be specific about all possible items of information to be communicated is impractical and much of the information communicated is reactive to expressed needs. However, a list of representative information needs is included under the heading 'Practical Issues' at the end of this chapter.

Categories

It is, however, possible to detail the broad categories of information that need to be communicated in the recovery process, namely:

- what has happened in the community;
- what recovery is likely to involve;
- what plans are in place for the well-being of the community;
- what services and resources are available for recovery of the community; and
- information which will assist the community to effect recovery.

Information Needs

In considering information gathering, processing and dissemination channels, it is necessary to take account of who needs information and whose role it is to provide information. It is relatively easy to identify two broad groups that need information: (1) the affected community and (2) those working towards recovery of the community. The individuals, groups and organisations included in those groups are innumerable; however, special mention needs to be made of the information needs of elected representatives and the media.

The means of communicating information to the affected community, recovery workers, elected representatives and the media differ vastly. It also should be kept clearly in mind that all four groups are disseminators of information as well as receivers.

Community

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

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

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

Those working towards recovery of the community also have the need for current, accurate information about the environment in which they are working. These information needs exist across the range of recovery workers whether they are involved in clean-up, rehabilitation, medicine, environmental health, physical restoration or community recovery.

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

Elected Representatives

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

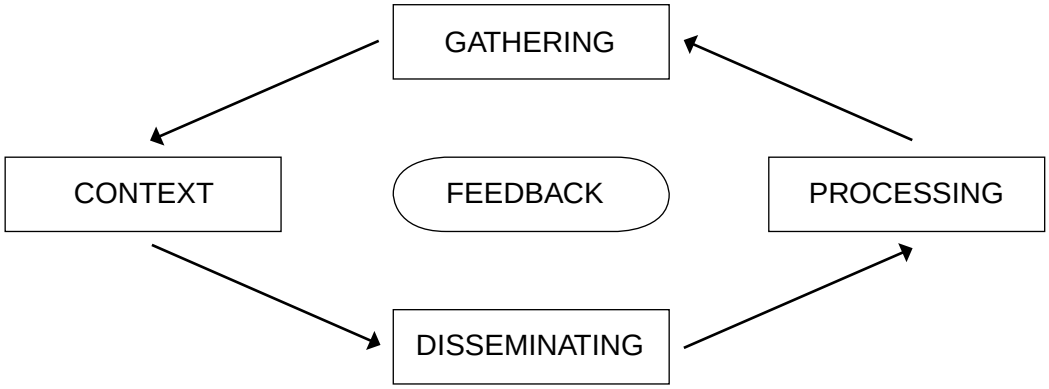
Media

News and spectacular events are the business of the media, so it must be expected that there will be considerable media interest in any emergency or disaster. It is important that the media be provided with full, accurate information in time to meet their deadlines. Reporters will meet those deadlines with whatever information they have at the time. If they have not been provided with full information, the gaps may give a distorted view of recovery efforts.

The media outlets, television, radio and print, are an excellent means of disseminating information to the affected community and the wider public. Consideration is given later in this chapter to the role of media liaison officers and the needs of the different types of media.

Communication Channels

There are five major channels to be considered. They are gathering of information; processing, evaluating and integrating information; disseminating the information; and feedback to the source so its relevance can be evaluated leading to further gathering. Finally, this takes place in an established and developed communication context. The information process is a circular one and can be represented in the diagram on the following page.



Each of these aspects is discussed below.

Gathering

The information required depends on the nature of the event and varies as time passes and the repercussions become manifest in the different areas of community life. It should be gathered from outside and within the community. Information that provides resources to people in terms of the availability of services and knowledge about how to cope with problems engendered by the event is probably gathered from outside the community. Information identifying community needs, day-to-day problems and the community's own services and resources needs to be gathered from within it. A network needs to be created which provides access to information from without and access to official and informal information from within. Since the information needs arising from the disaster are different to those that may have existed before, the community's current information systems need to be augmented and changed to serve the new purposes. One early task of recovery management is to establish a communication system to provide for input to and feedback from the community. This may mean convening existing networks and developing new ones to regularly report on their observations of the community needs.

Processing

Timing of information, the amount that can be absorbed, and the meaning it has within the existing recovery process need to be considered. Once information is obtained, it needs to be integrated with community culture, education levels, ethnic or other value systems, language, social traditions and local customs to ensure that the message delivered is the one intended to be received. Incoming information from the community needs to be analysed and interpreted for the requirements, which may not be expressed clearly or accurately. This processing occurs within the recovery management system and the network of local providers for planning, delivering services and obtaining resources from outside the community.

Community members may also need to process and integrate the information they receive before it can be of any use to them. They need to discuss and evaluate it, ask questions and make their own individual responses to it. This happens within family and informal social support networks, but these may not be able to fully perform these tasks and always risk distorting it with rumours and uninformed or emotive opinions. It is, then, important to establish opportunities for people to process important or disturbing information through other means. These may include community meetings, discussions with existing networks such as school, childcare, elderly citizens, rural and ethnic groups, talkback radio, newsletters, etc. People can then integrate their needs and understanding with what has been provided to them.

Dissemination

Once information has been processed, it needs to be conveyed along relevant and trustworthy communication systems so that it can be received by those who need it and can be accepted by them. To be accepted, it needs to be couched in the appropriate language and presented in an acceptable form. Consideration needs to be given about whether it should be written, verbal, mass media, pictorial, anecdotal or factual. Official recovery information should be seen to be given by trustworthy spokespersons. Risk information may need to be given by those with independent

expertise in the area. The systems that can be used are varied and may need to validate and support each other to ensure dissemination is successful. Media releases, interviews, public announcements, newsletters, meetings, information and drop-in centres, notice boards, visits and telephone contacts all have a role to play.

Feedback

Information is best conveyed as part of a two-way communication process. People receive and integrate information best if they can interact with it and provide feedback about it to the source. Feedback needs to be built-in as part of any communication system and information release. A wide range of systems may be employed to do this. They include community to recovery manager, recovery manager to community, and between the affected community and the wider community. Official or informal communication such as news coverage of the progress of the recovery process can all be harnessed in the service of the communication process.

Context

What is communicated is always more than the intended message. The timing, format, style and content all convey additional messages about attitudes, recognition of needs and other factors. The lack of a message or information, or the failure to inform that there is no information at a particular time, can be a message that itself carries an unintended meaning. Communication always occurs within a pre-existing context and this provides the framework for the interpretation of any information that is conveyed, or lack of information.

Release Authority and Credibility

The question of authority to release information is paramount, as is the credibility of the release. For instance, a release on meteorological matters that is not verified and attributed to experts in that field will not be credible, and if not authorised may result in restriction of the recovery manager's ability to disseminate information.

It is important that the recovery manager has a clear understanding of whose role it is to release what information and the timing of that release.

Often, media releases are the preserve of elected representatives and ministers, although, once released, the information can be disseminated in newsletters and the like. Also, emergency managers, whether they are police or emergency management organisation officers, may have an embargo on the release of information until its publication or broadcast.

In any case, it is imperative for the recovery manager to be aware of the information he or she is able to disseminate, the authority required and the expiration of any embargo.

Means of Communication

As has been stated, information must be timely, accurate, targeted and credible. Consideration must also be given to the fact that information carries implicit characteristics of emotional tone, attitude, values and priorities in each of the following means of communication. Where people from non-English speaking backgrounds are affected, the following means of communication should also be provided in the necessary range of languages and styles to meet the needs of those affected. This may include the use of translations, interpreters, ethnic media and representatives of ethnic communities.

Newsletters

Newsletters are an excellent means of providing a wide range of information to affected communities. Topics often range from eligibility conditions for financial assistance to how to restore flood-damaged furniture or photographs, and can carry messages of encouragement from civic and community leaders.

Newsletters are often used in the early days following an emergency or disaster when affected people often do not have access to other information media. They are seen as an informal, friendly and caring means of communication.

Leaflets or brochures serve much the same purpose but are usually specific to the one issue.

Another advantage of newsletters, leaflets and brochures is that they can be retained by affected people for future reference.

Radio

Radio newscasts, community service announcements and talk-back programs are particularly useful means of disseminating information in affected communities. Radio is very effective as announcements can usually be broadcast at short notice and talk-back radio is interactive. As well, radio broadcasts can be listened to while people are engaged in other activities.

Newspapers

Newspapers provide a hard-copy, retainable information means and have the potential for feature articles and paid advertising. By purchasing advertising space, the advertiser controls the text of the message.

Television

Television graphically brings the pictures of the event to the people. Television time is short, so precise statements are needed to convey messages. Television stations also carry community service announcements and may feature disaster issues in current affairs programs.

Public Meetings

Public meetings are an excellent means of communicating recovery information to and from an affected community. They can serve varying purposes at different stages of the recovery process. When well planned and actively managed, they can be most useful in providing information, gathering concerns, dispelling rumour and correcting misconceptions. However, the emphasis is on planning and clarity about the purpose of the meeting. Public meetings that are not well planned and are hazy about their objectives have a high potential to go awry and degenerate into a forum of scape-goating, blame-laying and complaint.

The objectives of public meetings will be dependent upon the stage of recovery that the community has reached at the time the meeting is to be held. However, the objectives should always include raising or maintaining the profile of the recovery effort and assisting the community towards recovery. In planning public meetings, the following must be taken into account:

- the patronage under which the meeting is to be held (i.e. local authority, emergency management organisation, recovery agency);
- the objectives of the meeting, the agenda to be addressed, the process of conducting the meeting, the speakers (including local identities) and their subject matter;
- the process for expressions of concern or complaint by attendees;
- advertisement of the venue, time, purpose, patronage, speakers and complaint process;
- strategies to deal with and follow-up expressions of concern or complaint and further meetings/ arrangements; and
- management issues:
  - strong, independent but fair and non-defensive chair;
  - representatives from a range of emergency-related disciplines to correct misinformation;
  - pre-determined finishing time;
  - neutral venue;
  - address the psychosocial issues as well as physical aspects of recovery;
  - availability of personnel to address issues after the meeting; and
  - review of the meeting and its effect on the recovery process.

Regardless of the success or otherwise of the meeting, every effort should be made to conclude the meeting on a note of optimism for the early and successful recovery of the community.

Information Centres

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

Information centres are often operated by local authorities, citizens' advice bureaux or community agencies. The range of information available may cover the whole spectrum of services available to the community. It is, however, impossible for an information centre to have information on hand to satisfy every possible inquiry and, therefore, it is important for centres to have the capacity to obtain information not immediately available. It is also essential for information centres to be accessible by telephone. Information centres are often established at or near evacuation centres, relief centres or in council chambers or conveniently located one-stop shops.

The integrity of information centres is dependent upon the accuracy and usefulness of the information they provide. Centre management must, therefore, be vigilant in ensuring the currency of the information provided.

Local Participation

As with all recovery services, local participation in information management is essential. Local knowledge not only affects how information is provided but also adds credibility to the message. Local residents have a wealth of knowledge about the physical and cultural aspects of their community, which cannot be gained by any other means.

Practical Issues

Efficient management of information following an emergency or disaster can contribute significantly to the success of the recovery process. However, management of information in such a setting can be a difficult task. Detailed below is a range of helpful hints gleaned through the experience of recovery managers.

- Keep the information management principles to the forefront of the mind of all information workers.
- Information must be factual and accurate—verify material wherever possible.
- Delivery by a known or easily-identifiable person or organisation enhances credibility of information.
- Information disseminated must aim to enhance recovery.
- In the early stages following a disaster, information needs to be repeated in order to be comprehended and retained.
- Information needs to be disseminated through a number of different channels or media to reach the target population. This may include the use of a variety of different forms and media to meet the needs of people from non-English speaking backgrounds.
- To reduce the likelihood of confusion, it is essential that information from the range of organisations involved in the recovery process is coordinated.
- Information leaflets are best suited for significant, single-issue messages.
- Newsletters are best suited for multiple-issue information dissemination.
- Leaflets, newsletters and newspapers have the advantage of providing retainable hard-copy.
- Newspapers provide the opportunity for information dissemination by way of news, features and paid advertisement.
- Paid advertisements provide the advertisers with full control over the text.
- Radio is often the quickest and most easily accessible means of mass dissemination of information. Talk-back programs offer an excellent means of communicating and processing information.
- As well as news, television offers current affairs programs and community service announcements as a means of disseminating information.

- Information centres gather, as well as disseminate, information.
- Information needs to be packaged to the needs of the receiver.
- Information changes constantly—include updated information for staff in briefings.
- Information centres must have the capacity to ascertain the information sought. Staff at information centres must also be aware of the availability of interpreter services and how to access them.
- Enquirers must be able to access information centres by telephone.
- Only disseminate information within the competency level of the staff communicating the information.
- Know the referral process for other services and what they offer and to whom.

CHAPTER 12

Management Structure

Introduction

Recovery should be managed and planned for in a structured manner. The broad needs created by the impact of an emergency or disaster on a community will only be met through a range of services, provided by a range of both government and non-government organisations.

At the local level, the focus of recovery planning and management is on community input. Within emergency planning responsibilities, local arrangements must incorporate recovery planning and, from an operational point of view, a range of services, including both infrastructure and human services. These arrangements should provide for the coordination of the activities of local agencies.

Individual states and territories have specific regional/district level arrangements, which provide for recovery planning and operations.

At regional or district level, a committee should have responsibility for recovery planning, while the committee itself or a designated agency will be responsible for the coordination of recovery management under the direction of the recovery manager. Within this context, specific services will be provided by a range of agencies in a coordinated approach to the recovery process.

Overseeing the process of recovery management at state/territory level is an emergency management organisation. This organisation is generally responsible for policy issues covering all aspects of emergency management including recovery.

CSMAC Disaster Recovery Subcommittee

Within each state and territory community services department is a designated position responsible for recovery. These positions have worked cooperatively as the Disaster Recovery Subcommittee of the Community Services Ministers' Advisory Council (CSMAC) since 1984. Originally the Department of Social Security was also a member. More recently, Centrelink and the Australian Government's Department of Family and Community Services have been represented. EMA also plays an integral part in the subcommittee's activities.

The charter of the group includes responsibility for:

- reviewing disaster/emergency recovery policies, practices and procedures; and
- examining other related matters and reporting to CSMAC.

Through membership of the state/territory level emergency management committees, members of the subcommittee contribute to emergency management policy and procedures and coordinate with the other agencies during operations. The group also provides expert advice on recovery issues to a range of committees, including the Australian Emergency Management Committee.

The Community Services Ministers' Advisory Council, through its member states and territories, funds a position entitled National Recovery Consultant. Based at EMA's Mount Macedon Institute, this position facilitates much of the developmental activity in recovery. Instigated to ensure that recovery training was given the necessary profile at a national level, the position has evolved to provide leadership in the development of recovery policy and practice, as well as educational aspects of recovery.

The remainder of this chapter describes the structures used in managing recovery, not the functions or services performed.

Recovery Committees

Local Government

Local government has responsibilities to provide and maintain physical services relevant to recovery. Most local government authorities also provide a range of human and community services to individuals and the community.

Recovery planning is undertaken by committees to address the needs of their communities. Emergencies and disasters may affect more than one local government area or, in some cases, relate to geographically diverse populations.

Composition

Recovery committees should include representatives of state, Commonwealth and local government, together with representatives of non-government organisations and community groups. All aspects of recovery should be represented.

Recovery Committee Roles

The role of local recovery committees is to:

- prepare and maintain a recovery plan;
- meet regularly to maintain liaison between agencies, enhance understanding of agency roles, update contact arrangements and ensure the currency of local arrangements;
- review local plans;
- conduct regular exercises and training programs;
- establish arrangements for the conduct of post-disaster impact assessment, and for the collation, evaluation and use of the information gathered;
- manage the provision of recovery services at the local level;
- supplement local government resources which may be exhausted by an emergency, e.g. building inspectors, environmental health officers, human services staff etc. to ensure that an adequate recovery program is provided;
- formalise links with regional/district plans and recovery agencies;
- consider all aspects of a local community's recovery;
- activate and coordinate service delivery; and
- identify responsibility for the establishment and maintenance of contact and resource listings.

Operations

A local committee oversees:

- management of the recovery process at the local level, ensuring that community needs are met, either through local resources or by the acquisition of appropriate resources from the regional/district level; and
- provision by member agencies of a range of specific recovery services, ranging from reconstruction and physical infrastructure issues to personal support services.

In addition, a local committee also reports on the progress and ongoing needs of the community to the next highest level of management.

Local Advisory Committees

Local advisory committees should be established to enable members of the local community, including people affected by the event and representatives from local organisations, to meet and to provide input and guidance to local/district committees on such issues as needs assessment and service delivery.

Regional/District

Regional/district committees are necessary because many of the services required in recovery management are administered and delivered on a regional or district basis.

Composition

The composition of regional or district level committees will be similar to that of local committees. There may be specific recovery-based committees or recovery aspects may be included as part of the overall emergency management structure.

Recovery Committee Roles

The role of regional or district recovery committees includes:

- preparing and regularly updating recovery management arrangements and detailing inter-agency arrangements, resourcing arrangements and responsibilities;
- monitoring local arrangements;
- ensuring adequate levels of agency preparedness (including regular committee meetings); and
- providing regular exercises and training programs.

Operations

A regional/district committee should oversee:

- management of the recovery process at the regional/district level, ensuring that community needs are met either through regional/district resources or by the acquisition of appropriate resources from the state/territory level;
- provision by member agencies of a range of specific recovery services, ranging from reconstruction and physical infrastructure issues to personal support services; and
- the interface with local management, as conducted through the local committee.

In addition, a regional/district committee also reports on the progress and ongoing needs of the community to the next highest level of management.

State/Territory

Composition

Committees at a state/territory level comprise representatives from Commonwealth, state/territory and local government agencies and non-government organisations.

Recovery Committee Roles

The role of a state/territory recovery committee includes:

- developing policy on recovery management planning and operations;
- overseeing the implementation of recovery policy throughout the state/territory;
- providing advice to government;
- preparing state/territory plans; and
- monitoring agency preparedness.

Operations

A state/territory committee should oversee:

- management of the recovery process at the state/territory level, ensuring that community needs are met, either through state/territory resources or by the acquisition of appropriate resources from the Commonwealth; and
- provision by member agencies of a range of specific recovery services, ranging from reconstruction and physical infrastructure issues to personal support services.

In addition, they also report on the progress and ongoing needs of the community to the next highest level of management.

Commonwealth

Prime responsibility for the protection of life, property and the environment rests with the states and territories. However, the Australian Government is committed to supporting states and territories in developing their capacity for dealing with emergencies and disasters, and provides physical assistance to requesting states or territories when they cannot reasonably cope during an emergency. Under the Constitution, the Australian Government is allocated responsibility for external affairs matters including the provision of humanitarian assistance for emergency and refugee relief overseas. The Australian Government, through EMA, supports a comprehensive approach to emergency management

At the Commonwealth level there are two key committees involved in disaster management. Details of these committees are outlined below.

Commonwealth Counter Disaster Task Force

The Commonwealth Counter Disaster Task Force (CCDTF) is a senior interdepartmental committee, chaired by the Department of the Prime Minister and Cabinet and comprising representatives of Commonwealth Government departments and agencies with a significant role to play in the provision of disaster relief or rehabilitation assistance. On the advice of the Director General EMA, the Chair may activate the CCDTF during the response and recovery phase of a disaster in support of EMA activities.

Australian Emergency Management Committee

The Australian Emergency Management Committee is Australia's peak consultative emergency management forum, comprising chairpersons and executive officers of state and territory emergency management committees (the various state and territory peak consultative committees established to coordinate and advise on emergency management/counter-disaster matters). The committee provides advice and direction on the coordination and advancement of Commonwealth and state interests in emergency management issues. As required, it establishes working parties to examine particular issues.

Note: additional information may be obtained from the EMA web site (http://www.ema.gov.au).

SECTION D

Recovery Activities

CHAPTER 13

Recovery Services Overview

This section addresses a range of recovery services and activities, under the headings of community recovery, economic and financial recovery and physical recovery. It also addresses the roles and responsibilities of recovery managers and workers.

Some of the information featured in this section is drawn from the separate, detailed publications *Community and Personal Support Services Guidelines, Guidelines for Psychological Service Practice, Community Development in Recovery from Disaster and Economic and Financial Aspects of Disaster Recovery.*

Before considering the particular services to be provided in an affected community, it is appropriate to restate the purpose and definition of recovery as well as to examine the roles and responsibilities of recovery managers and workers. It is also appropriate to consider desired worker characteristics and their key stressors together with a checklist of operational issues to be addressed.

Purpose

The purpose of providing recovery services is to assist the affected community towards management of its own recovery. It is recognition that when a community experiences a significant emergency or disaster there is a need to supplement the personal, family and community structures that have been disrupted by the event.

Definition

Disaster recovery is the coordinated process of supporting disaster-affected communities in the reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical well-being.

Management/Workers' Roles and Responsibilities

The recovery manager manages the recovery process on behalf of the nominated lead recovery agency. It is essential that this person be given the necessary authority to effectively carry out this role. Detailed below is material that summarises discussions held during a number of recovery management activities initiated and facilitated by EMA. Six distinct categories were identified in regard to the role of the recovery manager. These include:

- recovery issues;
- manager's role;
- management tasks;
- management skills;
- knowledge base; and
- personal qualities.

Recovery Issues

The basic issues confronting the recovery manager will include the following:

- what is the purpose of the recovery process?
- what services are required?

- how should those services be provided?
- who is best-equipped to provide the necessary services? and
- how and when should recovery services be withdrawn?

Manager's Role

- Ensure that appropriate strategies are put in place.
- Facilitate the acquisition and appropriate application of material, staff and financial resources necessary to ensure an effective response.
- Contribute to the resolution of community and political problems that emerge during the recovery process.
- Ensure the maximum community involvement in the recovery process.
- Ensure that both immediate and long-term individual and community needs are met in the recovery process.
- During non-disaster periods, increase recovery awareness and promote as much planning as is feasible.

Management Tasks

- Organise and manage the resources, staff and systems necessary for the immediate and longer-term recovery.
- Advocate on behalf of the affected community with government departments, voluntary agencies, local government, the wider community, businesses and other organisations involved in the recovery process.
- Liaise, consult and, where necessary, coordinate or direct voluntary agencies, community groups, local government and government departments in order to achieve the most effective and appropriate recovery.
- Provide information to the government, bureaucracy, community and media.
- Mediate where conflicts occur during the relief and recovery process.
- Develop a close and positive working relationship with the key individuals and groups in the affected community.
- Be partially distanced from the immediacy of the event and consider the overall recovery process in establishing priorities and anticipating future requirements.

Management Skills

A recovery manager requires a high level of skill in:

- planning;
- problem-solving;
- time management;
- public, group and individual communication;
- decision-making;
- monitoring;
- evaluation;
- negotiation/bargaining;
- consultation;
- personnel management; and
- information management.

Knowledge Base

The recovery manager will have to understand and fully appreciate the importance of:

- the emergency management arrangements in his/her area;
- involving the affected community in all aspects of the recovery process;
- getting reliable information out to affected people, politicians and government departments as a matter of priority and maintaining an information flow once established;
- meeting the physical as well as the personal support needs of affected individuals and communities;
- debriefing and supporting recovery workers;
- the limits of their decision-making powers and any other constraints under which they may be operating;
- who the decision-makers are within other organisations; and
- having recovery plans and systems in place prior to a disaster.

Personal Qualities

The personal qualities of a recovery manager are critical to that person's capacity to facilitate an effective recovery process. Paramount among the desirable qualities are:

- a firm but participatory management style;
- an ability to work in a confused and rapidly changing environment and still deal with complex problems;
- a high degree of energy and resilience to stress;
- the capacity to engender confidence among staff and the affected community;
- a quick and agile mind which can determine the most effective use of frequently limited resources;
- a strong belief in the rights and integrity of individuals;
- a sensitive and honest approach to people and work demands;
- political insight and intuitiveness; and
- an entrepreneurial approach to work demands and problem-solving, i.e., the person should be self-activating, flexible and result-oriented.

While it is unlikely that any one manager will have all the skills and abilities described above, it is worth noting the observation of a number of recovery managers in recent events that, in reality, **recovery management is no different from any other form of public sector management; it's just that decisions are made within a shortened timeframe**.

Workers' Characteristics and Stresses

The requirements of workers involved in the provision of recovery services are closely related to the nature of the work likely to be encountered. Key stressors in disaster work include the following:

- its unpredictable, emergency nature;
- the need to provide services in an uncertain and rapidly changing environment;
- application of skills in an abnormal environment;
- high levels of both acute and ongoing stress;
- exposure to direct and vicarious trauma;
- highly charged personal work environment and sometimes brittle inter-agency relationships;
- exposure to intense emotions; and
- intense scrutiny of work performance (often by politicians and/or the media).

In addition to the skills required to provide specific services under normal circumstances, workers involved in service provision following an event need to be capable of dealing with these stressors. In choosing appropriate staff for recovery work, it may be useful to consider the following characteristics.

- *Staff should have consolidated their core professional skills*. A disaster is not a training ground for inexperienced workers.
- *Staff should be secure in their professional identity*, otherwise the uncertainty of the disaster situation and its consequent stresses may seriously undermine their confidence and capacity to deliver the relevant service.
- *Staff should be secure in their role in their agency or organisation*. The nature of recovery work necessitates time spent out in the field, away from the normal working environment. Workers cannot function effectively or provide the time required if they are anxious about their positions or feel that their agencies are ambivalent towards them being away. Work roles should permit a degree of flexibility.
- *Staff need to adopt flexible working styles*, and be prepared to improvise strategies for the delivery of services.
- Preparedness to travel and work out of hours in less than optimal conditions is also likely to be required.

Operational Checklist

Detailed below is a checklist of the key issues that will need to be addressed throughout the recovery process. The list is by no means exhaustive and, depending upon the nature and location of the event and the affected community, a range of other issues may also emerge.

- Liaise with relevant response agencies regarding location, size, type and potential impact of event.
- Contact and alert key staff.
- Determine likely human effects.
- Contact other relevant response and recovery agencies.
- Activate and brief relevant agency staff.
- Activate appropriate inter-agency liaison mechanisms.
- Locate liaison officer at emergency operations centre (if appropriate).
- Determine immediate short-term needs (e.g. accommodation, financial assistance and personal support).
- Manage offers of assistance, including volunteers, material aid and donated money.
- Assess impact of the event through information/data from local government, geographic data and relevant response agencies.
- Meet with other recovery agencies to determine strategies.
- Report to organisational hierarchy on likely costs/impact of involvement in recovery activities.
- Organise briefing and debriefing processes for staff.
- Activate outreach program to meet immediate needs and determine ongoing needs. Issues to be considered should include the need for specialist counselling, material aid, accommodation, financial assistance and social, recreational and domestic facilities.
- Establish a ‘one-stop shop’ recovery centre to provide the affected community with access to all recovery services.
- Manage restoration of essential infrastructure/utilities.
- Manage the public appeal process.
- Brief media on the recovery program.
- Assess reports gathered through an outreach program to assess community needs.

- Identify special needs groups or individuals.
- Meet with other recovery agencies to consider full assessment of the impact of the event. Determine the best means of involving the affected community and determine action required from specific agencies.
- Activate community recovery committees, ensuring active participation of members of the affected community.
- Develop a community information process, including consideration of public meetings and newsletters.
- Monitor staffing arrangements.
- Review resources and services on an ongoing basis.
- Determine longer-term recovery measures.
- Provide newsletters to the affected community and information to the media as required.
- Provide interpreters, multilingual information and bilingual staff as necessary.
- Continue to monitor agency activities and reduce/withdraw services when appropriate.
- Debrief recovery agencies.
- Recognise agency/staff input.

CHAPTER 14

Community Recovery

Introduction

This chapter addresses the range of community recovery services—information, community and personal support, psychological, community development and resources. The range of these services and the quantum of each particular service is dependent upon the specifics and effects of the event and the resultant community needs. The information regarding these services is provided on the assumption that the initial needs assessment has been completed and follow-up assessments are to be undertaken.

Information Services

The community recovery information services provided to affected people aim to lower anxiety levels and to restore a sense of predictability through accurate, credible information that services are available to assist and hasten recovery as well as the means of accessing those services.

The information provided should advise:

- the support, psychological, development and resource services available;
- where, when and how to access those services; and
- the psychological reactions commonly experienced by affected people.

The information should be available as soon as possible and provided and repeated through a range of information means. The means commonly used are:

- leaflets;
- posters;
- newsletters;
- information centres;
- recovery centres;
- community agencies;
- radio;
- newspapers;
- television;
- outreach visitation; and
- public meetings.

The accessibility of the information to the people affected by the disaster is a major issue and actions need to ensure it is available to:

- the whole of the affected area;
- non-English speaking people;
- isolated people and communities; and
- secondary victims.

Community and Personal Support Services

Individuals and communities affected by emergencies and disasters have particular needs, which require the provision of specialised services. Individually, people will require information about both the cause and effects of the event, the availability and accessibility of services, and the capacity to regain control.

Service delivery may range from availability of personnel at evacuation centres to coordinated visitation programs and organisation of community activities. It is critical that personal support services be provided for individuals and communities throughout the recovery process, and be developed and managed in consultation with the affected community.

Definitions

The term 'personal support services' refers to the process of assisting the diverse immediate and longer-term personal needs of those people affected. Such needs may encompass provision of information, practical advice on a range of issues and emotional support. These services may be required in the short-term as part of an evacuation process or longer-term through home visits and at recovery centres. All agencies in the recovery system contribute to these services, which are coordinated by each state/territory government community services department as detailed in emergency management arrangements.

The term 'community support services' refers to a broad range of tasks undertaken within an affected community to ensure that it is given the support to recover effectively. Activities may include a range of practical assistance, organisation of public forums on current topics and development of a range of community activities. These activities are generally undertaken by recovery workers and/or community development officers.

Personal Support Services

Personal support services are most often provided on a one-to-one basis and comprise the full range of immediate needs following the provision of shelter, food and clothing. The range of services that may be provided at evacuation, welfare and recovery centres includes the following:

- information;
  - what's happened?
  - services available; and
  - what plans are in place?
- practical advice;
- comfort and reception;
- referral to other agencies;
- reassurance and security;
- material aid;
- time away for families;
- child-minding;
- child/aged care;
- transport;
- advocacy, legal aid, insurance;
- pet care;
- clean-up;
- meetings/forums;
- interpreters and translated information;
- organising funerals;

- medication and medical care;
- practical assistance; and
- tracing of relatives and loved ones.

Outreach/Visitation Programs

An effective means of delivering many personal support services is by outreach or visitation programs. These programs usually comprise home visits by representatives of the recovery program to offer support and information and, concurrently, to make an assessment of people's current circumstances.

Home visits also provide an opportunity for people to talk about the event and be reassured that their experiences are likely to have been shared by other members of the affected community. Although the majority of these visits will be undertaken within or close to the affected area, it is essential that people affected by the disaster who have left the area also be included in this process. These may include evacuees who have lodged with relatives or injured people transferred to hospital.

Management staff must ensure that close liaison and coordination is maintained with all staff from all the various agencies undertaking home visits. Their contact is important for support, assessment of claims and specific needs, or for other forms of material/financial assistance. Intrusion into people's lives must be minimised or additional stresses will be caused. This is done by coordinated and planned visits that limit the number of times people have to tell their story.

Conjoint visits by small groups of community services department staff and mental health workers, teamed with staff from other agencies (e.g. agricultural, commercial association, insurance or other financial visitors) should be considered. Cross-referral and sharing of information creates efficiency provided it is with the concurrence of the people concerned and meets usual professional practice standards.

In managing an outreach or visitation program, account should be taken of the following:

- a clear understanding of the objectives of the program;
- adequate briefing;
- home visits should be undertaken by workers in teams of at least two;
- interpreters should be provided where necessary;
- visits should only be undertaken during daylight hours;
- liaison should be undertaken with police to determine residences that should not be visited;
- workers should be debriefed at the end of each shift; and
- training and supervision should be provided by workers experienced in recovery activities.

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

Personnel

The personnel required to deliver personal support services is provided by a wide range of government and non-government agencies. The personnel comprise both employed and trained volunteer personnel who have the capacity and personal skills to support and listen to people in distress. These personnel do not provide counselling or psychological services but should be able to recognise people with these needs and refer them to the appropriate service providers.

Community Support Services

Assistance and resources must be provided to create and support community infrastructures and to enable successful recovery. Depending on capacity to recover, local community initiatives may also need to be supported by government and the wider community.

Community support programs are generally funded and managed by the relevant state/territory community service department and undertaken by recovery workers and/or community development officers whose task it is to work directly with an affected community in identifying and addressing specific needs following a disaster.

In addressing community needs, the following tasks may be undertaken as part of the management of a community support process:

- identification of community needs;
- initiating and servicing key committees and working groups;
- assisting in accessing information and resources; and
- assessing and monitoring the overall recovery process.

There are a number of specific activities that may be part of a community support process. These are addressed under the following headings: Community Information, Public Forums, Community Activities, and Cultural and Spiritual Factors.

Community Information

In addition to the individual information regarding services available after an event, there is a need for a broader range of information regarding community activities. The dissemination of such information is an important part of supporting the community.

Further advice is available under the preceding heading Information Services. However, it is important to note the range of different means of distributing information within an affected community. These include regular newsletters, convening of public forums and recovery centres.

Public Forums

Various forms of public forums provide an important part of the recovery process. Public meetings may be held soon after an emergency or disaster has taken place as a means of communicating information to an affected community regarding such things as the extent of the damage caused by the event and the services available through the range of recovery agencies. Representation of the various recovery agencies at a public meeting also gives the affected community an opportunity to identify those agencies providing services and to clarify important issues. Further public meetings may be held throughout the recovery process as the need arises.

Public meetings also provide the opportunity for members of an affected community to meet together and for rumours, which are inevitable in the early part of the recovery process, to be dispelled. However, given the volatility that may be evident immediately following an emergency or disaster, it is critical that public meetings be carefully timed and managed by a facilitator skilled in dealing with any problems which may arise.

Public forums may also be organised to provide practical advice and discussion on a range of issues from personal needs to housing and rebuilding issues. The need for such forums is best identified by workers who have a direct understanding of emerging needs within a community.

Community recovery committees also provide an affected community with a mechanism to have an input into the management of the recovery process. These committees provide an important forum, ensuring local participation in the management of the recovery process.

Community Activities

The amount of time spent on recovery activities such as rebuilding and repair to houses and properties may undermine the equally important recovery issues of family and community interaction. To address this problem, the organisation of activities such as community, cultural and sporting events has proven very effective.

Cultural and Spiritual Factors

Cultural and spiritual symbols provide an essential dimension to the recovery process. They provide a framework for meaning and evaluation of the disaster experience. These need to be managed as an integral part of recovery activities. The community will present its own symbols and rituals, probably beginning in the immediate aftermath. If these are recognised, supported and coordinated as part of the recovery process, which is owned by the community, they will provide the focus for cultural and spiritual activities.

These activities will assist in the long-term integration of the emergency or disaster into the history of the community. Often these activities can be conducted on anniversaries or other significant community occasions.

Principles

Principles have been developed to assist the management and delivery of community and personal support services in the recovery context. These services should be delivered in a manner that empowers individuals and communities in the management of their own recovery. Specific services and resources should be made available but not enforced in a prescriptive manner.

Community and personal support services are most effective when they:

- are provided in a coordinated, timely and culturally appropriate manner throughout the entire recovery process;
- are available to all people affected by the disaster, including:
  - individuals;
  - families;
  - communities;
  - groups/organisations; and
  - emergency service and recovery workers and volunteers;
- include the affected community in their development and management;
- facilitate sharing of information between agencies as an integral part of service delivery;
- recognise that people will require accurate and current information about the situation and services available;
- are integrated with all other recovery services, particularly with regard to financial assistance;
- provide assistance and resources to create, enhance and support community infrastructures;
- recognise that cultural and spiritual symbols and rituals provide an important dimension to the recovery process; and
- utilise personnel with appropriate capacities, personal skills and an awareness of the full range of services available.

Psychological Services

Emergencies and disasters typically have a wide range of impacts on individuals and communities. Examples include the impacts of evacuation, damage to community infrastructure, personal loss and financial hardship. There is a psychological component to each of these impacts, which may require local attention as well as attention at the management level.

Reciprocally, the planning, management and delivery of emergency services by disaster managers in many areas in all disaster phases have the potential to have serious psychological consequences for individuals and affected communities.

Positive consequences can be enhanced and negative ones avoided, or at least alleviated, through disaster managers being informed by specialist psychological consultants of the psychological consequences of their decisions.

It is critical that the psychological dimension informs understanding, planning, training, assessment, decision-making and service delivery components of emergency management. This should occur in an integrated way, from local to regional, state, national and international levels as required. In addition, psychological services may be utilised by managers to deal with secondary stresses within their own sub-systems.

Definition

For the purposes of this publication, the term 'psychological services' refers to those specialist psychological services which apply skills ranging from psychological first-aid to long-term clinical treatment provided by personnel trained to the level appropriate to the task.

Aims and Rationale

Psychological services in disasters aim to encourage 'wellness' by addressing psychological vulnerability and limiting the development of psychopathology. Alternately, they help affected populations to shift the balance from maladaptive or traumatic responses to adaptive ones. In each case the aim is to preempt later pathology and to alleviate it should it occur.

Logistics of Service Delivery

While orthodox treatments often take the form of patterned, office-based, individual clinical therapies, in the disaster context social structures and patterns may be disrupted, there may be a rapid increase in client numbers and the psychological service resources may be overtaxed. Therefore, service delivery needs to be flexible, mobile, creative and extensive, while at the same time being capable of prioritisation.

An initial outreach approach to all in the affected community is cost-effective as it can identify the need to prioritise services to the vulnerable and to those with established dysfunctions. Secondly, outreach may be able to prevent more widespread distress and help prevent dysfunctions by providing information about the nature and sense of common stress responses and what can be done about them.

Psychological services should be a special but integral part of established response and recovery services. The logistics of service delivery is in the context of disaster management as a whole. To accomplish their goals, psychological service staff must have special skills in 'seeing the bigger picture' and be able to apply flexibility, mobility and creativity; they must also have the ability to communicate along hierarchical lines and across services, as well as to liaise and integrate with the response and recovery services as a whole. In addition, members of the psychological service staff have consultancy and healing roles toward the service network and its personnel.

Special skill and sensitivity are required to communicate with those who may previously have had no contact with any aspect of psychological services. Skill is also needed to distinguish the majority of people, who do not require professionally based formal psychological support but may simply benefit from information, from those who may require help in the future and those who suffer current, fresh or reopened wounds. Professional sensitivity, skill, ethical standards and self-monitoring must be of an exceptional order to provide what is needed to those who need it and to desist from offering help where it is not needed.

Assessment

Psychological service providers have a brief for ongoing continual assessment of the needs of disaster-affected people from pre-impact to recovery. In the disaster context, this assessment is a complex process which must take into account predictable and unpredictable fluctuations within multiple social levels. Social levels comprise the community as a whole and its components of families and individuals, whether adults or children.

Definition of Psychological Service Assessment

Psychological service assessment may be defined as evaluation of the impact of a disaster at a particular time on individuals, families and communities, with the purpose of determining needs

for psychological service interventions. Assessment is a continuing process from pre-impact to healing. It is a complex, dynamic multidimensional inquiry, which takes into account adaptive and maladaptive biological, psychological and social responses to threats of survival and to what is cherished in life.

Assessment in the Disaster Context

Assessment of the various factors inherent within the particular disaster context needs to be part of an overall coordinated recovery management process. Assessments involve the multi-factorial and dynamic and biological, psychological and social disaster responses within the three dimensions of the triaxial framework.

While the basic aim of assessment is to ensure that appropriate psychological services are provided and referrals are made as needed, outreach/educative engagement is also required. This is necessary to help individuals and communities understand the dimensions of the psychological impact of the disaster and the psychological dimensions of the processes of recovery. It should also ensure that a healing psychological climate exists and provide an understanding of psychological interventions and how they can assist at all levels throughout the recovery process.

Reactions/responses to the event may be appropriate in one phase in the recovery process but not in another. Each person's response will be individual and likely to be complex, dynamic, and variable over time. Individual responses will be affected by disaster survival responses, different aspects of personality and functioning, and a heightened sense of morality, values, dignity, meanings and spirituality. Reactions need to be assessed within this wide context.

The aim and mode of assessments may vary and might need to be tailored according to the phase of the disaster (from initial 'triage' in the immediate aftermath of a disaster through to detailed clinical assessment later).

It should also be noted that assessment is, in itself, an intervention into the disaster-affected community. Service providers cannot assume that such an assessment/intervention is necessarily a positive experience or is helpful for affected people.

Key Considerations

Given the complexity and variety of psychological responses to disaster, there can be no simplistic pro forma model for assessment. However, the triaxial framework informs assessments. Other key considerations in disaster context assessments include:

- disaster managers and psychological service providers must have close liaison through all phases of disasters and share all available pertinent information;
- assessment in the disaster context is different from other forms of clinical assessment;
- assessment needs to be managed on the basis of an awareness that it is an intervention and, therefore, will have an impact on the client group;
- affected individuals must be given the opportunity to express their most pressing needs in their own language without preconception or judgment;
- experience indicates that parents and teachers often underestimate the nature of the impact and distress that children experience;
- specific vulnerabilities of children and families must be considered (e.g. deaths, chronic ill health, neurotic symptoms, overly quiet child);
- the impact of a disaster may have significant resource implications for availability of services/ service providers;
- assessments must be coordinated to ensure there is no unnecessary repetition;
- where feasible, review assessments should be undertaken by the same person;
- assessment in the disaster context should begin with no predetermined assumptions and should include the use of appropriate personnel;

- assessments of the community;
- assessments for matching the needs with available resources and service providers;
- a window of opportunity may exist for the integration of service providers into a disaster-affected community. If this opportunity is missed, assessment and service provision may be skewed in its conclusions, or unacceptable to the affected community;
- assessment should be made of adaptive natural processes as well as assessment of disrupted or disruptive maladaptive processes of recovery;
- vulnerabilities should be identified but not increased; and
- resilience and coping skills within individuals, families and communities should be assessed and supported.

With this range of issues in mind, service providers must be flexible in order to assess the unique characteristics of each situation. This requires consideration of the unique requirements of the particular event, local issues and dynamics, availability of resources and conceptual frameworks as described above. Ultimately, assessment must identify the needs of the individuals affected by the disaster, rather than any potential needs of the provider to fit the situation into a prior orthodox framework.

In assessing the need for psychological support and intervention, a number of key questions should be addressed. These include:

- what are the specific assessment foci for children/adults/family groups in disasters?
- why are particular services needed? and
- how might they best be provided/delivered?

In addition, it is imperative to determine any special circumstances of the client and also to identify/determine when specialised assistance/counselling is not required.

Assessments of Different Social System Levels

The following section provides guidelines on assessment procedures for specific social groups.

It should be noted that the underlying intention is to assess needs at any given time at any given level so as to specifically match them with appropriate interventions.

This can only be an approximation as both phases and social systems overlap and impact on each other in a dynamic system. For instance, events in one phase influence those in subsequent ones and social systems impact on each other.

Community

Community-level assessment is a complex process taking into account multiple dynamic factors and their interaction. There are many groups in most disasters. Community identity can be confusing because people can belong to multiple groups and have multiple roles (such as a person being a firefighter, local community member and father of a family).

For the purposes of assessment in a disaster context, communities may be identified in a number of ways. These include:

- geographic groupings;
- cultural affinities;
- special interest groups—ethnic, religious, school, aged etc.;
- various socio-economic groupings;
- isolated, marginalised, vulnerable groups; and
- communities of association—retirement villages, nursing homes, caravan parks, schools etc.

Critical to effective assessment of community need is a determination of the nature of networks, leadership and hierarchies to ascertain how information is processed and transmitted, and the interaction between groups, their role within the community and the capacity of that particular

group to respond and recover. The underlying intention is to match interventions appropriate to the community's needs at any given time.

When assessing communities, it is important not to assume that any one individual is responding the same way as the community as a whole or is subsumed into the group. Individual reactions need to be differentiated from the group process.

It is also important to develop an assessment style that is relevant to the particular community being assessed (such as civilian, military, urban or rural). Community assessment can involve:

- assessing tone/mood of community (cohesion, morale, anger etc.); and
- assessing common psychological problems that are experienced by many individuals in the community.

These two features will require different interventions at a community level.

Family

A multi-dimensional assessment process needs to take into account the family's context, culture, lifestyle, values and developmental stage. It is critical that assessment is undertaken recognising the importance of the family's links with all local networks, groups and existing services. Information and feedback should be sought from each of these groups.

Assessment must be both of the family as a unit and of its members as individuals. There is a need to place emphasis on family functioning because this influences children's response and recovery. For instance, some children are used as the flagship of family distress.

A critical aspect of the assessment process is to identify and support a family's normal recovery processes, identifying ways in which they can be aided and further supported. Similarly, assessment should be undertaken of the capacity of the individual and family to identify their own needs for support. In this manner, assessment may be used to guide people in their own recovery and to prevent future difficulty. In the course of assessment, families may be enabled to recognise potential needs in the future and be able to access specialist assistance.

Finally, it is critical to ensure that all members of the family are included in the assessment, including children from infancy to late adolescence, the older generation and even the extended family.

Adults

As with each of the other groups outlined, the assessment of adults affected by disaster should be undertaken within the triaxial biopsychosocial framework. Individual responses to a disaster and the resultant circumstances may be both adaptive and maladaptive. Within the one individual, a range of combinations of responses is possible and may fluctuate (such as an individual may help others at one point in time but, at another time, feel helpless and focus on themselves). Consequently, the purpose of assessment of adults is to determine the nature and degree of stress responses and psychological need. An effective assessment will support planning of service delivery, including identification of need and resources.

In addition, disaster-affected people will not always recognise or report their difficulties. As such, it is necessary to provide means to encourage communication of problems. Education and information provision are an integral part of facilitating this process.

An individual may belong to a number of groups. There needs to be an assessment of the individual's functioning in various roles, within various groups (e.g. may be functioning well in one context but not in another such as individual, parental or carer roles).

The psychological impact of a disaster on adults is likely to go through a number of stages. Research indicates that after a period of initial distress, only a proportion of people affected by disaster will have persistent psychological problems. It is also likely that some distresses lasting for more than a week may be predictive of longer-term adjustment. (For example, stressor-induced

dissociative symptoms and other traumatic reactions: fight/flight and separation reactions.)

Key factors in the assessment of adult needs in a disaster context include:

- a variety of biopsychosocial responses in the triaxial framework. For instance, assessments include pre-existing and concurrent problems, vulnerabilities and strengths;
- cognitive and emotional responses;
- verbal and non-verbal communications such as body language;
- reading displaced emotions as reflections of one's own; and
- family/organisational/community dynamics.

A further consideration is the potential impact of a disaster on families, friends and colleagues of those directly affected, as they may not be able to provide the social support normally available following a more isolated event such as a car accident. In addition, the potential also exists for an individual's distress to affect those around them. In this regard, consideration must be given to the collective dimension of the disaster impact on individuals and their environments.

Assessment must be undertaken in a manner and context congenial to the person. Privacy, confidentiality, dignity and rights of the disaster-affected person should be respected at all times.

Finally, there is also a need to evaluate the assessment process. Key questions to be asked in reviewing its efficiency include:

- is the process appropriate to the task?
- is it creating potential additional trauma? and
- is it meeting affected people's needs?

Children

As with any psychological assessment in a disaster context, the consideration of the impact of a disaster on children and any subsequent psychological needs is a 'mapping process' over time. Any assessment process should bring to bear knowledge of the child from key local people such as teachers, guidance officers, clergy/leaders, child carers and parents. In addition, practitioners/assessors should draw upon disaster and trauma knowledge and their experiences and observations from previous events.

It is important to remember that the key people in the child's life can also be affected by the disaster and their judgments may be skewed, usually minimising the extent of problems in children. Consequently, it is important that assessment of current parental response and family functioning be undertaken, as well as assessment of individual children's responses to the disaster.

Specialist knowledge of child, adolescent and family developmental stages, as well as how children communicate (e.g. playing, drawing, nonverbal family communication) are critical to effective assessment.

Interventions

The purpose of psychological service interventions in disaster-affected populations is to enable affected people to maintain and retrieve their biological, psychological and social selves and to emerge with existentially meaningful lives.

Dealing with fresh wounds gives opportunities to preempt serious pathology and excessive scarring. Further, even if pathology develops, its recent onset and relatively clear causation may lend themselves to efficacious healing.

While psychological services are provided in a manner that empowers individuals and communities in the management of their own recovery, effective service delivery is also reliant upon recognition and understanding of the impacts of disaster on adults, children, families and communities in their various social and cultural contexts and provides help to minimise the impact and re-establish self-direction.

Expert advice and consultancy are provided throughout all aspects of the disaster recovery process. This ensures that services are delivered in a psychologically informed manner to facilitate and enhance overall community recovery.

Expert advice and consultancy need to be provided at all hierarchical levels, including to emergency managers, particularly recovery managers.

Types of interventions thus range from psychological first-aid and support to long-term clinical treatment of affected people, as well as secondary consultation to services dealing with affected people. The means of delivery of such interventions should be preplanned to be delivered as a seamless, holistic service.

Psychological Support

Psychological support can be provided by relatives and friends and non-clinical support staff. It includes constructive interest, expression of a bond, and a desire to protect and nurture the person. Clinical psychological support may include the above but goes beyond this by the use of empathic listening and emotional attunement to recognise, assess and understand people's distress in order to be able to offer skilled help as needed.

Crisis Counselling

Counselling provides a relationship in which the affected people's disaster experiences are able to be examined in detail, together with other issues in their lives in order to assist them to understand the effects the experiences have had and the meaning they have given them. It can then provide them with an alternative set of understandings. This may also extend to other aspects of the recovery process, such as the impact of change and stress on relationships, personal identity and values. Counselling involves a structured relationship, which is provided by someone who is trained to understand the nature of the difficulties the person is presenting and who can anticipate the needs and the methods necessary to assist them. Most crisis counselling is focused on some specific aspects of the crisis situation and seeks to provide immediate remedies.

Defusing, Debriefing and Worker Support

Defusing, debriefing and worker support are special techniques which have been developed to assist recovery workers who have been affected by their experiences and have developed potential or actual traumatic stress, sometimes called critical incident stress. Debriefings may use structured methods by those with specific training whose aims are to ensure that the details of the experience are reviewed, together with the thoughts, emotions and behavioural reactions they have caused. They are then normalised in the disaster context. Services whose workers are offered debriefing include police, firefighters, hospitals, nursing homes and community service agencies.

Debriefing has come under critical scrutiny in recent times, as many inexperienced providers applying debrief packages have converged on disaster sites causing distress rather than mitigation of stresses. It is important to understand that no treatment is a panacea and that knowledgeable, professional, sensitive tailoring of good principles is more important than prescribed techniques.

Traumatic Stress Treatment: Longer-term Counselling

Post-traumatic stress and post-traumatic stress disorder are complex and potentially severe and disabling conditions. They need to be carefully assessed and treated by clinicians trained in the field. Usually these conditions become compounded with pre-existing and subsequent problems and form a complex set of difficulties.

Even without going so far as traumatic stress illnesses, complex personal and family problems often emerge during the recovery period. As well, emotional problems, which may have been adequately managed in normal circumstances, may become major difficulties in the context of the disaster stresses. These often require more extensive counselling or other forms of psychological treatment provided by experienced clinicians.

Interventions in Different Social System Levels

Because assessments and interventions overlap, many principles applicable to assessments at different social levels also apply to interventions. For instance, interventions in communities need to be applied taking into account the nature of the community, its mood, morale and culture, and organised and applied at different hierarchical levels. Similarly, at the family level, interventions are applied as necessary to all family members, even if one member is chosen to symbolise family distress. With children, play and drawing techniques may be used in treatment akin to those in assessments.

Like assessments, interventions are informed by the triaxial framework. Thus, interventions in all groups that follow are tailored to adaptive and maladaptive biological, psychological and social responses and include dimensions ranging from the survival strategy responses to spiritual issues.

Communities

It is desirable that all types of service interventions be psychologically informed. Expert psychological advice and consultancy needs to be provided at all hierarchical levels, ranging from government, through emergency and recovery managers, to affected communities. Information, through consultancy and through other media, should be dispersed about usual post-disaster community responses such as post-disaster euphoria, tendency to find scapegoats and convergence phenomena. Myths about the frequency of panic, looting, unbounded heroism and capacity to recover, as well as pessimistic assessments of permanent damage, need countering with objective information. Special care should be taken that media reporters are properly informed and that they, themselves, are not over-optimistic or, on the other hand, overwhelmed.

Information is widely distributed about the ubiquity, normality and sense of the many biological, psychological and social responses and negative judgments such as guilt, shame and sense of injustice, as well as emergence of negative meanings. All means of communication are utilised, including radio, television, newspapers, internet, telephone hotlines, newsletters, pamphlets, posters, community meetings and interpersonal communication.

Realistic causes of the disaster and realistic stocktaking of losses and public mourning for them should be facilitated, helping progress in the assimilation of the disaster.

Many agencies, as well as individuals, that provide material and financial aid stream into the area. Help may be harnessed if it can be well tailored, but it may have adverse effects if it is part of the convergence phenomena and competition for clients. Psychological service providers may counter these phenomena by bringing them to the attention of managers and helping them to be discerning about the aid offered. They may help to coordinate quality aid and to halt inappropriate help and voyeurism.

Psychological services can foster communities and workers to have a mutual understanding of losses, needs, available resources and knowledge of the systems by which to access and distribute them. Aid workers can be facilitated to tailor expeditious and efficient distribution of resources according to need and priorities. Consultation may ensure that aid is given with compassion yet generosity of spirit, with grace, and while maintaining dignity and respect for the helped. All the above may preempt later community tensions, anger, envy, greed and sense of unfairness and injustice.

Vulnerable groups such as orphans, bereaved, homeless, isolated or non-English speaking people should be identified and early specialist treatment (e.g. crisis counselling, bereavement counselling) provided. Secondarily affected groups, such as relatives, should be identified and catered for, as should those who have left the district.

Psychological service providers may educate aid workers and the communities they cater for about the natural ambivalence to aid. The effects may compound with earlier disaster states and add to previous states of helplessness and rage. Psychological service providers may diagnose

and ameliorate these interactions, build helpful bridges, educate, resolve conflicts or advocate on behalf of some disaster-affected people.

Existing communication channels should be encouraged and enlarged to increasingly empower communities to seek their own help and eventually to help themselves. This decreases a sense of dependency and increases self-esteem.

Aid workers should, themselves, be educated about secondary stress effects and their prevention, and help given to them as required.

Families

Psychological services to families are most efficiently provided on an outreach basis. Disaster-affected families should be visited in their homes or in other shelters.

It is helpful if two workers with different fields of expertise can visit families together as part of a 'buddy system'. Together, they should make sure that the biological, psychological and social needs of all family members are catered for and that the family dynamics are fully understood; for instance, an individual's symptoms may be seen as a vehicle to signal family distress. Vulnerable family members need special attention.

Family needs must be attended both on the level of the family as a whole and on the basis of all individual members.

If stress responses are due to ongoing stressors, they need to be identified and, if possible, ameliorated. This may involve arranging for comforts such as food, shelter, warmth, toilet facilities and medicine. Reuniting within families is still very important. So is reuniting families with familiar social and helping networks and new networks.

If it has been assessed that the family is tense and dysfunctional since the disaster, stress responses still active from the impact phase of the disaster need to be made overt and ameliorated. Support and crisis counselling should be instituted in a family setting.

Typically, in a safe environment facilitated by the therapeutic relationship, detailed cognitive emotional and behavioural recognition of what the family went through is achieved. Which survival strategies worked, when and in what interaction, and which did not, why not, and with what consequences, are ascertained and validated with family members. The sense and normality of their responses in the disaster context is pointed out, as is the reason for lack of need to maintain such responses currently.

Family members may express to each other how they saw the disaster from their personal perspectives and express feelings to each other from such perspectives. Understanding of each other may resolve guilt and anger and strengthen mutual esteem and bonds. Family dignity and identity are preserved or even enhanced. Adaptive meanings of the experiences may well emerge. Vulnerable family members need special attention. Nevertheless, if the individual's symptoms are used as vehicles to signal family distress, this needs attention.

Adults

The same principles apply to individual adults as for families and may occur contiguously with family healing. Thus, reuniting with families and with social networks is beneficial to individuals as well as to whole families. However, intimate one-to-one counselling relationships allow more personal issues to be addressed in more depth.

While stress responses experienced by individuals may be able to be placed in logical context as ripples from disaster, personal counselling often deals with situations where the connections to such contexts may be hidden. Then people may appear to suffer irrational biological, psychological and social manifestations or symptoms.

Reasons for the disconnections may be protection against reliving traumatic events (e.g. sense of imminent death, deaths of others, helpless abandonments), accompanying negative

judgments (e.g. guilt, shame, rage, outrage) or unacceptable meanings of oneself and the world. The connection may be retrieved through offering skilled and deep recognition of the symptoms and their origins, and deep empathic understanding as to why memories of the event are disconnected. Connections of symptoms to the original event are retrieved through hope engendering reassessment of traumatic feelings, cognitions, judgments and meanings, and seeing that they are not warranted today. Retrieval of connections to the traumatic event then allows understanding of the symptoms in terms of rational biological, psychological and social survival responses in abnormal situations. With reconciliation of past and present, individuals tend to develop new, realistically positive meanings and views of self and the world.

Such acute trauma therapy may prevent long-term fragmentations of the mind and development of many entrenched symptoms and illnesses. Therapeutic skills require empathetic listening, ability to decipher covert communications and knowledge of the way the mind deals with trauma. Additionally, therapists need to be able to include dealing with past vulnerabilities and meanings, defences, personality styles and cultures, all of which compound with the way affected people present.

Note that it may not be enough to simply reassure that symptoms are normal. Such reassurance may only be meaningful when all healing principles are applied as well. This results in full cognitive and emotional awareness of causes, consequences, connections and reasons between disaster and symptoms, as well as full cognitive and emotional awareness of the safety and hopefulness of the present environment. This results in a narrative story of the disaster and its consequences from a position of control and purposeful future.

Children

Reuniting with parents and family and provision of physical and practical needs are even more urgent for children than for adults. Next, it is important to establish an environment of security, routine, education, contacts with peers and opportunities for play and drawing to express the children's experiences.

As for adults, it is important to give children opportunities to express themselves in one-to-one situations. Their physical and social re-enactments may then be connected to particular child versions of traumatic events, judgments and their meanings. For instance, children may feel that the disasters, deaths and subsequent parental strains and irritability are due to their badness. They may combine their concerns with atavistic meanings of predatory worlds, and monsters and witches.

Again, acute therapy, this time tailored to children, may prevent such symptoms and meanings becoming entrenched. Interventions need to be congruent with children's developmental phases and need to use their special modes and means of communication such as play and drawing.

Community Development

A vast array of literature is available on generic approaches and methodologies of community development. The aim of this section is not to compete with or repeat information which may already be available, but, rather, to consider the way in which a community development approach can best be utilised to enhance the process of recovery from emergencies and disasters.

The management and delivery of recovery services is based upon the disaster recovery management principles. The underlying basis of these principles is a community development approach. Specifically, in the recovery context this is defined as the empowerment of individuals and communities to manage their own recovery. Consequently, individuals and agencies involved in community development in recovery from disaster have a very clear role to support and facilitate individual and community recovery. In so doing, positive community outcomes are promoted.

Given that a community development approach is critical to effective community recovery, this section aims to inform the full range of government and non-government agencies and individuals likely to be involved in the recovery process. However, it is also essential that individuals and

agencies responsible for community development activities and initiatives be aware of the broader recovery system in which they operate, and integrate within it.

Outcomes

Measures and outcomes will differ between events and communities. Successful community development activities in the recovery context are typically those with a vision for an enhanced future in which the following key areas are addressed:

- sustainability;
- social justice;
- economic environment; and
- equity.

In addressing these areas, the community development program must support the affected community in working towards achievable and sustainable outcomes.

Detailed below are the key outcomes, which provide a benchmark for the effective implementation of community development in recovery from disaster. By addressing these outcomes in the context of a specific event, community development programs will contribute substantially to the empowerment of affected individuals and communities.

Informed community: a community that is informed and aware through provision of timely and accurate information.

Access to services and facilities: community members and groups have access to appropriate services, facilities and resources.

Sense of community safety: a community in which people feel safe in the pursuit of their daily lives.

Healthy community: a community that lives and promotes healthy lifestyles, through its primary health-care system, preventative health measures and environmental practices.

Participation in community life: a community where the development of cooperative partnerships is encouraged and actively promoted.

Sense of belonging: pride, care and involvement in the unique, distinct physical, social and cultural characteristics of a community.

Community cohesion: the capacity of a community to work together with respect for differences among people.

Community identity: expression of the life and character of a community through elements of tradition and history.

Economic recovery: development of a community's economic capacity.

Indicators of Need

Fundamental to any assessment of community need resulting from an emergency or disaster is change to the existing state of community. The challenge is to determine how much of the community's need is due to the impact of the event and to estimate what level of resource is required to support an effective community development approach to the recovery process. Generic issues that may indicate the impact of a particular event include:

- scale of the disaster;
- number of homes damaged or destroyed; and
- disruption of social networks.

This section details four key areas, which provide an indication of the level of need for community development activity and resource support. These are:

- physical effects;
- psychosocial/emotional effects;
- service capacity; and
- event profile.

A checklist of key indicators of need is provided under each of these headings. By considering these and any other issues relevant to the particular event, it should be possible to make a sound judgment of the need for additional resource support to an affected community, particularly through the employment of one or more community development workers. In addition, these indicators of initial need may also be utilised to inform ongoing monitoring and evaluation of level of community functioning.

Physical Effects

Depending upon the type and impact of a disaster, the physical impact upon the community may be a key determinant in the community's recovery. Detailed below are a number of key physical effects that may indicate a community's need for support through community development activity.

Indicators:

- percentage of community displaced;
- length of time people are displaced from community;
- loss of infrastructure (physical/social);
- scale of disaster;
- increase in request for material aid and financial assistance; and
- length of time to restore services.

Psychosocial/Emotional Effects

Psychosocial and emotional effects of a disaster are generally more difficult to measure than the physical impact. However, they are no less important as an indicator of the need for community development activity within a disaster-affected community.

Indicators:

- apparent rifts within community;
- expression of loss;
- manifestation of antisocial behaviour;
- downturn in economic activity;
- increase in crime;
- absenteeism from school;
- general feeling of apathy among community members;
- lack of motivation in workplace;
- increase in alcohol consumption;
- increase in reported incidences of domestic violence, child abuse, assault;
- increase in number of calls to telephone counselling services; and
- increase in number of requests for counselling (long-term).

Service Capacity

Another measure of the impact of a disaster and the subsequent need for community development activity is the capacity of existing services to meet the additional demands generated by the event.

Indicators:

- usual information lines broken;
- community requests—for information/meetings etc.;
- increased requirement for information on health and safety issues;
- sudden/unexpected/unusual event for the area; and
- service disruption.

Event Profile/Scale

A further, more general indicator of a community's need for community development activity is the overall scale and public profile of the disaster. Large-scale disasters may be very public events and the intrusive nature of the public and media attention which they generate may further complicate the recovery process for individuals and throughout the affected community. Consequences of this may include heightened anxiety, both individually and across the community, which may be alleviated through community development activity.

Indicators:

- number of deaths and injuries;
- range of responses required (indicator of scale and need for coordination);
- point of coordination required;
- high media profile;
- degree of dependence on services to meet basic needs;
- constant requests for information to and from community;
- type of disaster;
- unexpectedness; and
- how prepared a community was to face potential disaster.

General Indicators of Need

Other, more general, indicators that a community development program may be necessary include the following:

- increased residential property sales;
- increased church attendance;
- increased tensions in community;
- exacerbation of pre-existing community rifts;
- reports from child health services;
- increased need for medical services; and
- relative disadvantage of the community pre-event.

Funding Sources and Strategies

Based on generic community development principles and the Principles of Disaster Recovery Management, it is most effective for community development workers to be employed by an agency as close as possible to the affected community. Generally, this will be either the local government responsible for the affected area or, alternately, a non-government organisation with a relevant service delivery role in the affected community.

An effective means of employing community development workers in a number of large-scale events has been through the provision of state, local government, community or corporate funding. Regardless of the funding source, employment of workers through local agencies has kept the facilitation of community development at the level of the affected area, while provision of additional funding from external sources has reduced the financial burden of the disaster for the local area.

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

While funding arrangements and legislation will vary between the various states and territories, sources of funding for community development activity in the recovery context may include:

- Commonwealth Government;
- state government;
- local government;
- non-government organisations;
- service clubs/community groups;
- corporate sponsorship;
- philanthropic organisations; and
- donated funds.

The development of a funding submission will vary depending upon the type, scale and impact of the event, together with the demographics of the affected community. However, there are a number of generic issues that should be addressed in any proposal. These include:

- an assessment of community need, highlighting the relationship between the disaster and the subsequent need;
- an assessment of political and community expectation as a result of the disaster and its impact;
- the positive benefits of expenditure on community development (i.e. reduction in likely future expenditure on a range of other existing services: prevention versus cure);
- likely activities and programs community development workers may be involved in and the potential community benefits;
- the positive impact and benefits of community development programs in previous events; and
- the importance of community responsibility for managing its own recovery and the role of community development workers in facilitating this process.

Recruitment/Selection

In general terms, the employment of community development workers should follow established best practice in human resource management. However, the requirement to employ people to such a role takes place in the rapidly changing and politically sensitive environment often generated by a disaster. Consequently, there will be pressure on both human resource and recovery management personnel to quickly appoint an appropriate number of people who are suitable to the role.

In addition to organisational and political pressures to make early appointments, experience has shown that it is critical to the affected community that relevant personnel be appointed as early as possible in the recovery process. When appointed early, community development workers are more readily able to form effective partnerships and working relationships with the affected community. It seems that the closer their appointment to the time of the disaster, the more readily they are accepted within the affected community. Conversely, for those appointed a number of weeks after a disaster, it has proven far more difficult to establish the necessary rapport with their clients. However, this can be addressed if community development officers are integrated with the community recovery committee prior to commencing community development duties.

The two key attributes for community development positions in disaster recovery are:

- previous experience and knowledge of community development theory and practice; and
- an understanding of the affected community and any prevailing issues.

However, given the speed with which appointments need to be made and the impact of disasters on a broad range of community members, applicants with all of these attributes may not always be available. Consequently, selection panels may need to determine which of these areas is a priority and provide professional development and support to bolster areas of weakness. Another means of addressing this issue is for local agencies (e.g. local governments) to transfer existing community development workers into disaster recovery-based positions, backfilling their normal role.

Roles/Responsibilities

While there are a number of generic roles and responsibilities for community development workers, there are also a number of issues specific to the recovery context. In particular, the community development role in disaster recovery may need to use different processes from regular community development, requiring a more reactive approach than in some settings.

The overall aim of a community development position in the disaster recovery context is detailed below, followed by some of the key roles and responsibilities. A number of considerations, such as the specific features of the disaster and the affected community and the employing agency, may necessitate amendment to the list.

Aim

To identify, assess and plan to meet the needs of the affected community.

Objectives

To facilitate:

- a process of community consultation;
- the prioritising of the needs to be addressed;
- provision of services to disaster-affected individuals, families and the community;
- availability of timely and accurate information to the whole community in multiple formats;
- sharing of information between all key stakeholders and the employing body;
- availability of culturally appropriate services to families and individuals;
- community participation, self-determination and self-healing;
- identification and utilisation of existing and emerging community communication networks;
- utilisation of local services where possible; and
- community wishes in regard to rituals, symbols and anniversary events.

To effectively address this aim and the objectives, it is imperative that one of the first tasks undertaken by community development workers is to develop a work plan for their role in the affected community. Key components of the work plan include appropriate strategies, activities, timelines and performance indicators to meet the objectives.

Skills

Community development work in a disaster-affected community is invariably a complex task, requiring a high level of maturity, together with highly developed interpersonal and organisational skills. In addition to these fundamental requisites, the following skills should also be sought in anyone undertaking such a role:

- demonstrated understanding of community development principles;
- well developed mediation and conflict resolution skills;
- group facilitation skills;
- capacity to interact and work with a broad range of groups within the affected community;
- good report-writing skills;
- appropriate information technology skills;

- ability to work independently, under limited supervision and as a member of a team within a broad range of contexts; and
- creativity, flexibility and initiative.

CHAPTER 15

Financial and Economic Recovery

Economic Services

The following principles of economic recovery and the supporting strategies provide a framework for those planners, managers and workers assisting the recovery of affected communities.

Economic recovery from emergencies and disaster is most effective when:

- response and recovery actions actively support the recovery of business and industry;
- business and/or industry representatives participate in economic recovery decision-making;
- business and industry is returned to activity as early as possible;
- economic recovery strategies are an integral part of the overall recovery management process;
- measures are taken to mitigate the impacts of future disaster on business continuity; and
- there is coordination of all recovery programs to support and enhance the economic structure.

Strategies

These strategies to implement the principles of economic recovery following disaster are shown in conceptual, management and service delivery classifications. They are proposed as examples, rather than as an exclusive listing of strategies that might be invoked in all circumstances.

Conceptual

- Resettle evacuees into the affected area as soon as possible.
- Encourage emergency service agencies to implement procedures to support economic recovery (e.g. assistance with clean-up etc.).
- Support and promote the economic viability of the affected community.
- Purchase replacement goods and services locally via local businesses and tradespeople wherever practical.
- Maintain the integrity of local agencies and their capabilities.
- Build on existing organisations and networks through activation of available systems within the community.
- Encourage support of local trade and commerce.
- Encourage agencies to employ local residents and to purchase resources and services locally.
- Provide government grants, appeal distribution and charitable payments as financial, rather than material, assistance in support of economic and local business recovery.
- Avoid duplication of services and identify gaps.
- Maintain confidentiality and privacy principles.

Management

- Identify all segments of the business community that may be affected.
- Establish dialogue between business, industry and government representatives in the community.

- Establish a reference group which is representative of business, industry and employee groups.
- Provide the business community with information about the recovery process and resources available through the reference group and other appropriate mechanisms.
- Ensure business community participation in the community recovery committee.
- Conduct inter-agency briefings and feedback sessions on the effectiveness and progress of the economic recovery program.
- Identify threats to business continuity for consideration in risk management processes.
- Develop risk management assessments aimed at minimising future damage.

Service Delivery

- Ensure service delivery personnel have an awareness of the range of services available and appropriate referral processes.
- Ensure service delivery personnel are aware of the local economic circumstances pre- and post-disaster.
- Ensure service delivery personnel have good interpersonal skills and understanding of the local community.
- Provide financial assistance measures in a timely, fair, equitable and flexible manner.
- Ensure financial support is needs-based and timely.
- Provide financial counselling and management services.
- Advocate with financial institutions on behalf of affected residents.
- Ensure services and/or information is coordinated and provided by a variety of means:
  - one-stop shops;
  - newsletters;
  - outreach;
  - internet; and
  - telephone.
- Ensure availability and accessibility of economic recovery information and services.

Financial Services

The recovery of communities from the effects of emergencies and disasters is assisted by a range of financial measures, which provide a source of funds to business, government, householders and the community to effect recovery. These sources include insurance, natural disaster relief and public appeals.

This section details each of these schemes. It should be noted that eligibility under these schemes is dependent upon the terms of the particular policy, state arrangements and the trust deed, respectively.

Insurance

Natural and man-made events impact upon businesses, homes and community infrastructure in any area, often without warning. Insurance is a means of gaining financial compensation for the cost of restoration of the damage or loss caused by the event.

The major types of insurance cover that are available to policyholders to recover from emergencies and disasters are home and contents, property and business interruption policies.

Home and contents policies usually provide replacement and reinstatement insurance, which covers the cost of repairing and replacement of damaged property and contents. The less common indemnity policies take account of the age and condition of the items insured. If buildings and/or contents are underinsured, the settlement amount from the insurer will be reduced. There is also a need to be aware of the policy's exclusions of the risks not covered.

Commercial insurance is designed to cover many of the risks, including damage or loss caused by disasters, which are faced by business including coverage for buildings, vehicles, equipment, stock, plant, and fixtures and fittings, as well as business interruption.

Insurance Disaster Response Organisation

The Australian insurance industry, with decades of experience in dealing with the aftermath of disasters, knows that policyholders need fast, practical and professional help, which the Insurance Disaster Response Organisation (IDRO) has been established to provide. By coordinating the work of the Australian insurance industry when disasters occur, IDRO improves the recovery experience of policyholders and works closely with government, emergency services and communities.

The IDRO, with the assistance of the insurance industry, provides a unified presence and coordinated response to disasters. Together, IDRO and the insurance industry will help to provide:

- one central contact point for insurance information;
- a faster, more informed assessment of disasters;
- help with identifying insurers and lodging claims;
- support in resolving claims, assessing damage and rebuilding;
- improved collaboration with emergency services, relief organisations, media and government to provide the best service possible on the ground;
- post-disaster reviews to help evaluate costs and recovery times;
- support for innovative disaster research and recovery service development; and
- greater awareness by the public and the media of the roles involved in recovery.

Natural Disaster Relief Arrangements

The primary objectives of the Natural Disaster Relief Arrangements (NDRA) are to relieve the financial burden on states and territories of natural disaster relief and recovery efforts and to facilitate the early provision of a comprehensive range of relief and recovery measures to disaster affected communities.

The NDRA are prescribed by determination made by the Commonwealth Minister for Local Government, Territories and Roads. The determination sets the terms and conditions for the provision of assistance, which is provided by means of a partial reimbursement of state or territory eligible relief and recovery expenditures.

The NDRA Determination defines eligible disaster events and addresses the Commonwealth/ state cost-sharing mechanism, generic criteria for eligible relief measures and administrative procedures, as well as prescribing the general intent of the programme and conditions of assistance. However, implementation of measures, means tests limits and the dollar value of assistance are determined by the states within those parameters. Hence this section does not address how the scheme operates in a particular state or territory, but, rather, the parameters within which each is able to administer their disaster relief schemes.

This section aims to give an overview of the NDRA for disaster recovery planners, managers and workers. It is not intended to be a policy document nor an authoritative source for state or territory authorities with respect to Commonwealth reimbursement claims.

Eligible Disaster Relief Measures

The following disaster relief measures are eligible for NDRA funding. It should be noted that not all relief measures are activated with respect to each disaster.

Personal hardship and distress: this measure includes emergency payments, or payments in kind, to individuals for accommodation and food, as well as disaster relief assistance for the replacement of essential household contents and the repair of dwellings.

Restoration of public assets: this measure covers state expenditure on the restoration of essential public assets, such as roads and government buildings.

Concessional loans to primary producers: this measure provides for concessional rate loans to primary producers for carry-on needs, stock replacement and restoration of fixed assets.

Concessional loans to small businesses: this measure provides for concessional rate loans to small business operators for reestablishment of business operations following physical loss.

Concessional loans/grants to non-profit organisations: this measure provides for concessional rate loans and accompanying grants to non-profit organisations for the restoration of assets.

Psychological counselling: this measure covers psychological counselling adopted to alleviate distress that is a direct result of an eligible disaster.

Other acts of relief and recovery: other expenditures have been accepted as NDRA eligible under this provision, including some costs associated with disaster suppression, such as extraordinary fire fighting costs (ie normal operating costs are not claimable), and freight subsidies to primary producers.

Public Appeals

The Australian community has, historically, come to the aid of people affected by disaster through monetary donations to public appeal funds.

The magnitude of disaster events, in terms of such things as the impact on individuals, geographical area and costs, has primarily determined the source(s) from which a public appeal may be initiated. Generally, local authorities, non-government organisations or the media have initiated public appeals when the disaster affects the people, businesses etc. within that local authority's boundaries.

However, the various state governments and/or the lord mayors of the principal cities have initiated public appeals that have national or special interest or widespread impact and that are considered to be beyond the capacity of one local authority to manage.

Experience shows that there is a need to have procedures for handling public appeal funds available for use in the event of significant disasters occurring within Australia.

The EMA publication *Economic and Financial Aspects of Disaster Recovery* provides detailed information on the establishment, management and administration of public appeals, and also lists the likely losses to which public appeal funds may be applied and the information to be included in an appeal application.

CHAPTER 16

Physical Recovery

Repair and Reconstruction of Physical Aspects of Community

Introduction

This chapter provides an overview of key issues and considerations in the repair and re-establishment of physical aspects of communities affected by emergency or disaster.

Principles

The following basic principles underpin the provision of physical services during any recovery process.

- Involve the community where possible—decisions, strategies, supplies, labour and expertise.
- Learn from the problems. Where something didn't perform this time, do it better so that it has more resilience. Look around for similar things that may need fixing.
- Don't take shortcuts. Follow agreed processes and regulations. Identify any 'temporary fixes' for a permanent remedy. This may involve sourcing, training and equipping extra staff to handle the extra workload of the recovery phase.

Teamwork

Recovery workers are part of a multidisciplinary team. Recovery involves a large number of different professions working with the one community under trying circumstances. The prime objective of all recovery workers is the same—the restoration of normal community functions and quality of life—but minor objectives can be very different.

- All recovery workers operate under similar pressures of time and resources.
- All recovery processes are working with and around the same community members. The community members may feel that they are inundated with assistance, or that the recovery processes are giving them conflicting messages. It is really important to ensure that consistent messages are given, and that the recovery team operates with a spirit of cooperation.
- All recovery workers will be experiencing similar emotions caused by the privations they are working in, the plight of the community they serve, and the urgency of their work. It is important that the recovery team supports each other and feeds relevant information to other team members to assist them in their work.

Recovery works best when all managers involved in recovery communicate with each other, so that they can be aware of delays, problems and successes in other areas. This will help them involve the community in the best possible way without overloading community resources. Information on needs of specific people in the groups of the community should be passed on to the appropriate recovery managers speedily.

Recovery Processes

Recovery involves a number of identifiable processes. These are generic processes and apply to a greater or lesser extent to all aspects of physical recovery and to most other recovery tasks.

Investigation

This is the task of establishing the starting point for recovery. This involves surveying the damage and determining the extent to which normal operations have been compromised. In particular, the operation of key points in the system will be checked. It may not be obvious what is operational, as damage to parts of the system will prevent ready examination of other components.

Design

This is the task of devising changes required to bring the system back to full functionality. Frequently, a staged restoration is planned. Effective recovery doesn't happen by accident. It must be well thought through so that the adopted solutions meet both the short-term needs and the longer-term objectives for the community. A temporary fix can quickly restore service, but later work should ensure that a durable solution is achieved for long-term security of the system.

Resourcing

This is an important function involving the sourcing of funding, equipment, supplies, personnel and back-up or support to enable the subsequent stages of recovery to take place. Frequently, the damage to infrastructure in the affected community will make this task quite difficult. Where possible, resources should be drawn from the community itself.

Mobilisation

This involves the assembly of the required resources ready to perform the reconstruction/ restoration. Transportation difficulties will hinder this process, and so logistical planning will be central to the early stages of recovery.

Installation

This is the implementation of the designs. It may include construction, rebuilding or re-establishment of systems. In nearly all cases, a normally functioning community has the resources and systems in place to achieve this work, but the workload and shortage of resources in the community as a result of the hazard may make it necessary to augment the community resources from outside. A key part of this process is the use of supervision to ensure that the quality of all long-term solutions is appropriate. Documentation is also required to ensure that future operators of the system are aware of the changes that have been made.

Commissioning

The process of starting a new or modified system will require supervision and careful testing. Where the opportunity for testing is low, generally a higher level of supervision is required.

Monitoring and Review

This is the process of ensuring that the modified system is able to continue to meet its objectives. If, over time, the system is not performing satisfactorily, then necessary adjustments or changes to meet demands on the system must be made.

Dynamics of Recovery

The following are some aspects of the environment in which recovery takes place that makes it different to similar operations in a normal environment.

Compromised Infrastructure

The infrastructure we take for granted in performing our normal work functions may not be in place to assist us in the recovery process. Part of the mobilisation process will be the establishment of the parts of infrastructure that are essential to our recovery functions.

Changing Community Needs

The needs of the community and the recovery operation will change significantly during the course of recovery, and the workers need to be able to adapt to those changes.

- Where mistakes are made, it is important to acknowledge them, apologise, change and move on. Mistakes will be made when people operate under pressure, and trying to cover or defend them can prove very counter-productive. Documentation of decisions made and the processes by which the decisions were reached at all stages of the work will help in minimising the impact of mistakes.
- The changing environment of recovery will mean that plans have to be readily adaptable. The community needs will change, the ability of the community to manage itself will change, the weather will change, the availability of resources will change and, in some cases, political and administrative decisions and arrangements will change. Recovery must be responsive to those changes, and working closely as a team will ensure that the changes are monitored and passed on to all recovery workers.
- Starting a new or modified system will require supervision and careful testing. Where the opportunity for testing is low, generally a higher level of supervision is required.

Specific Issues

Some specific issues affect the recovery of physical aspects of communities. Examples are outlined below.

Recovery of Power

Restoration of reticulated power is quite complex and involves a number of steps including:

- generation;
- transmission;
- distribution; and
- consumer safety.

Assigning priority for restoration of the distribution network can be very sensitive. The process of restoring power to the grid is a significant commercial undertaking, but will not necessarily lead to community satisfaction. The electrical safety of premises must be checked before the connection of consumers can be completed. The personnel required for this task must also be factored into recovery operations.

- Prior to the restoration of a full and reliable power service, there will be use of portable electricity generators with implications for the recovery operations.
- Portable generators will place added pressure on fuel reserves.
- The use of these raises issues of fuel and motor safety. There may be a need for some education on safe refuelling practices for small engines, and on provision of adequate ventilation around engines and for exhaust gases.
- The issues of electrical safety are compounded in the unregulated environment of portable power generation. Appliances must be checked prior to connection to any power source, and portable generators must not be used to energise building wiring without checks and supervision by a suitably qualified person.

Timely restoration of power is important in the recovery of:

- water;
- sewerage systems;
- commercial activity; and
- normal accommodation functions.

Standards of Recovery Work

All recovery should be performed in such a way that it delivers appropriate levels of safety and reliability to the community for its longer-term safety and security.

- Early in the recovery phase, the restoration of basic services is a high priority, and 'quick fix' solutions may be adopted for the short-term. The temporary measures must be clearly identified and plans put in place to upgrade to a permanent solution. This will ensure that the systems in place are able to deliver a reliable and durable service for the community.
- Adequate design and detailing of long-term solutions—while temporary solutions can be devised with a minimum of planning and documentation, longer-term solutions need to be fully detailed. It is natural for the urgency of the work to put pressure on the design process. Where original plans are adequate, these can be implemented without delay, but where new plans must be made, they should be properly detailed so that all processes and administrative requirements are met. Shortcuts inevitably lead to problems later on.
- Insurance issues—after a disaster, a large number of insurance companies may be involved in making assessments and prescribing remedial measures. There may be some significant differences made in the assessments delivered by different companies. This can lead to confusion and dissention in the affected community. Where the losses are substantial, a high percentage of the payouts will be met by one or two reinsurers. In these cases, it may be possible to meet with representatives of the insurance companies and suggest that they try to adopt a more uniform approach. Insurers have key roles in establishing the standard of remedial work, and it is in their interest to have it performed to a standard required to prevent similar losses in the future.
- Use of appropriate skills in recovery—often volunteer assistance is provided to speed the process of recovery and, in many instances, this is a very valuable resource. However, where the skills available are not appropriate for the work required, some education or training must be provided to realise the true benefit of this resource. Where appropriate skills have not been demonstrated, it can place unreasonable pressure on supervisors and may lead to frustration for the community if work has to be undertaken twice.
- Supervision is a very important part of all recovery. This is required to ensure that the work meets the appropriate quality standards, and that all processes have been completed satisfactorily. The sheer volume of work during recovery places extra demands on supervisors, and relief and assistance may be needed to handle the workload. As well, where some training of volunteers, workers, or assistants is needed, this places extra demands on supervisors.
- Documentation is a necessary part of all workplaces. Documentation tracks decisions, provides information on the background to work performed, and provides a permanent record of what was done. Each of these is very important in the post-recovery, normal operations of the community. Often some of the people working in recovery will not be easy to access after the community has returned to normal operations. Documentation during recovery is vital to understanding the 'who, what, why and where' of the work performed. Where there have been deviations from plans in performing the work, it is vital that 'as constructed' drawings be completed, so that people maintaining the work later are aware of the details that were used in the construction.
- Planning approvals—concessions given in the rush to restore a community often do not work in the long-term interest of the community. It is important that proper processes are followed during the recovery process.

Case Study

The following case study is provided as an example of the practical implications of infrastructure damage following a disaster.

Scenario: after a significant tropical cyclone, the power is off for a complete community, and 12 per cent of buildings have received structural damage ranging from minor roof cladding loss to total building loss. There were no deaths and few injuries.

Re-establishment of Power

The power company gave re-establishment of power service a very high priority. A number of work crews were flown in by helicopter to commence work on the day of the disaster.

- A crew worked on the re-establishment of the generation facility, and had it operational on the second day after the event. No changes to operational procedures or to the facility were required.
- A number of crews worked on the distribution system. This involved changing damaged poles and replacing stretched or broken conductors. As the work was proceeding, pole fuses were removed so that the power company could regulate the reconnection of consumers.
- People at town meetings were asked about their priorities for the reconnection of power. A strategy was selected that would run the first line past the shops to the hospital. A spur line was run to the water supply headworks. Other lines could be extended from this spine later on.
- All consumers were informed that an electrician would need to provide a certificate that the wiring of each premises and all fixed appliances were safe. Only once the checks were completed was each pole fuse replaced.
- A large number of power generators was delivered to the town for hiring to commercial and residential customers. The shops and some accommodation were able to open on the second or third day because of the use of temporary power. The electricians in the town were kept very busy, checking wiring and appliances that were connected to temporary power, as well as issuing the certificates required for connection to the grid. There were some accidents and health problems associated with inappropriate use of portable power generators.

Water Supply

Without power, the water supply was inoperative.

- Rain water was harvested by many residents for drinking, cooking and rudimentary washing.
- By the second day after the event, bottled water was imported for use by residents, responders and recovery workers.
- One of the first services connected to the power system was the water supply headworks so that the pumps and chlorinators could operate. However, tests on the reticulated supply took a further day before customers could be given the all-clear on use of the town water. A number of services had to be turned off, because damage to the water pipes and appliances was causing leakage.

Health Issues

- Without power, food had deteriorated badly in some premises by day three. This was particularly the case where families had left their houses unattended. Uniformed army personnel were given the task of removing rotting foodstuffs from cupboards and refrigerators in occupied and unoccupied premises. It was important that the town people were informed of these operations, and were able to differentiate between people who were legitimately entering property and those whose presence was regarded with suspicion.
- Disposal of food stuffs and some pharmacy items was supervised to ensure that animals did not dig up any risky waste. Separate disposal areas were used for these materials from the green and building waste that represented the majority of the material removed from the town.
- A large amount of water was lying on the ground in and near the town. This was an effect of the heavy rain during the event, the storm surge and failure of drainage systems due to clogging with debris, mud or foliage. There was concern over the breeding of mosquitos and potential for spreading of mosquito-borne tropical diseases. Fogging of many of these bodies of water with larvicide took place within the first week of the recovery. There were no reports of vector-borne diseases during the recovery. There was some concern in the town of the health and environmental consequences of the fogging operations.

- The hospital had reliable emergency power, which functioned well until the power was restored. There was some minimal structural damage at the hospital and damage to some of the peripheral buildings. Water ingress occurred but was manageable and normal services were operating on the second day.
- There were a few injuries during the cyclone, and a number during the clean-up. The normal health and medical services in the town were able to cope with the cases as they came up.

Building Issues

A significant number of buildings were structurally damaged, and these required varying strategies for repair. A significant number of buildings suffered water penetration and also required significant building work.

The normal processes for building work required assessment by the insurer, quoting on the repair by a builder, development of plans for the repair, and then rebuilding. However, there were few cases in which this proceeded smoothly.

- Damage to carports, pergolas, verandahs. In a large number of cases, the shire building inspector had no plans of these facilities, and some of them may have been added by owner/occupiers without permission. An inventory of building stock was undertaken to try to minimise unauthorised reconstruction work. A number of visiting building inspectors were used for this work. Plans of acceptable reconstruction details for carports and verandahs were produced and freely distributed by the shire council.
- Minor structural repairs. The town's own builders and builders from nearby communities were swamped by the magnitude of the work. Other builders from outside the region also worked on the reconstruction. Many of these workers were not aware of the detailing requirements for cyclone-resistant construction. A number of consulting engineers worked closely with the building inspectorate to educate these builders and carpenters on the appropriate requirements for fixing. Where there were commonly occurring details that were shown to be inadequate, sketches of appropriate remedies were prepared and distributed to insurance assessors, builders, carpenters and inspectors.
- Rebuilding. Severely damaged buildings required complete reconstruction. There were discrepancies among insurance assessors as to the level of damage at which a building was written off. After encouraging a more unified approach, a number of decisions were reversed. Reconstruction of most residences was substantially completed within 12 months.
- Restoration of water damage. Water damage was assigned a relatively minor priority during initial inspections of buildings, but growth of fungal colonies and mould left a number of water-damaged buildings uninhabitable. Significant replastering was required. The extent of this problem was underestimated early in the recovery, and complicated the recovery after a month or so by increasing demand on supplies and specialist labour.
- Supervision of repairs was very difficult. The shire had one part-time building inspector, and the workload was much more than he could handle. A large number of repairs were made without building approval and with minimal quality control. It was also difficult differentiating between structural and non-structural repair activities.

SECTION E

Appendices

APPENDIX A

Principles of Disaster Recovery Management

The then Standing Committee of Social Welfare Administrators (now the Community Services Ministers' Advisory Council) in 1986 endorsed principles of disaster recovery management which have provided a successful management context for recovery managers.

- Recovery from disaster is an enabling and supportive process, which allows individuals, families and communities to attain a proper level of functioning through the provision of information, specialist services and resources.
- Effective recovery from disaster requires the establishment of planning and management arrangements, which are accepted and understood by recovery agencies, combat agencies and the community.
- Recovery management arrangements are most effective when they recognise the complex, dynamic and protracted nature of recovery processes and the changing needs of affected individuals, families and groups within the community over time.
- The management of disaster recovery is best approached from a community development perspective and is most effective when conducted at the local level with the active participation of the affected community and a maximum reliance on local capacities and expertise.
- Recovery management is most effective when human services agencies play a major role in all levels of key decision-making which may influence the well being and recovery of the affected community.
- Recovery from disaster is best achieved where the recovery process begins from the moment of disaster impact.
- Recovery planning and management arrangements are most effective where they are supported by training programs and exercises which ensure that recovery agencies and personnel are properly prepared for their role.
- Recovery from disaster is most effective where recovery management arrangements provide a comprehensive and integrated framework for managing all potential emergencies and disasters and where assistance measures are provided in a timely, fair and equitable manner and are sufficiently flexible to respond to a diversity of community needs.

APPENDIX B

Recovery Concepts

Underpinning the recovery management principles detailed in Appendix A are the following concepts which provide the basis for effective recovery management within Australia.

Community Involvement

Experience gained through a range of events from cyclone Tracy onwards is that the recovery process is most effective when individuals and communities actively participate in the management of their own recovery.

The involvement of the affected community in the recovery management process creates and supports community infrastructures and provides the resources necessary for successful recovery. However, recognition of the community capacity to sustain an effective recovery process will vary. Government and the wider community should complement and supplement local recovery initiatives where appropriate.

One of the most effective means of involving the community is through community recovery committees. These committees comprise representatives of government, private and voluntary agencies, as well as local councils, ethnic leaders and other representative members of an affected community.

Community recovery committees provide a mechanism through which information, resources and services may be coordinated in support of an affected community, priorities established and information regarding the progress of an affected community made available. These committees also provide a useful source of information and advice for the affected community and recovery agencies.

The advantages of community recovery committees include:

- reinforcement of local and community orientation of the recovery process;
- recognition of the common interests of members of the affected community;
- ensuring the equitable application of resources and services;
- establishing a mechanism for the identification and prioritisation of community needs;
- overall monitoring of the recovery process; and
- providing a means for identifying needs which cannot be met from within the community and which require resource support from regional/district or state/territory level.

Depending upon the scale and geography of a disaster, one or more community recovery committees may be activated. Where an event impacts upon a number of communities, it may be appropriate to activate local recovery committees for each of the affected areas. Subcommittees may also be required to meet the needs of special needs groups if a large-scale event takes place in a large urban area. In instances such as these, a central community recovery committee may also be necessary to provide an overall forum for advice, coordination and consultation.

Management at the Local Level

Management of recovery services should be devolved as much as possible to the local level. Experience has shown that when recovery programs and assistance measures are imposed upon a community, they are less effective than those that are managed at the local level.

Resource support will often be required from regional or state level. However, by maintaining participation at a local level, community input and a capacity for affected people to participate in the management of their own recovery will be maintained. In this way, state and regional recovery strategies, services and resources supplement and complement local initiatives rather than replacing local endeavour. The local authority may require additional management support following a major disaster. This should be provided through the responsible person, agency or committee at state/territory level.

Affected Area/Community Approach

Recognising that disasters rarely occur within the confines of a single local government area, management of the recovery process is generally undertaken on the basis of an identifiable affected area.

The affected area is the entire geographic area affected in any significant way by the event. It is distinguished by the losses that have resulted and by the common interests of the people involved. It may be contained within a single municipality or administrative region, or may cross municipal, regional/district or state/territory boundaries.

Affected areas are not always clearly definable and affected people may be from a dispersed population. For example, a shooting incident in a shopping centre or other public place may affect people from a range of different localities. In an instance like this, the affected community will need to be defined by other than geographic means.

Differing Effects/Needs for Different Communities/Individuals

The capacity of individuals, families and communities to restore losses and re-establish normal living patterns following emergencies or disasters will vary depending upon their own capacity, the specific circumstances of the event and its effect upon them. Consequently, assistance measures must be adapted to most appropriately meet the needs of those affected. This will require sensitivity, together with extensive consultation with affected people and communities.

Empowering Individuals and Communities

Throughout the recovery process, it is essential that affected people and communities participate in the management of their own recovery. The capacity of many individuals, families and communities to recover is likely to be diminished by the physical and emotional impact of a disaster. While assistance from outside may be required to overcome these difficulties, it is important that such assistance does not overwhelm those affected and detract from their participation in the management of their own recovery.

Emphasis should be given to supporting and maintaining the identity, dignity and autonomy of those affected by the event. Support services and assistance measures should be well advertised on a repetitive basis, and easily accessible, but allow people to make their own decisions. It should also be ensured that information be made available to people of non-English speaking backgrounds.

Recovery should be seen as a developmental process, which should seek to develop the community rather than just return it to the previous level. This is one of the potentially positive aspects of a well managed recovery process. Community infrastructure and functioning may, in fact, be improved following a disaster, rather than just reinstated to previous levels.

Minimum Intervention

The recovery management approach should be one of minimum intervention. However, recovery services and information should always be readily available within affected communities and be responsive to the range of needs evident.

External recovery services and resources are provided as a support to an affected community, to be used if the needs following the event are beyond the capacity of existing services and resources. Wherever possible, additional resources should be under local management through the network of existing service providers.

Recognition of Resourcefulness

In successfully managing recovery, recognition needs to be given to the level of resourcefulness evident within an affected community. As with other aspects of needs assessment, the capacity of individuals and communities to participate in the management of their own recovery and the level of need for support services will only become clear as the recovery process unfolds.

Planned/Timely Withdrawal

One of the most critical aspects of the recovery management process is that of the withdrawal of outside services. If this aspect of the process is not managed successfully, the positive effect of all previous efforts may be undone. A planned withdrawal ensures community involvement, ensuring a void will not be left. This is an area in which community recovery committees have a crucial role to play.

Accountability, Flexibility, Adaptability and Responsiveness

These represent four key aspects of recovery management. As with any area of public administration, accountability is an important issue. However, the most critical element of recovery management is the speed with which events may unfold and it is in this context that managers and staff working in recovery management will need to be flexible, adaptable and responsive in a potentially ever-changing environment. The need for these skills is further accentuated by the public, media and political scrutiny inherent in large-scale disasters.

Integration of Services

One of the lessons of emergency management over recent years is that, while response and recovery activities may be separate, they are not sequential activities: they should commence and initially occur as parallel activities. Consequently, it is essential that there be an integration of all services. This is particularly important when there is an overlap between response and recovery activities, such as when an agency has responsibilities in both areas, or where response and recovery agencies both require access to limited resources. Many of these issues can be resolved through the planning process, while those that cannot will be more easily negotiated during the operational process if effective liaison arrangements and networks are in place prior to an event taking place.

There is also a need for an effective integration of recovery services. This is the basis for a coordinated approach to recovery management. Again, the establishment of networks and management arrangements during the planning process will ensure that any difficulties which arise throughout the recovery process will be resolved as easily as possible.

Coordination

The provision of recovery services is most effective when coordinated by a single agency. This agency should be represented by an identifiable coordinator who has responsibility for the full breadth of recovery activities. To ensure community input into all aspects of the recovery process, human services agencies must have a significant role in all decision-making processes.

APPENDIX C

The Social Dimension of Emergency Recovery

Recovery

Emergencies and traumatic events have profound effects on those involved, but most people adapt to the events, if given appropriate support. Lasting personal and social changes are inevitable and restoration of pre-existing conditions has to be combined with adjusting to the new circumstances. New lives are established by making the event part of history (Kaniasty and Norris, 1999). The social environment of the aftermath is crucial in determining how well people adapt to stress, change and emergencies (Gist and Lubin, 1999; Coman, 2003). However, emergencies shatter essential assumptions for psychological health (Kauffmann, 2002), which are formed in community life and psychosocial forces maintaining the normal structures of life are released in personal life (Janoff-Bulman, 1992), families (Cohen, 1992), communities (van den Eynde and Veno, 1999) and society (Bolin and Stanford, 1998). The outcome of emergencies is as much a matter of how the environment supports recovery as it is related to the impact. Recovery must harness these personal and social processes to avoid a 'secondary disaster' (Golec, 1983; Raphael, 1986) resulting from the social confusion. People with access to a supportive community (even if its services and resources are impaired) recover better than those who leave (Haas, Cochrane and Eddy, 1975; Milne, 1977). Hence, recovery involves the social environment (Ursino, McCaughey and Fullarton, 1994).

This paper presents a model of the social phenomena of emergency recovery and predicts the dynamics of affected communities that enable social recovery to be managed as the context for personal recovery. It is based on observations of Australian disasters and emergencies over the last twenty years and on research findings in the literature.

The Nature of Community and Personal Recovery

Social process is embodied in individuals but expressed in collective events; society and its members express the same thing in different conditions (Mennell, 1998). An emergency for a group of people is also a group event. Recovery has to relate individuals and groups and incorporate community responses (Marsh and Buckle, 2001). Communities provide a shared life based on common locality, culture and routine within a communicating group in which members are united by their common identity in spite of personal differences (Wiggins and Schwartz, 2002). Loss of community threatens identity, independently of the loss of personal relationships (Harré, 1993). 'Communal bonds' linking people in communities depend on communication and provide the basis for daily life (Crittenden, 1992).

Personal recovery is shaped by each person's unique experiences, which are the core of personal identity (Wiggins and Schwartz, 2002). But people in the same place at the same time do not have the same experience in emergencies and their impact and recovery are different. One person may see the threat coming and anticipate death, while another is surprised; in a shooting, one person is wounded and survives, while a companion is unscathed, but expects to die. The effect of these experiences on social connectedness is determined by how they are communicated as a common body of stories by their community. Personal uniqueness may undermine or enhance collective bonds depending on the adequacy of communication.

Post-traumatic stress is associated with social isolation, which undermines constructive help and impedes recovery (McFarlane and Yehuda, 1996). Social embeddedness is crucial to impact; greater embeddedness is associated with reduced psychosocial impacts (van den Eynde and Veno, 1999). The incidence of psychiatric disorders in emergencies is usually not much beyond that expected normally (10–20 per cent, Smith and North, 1993; Carlson, 1997), although terrorist bombings show up to 40 per cent post-traumatic stress disorder, depression, anxiety and substance abuse (North et al., 1999) and it may be 100 per cent where recovery is not provided (Smith and North, 1993). Large-scale disasters also affect the mental health of other community members (Galea et al., 2002). These observations show that the social dimension provides the framework for assessing recovery resources, identifying impacts and anticipating reactions to come.

Most psychological reactions subside over the weeks following emergency, provided effective support is available. However, degradation of the quality of life and erosion of the fabric of relationships is widespread (Gist and Lubin, 1999). Change in community arrangements, itself, constitutes stress (Kaminoff and Proshansky, 1982; Farley and Werkman, 1990), but emergencies shatter the sense of continuity of life, community, culture and relationships (Gordon and Wraith, 1993) that are, themselves, resources for recovery. While not mentally ill, people are unhappy, go through the motions of life without enthusiasm, lose the heart of their relationships and neglect life goals. People with identifiable disorders are referred to services, but degraded quality of life must be addressed by understanding and supporting community processes.

The Community as a System of Social Communication

While the idea of community is often criticised (Dyke and Dyke, 2002), it is a necessary dimension of human existence (Miami Theory Collective, 1991). Communities are combinations of open-ended groupings, defined by organising cultural beliefs and practices, and are constantly open to change (Masolo, 2002). Social structures and systems include individuals who do not know each other personally. 'Society' denotes the complex set of social, national and legal relationships, political obligations and membership of interest groups and associations that support or constrain the person's access to goods and services. These all constitute 'social bonds' connecting people in social units.

The community is a system of social elements linked by bonds of influence, history and tradition expressed as various forms of communication (Luhmann, 1995). The position of social elements and sub-groups can be mapped in terms of their degree of social proximity and strength of attachments on dimensions such as culture, locality, religion, class or political affiliation (Woelfel and Fink, 1980). The complex system of bonds that link them vary from strong and close to weaker and more distant, providing a unique location that is part of their identity (Hormuth, 1990). These relationships constitute interdependent networks with multiple linkages and connections between members, intersecting dimensions, structures and boundaries (Dyke and Dyke, 2002), occupying a common locality. It has a relatively stable social structure of authority, power and prestige and a shared culture (Alperson, 2002) enabling members to meet each other's needs and provide security.

Emotional attachment, identification and common values hold the community together as different types of communicational relationships (Sigman, 1987), since communication is the medium for social action (Honneth and Joas, 1991) and social structure can be viewed as a system of communications (Luhmann, 1995). The social bonds are described by the nature, content and forms of communication (Harré, 1993; Gumbrecht and Pfeiffer, 1994). Communication between people or social units creates a relationship between them; its content affects the bond's quality rather than its existence. In functioning communities, social bonds include all modes of communication: personal verbal and non-verbal, proximity, movement and mass media, each contributing to the social fabric. Social interventions working with communication have direct consequences on the social fabric of those involved.

It is the nature of civil society that threats to survival are delegated to subsystems such as police, fire and medical agencies. The social system meets its members' needs, allocating functions to

individuals or groups, including leaders, representatives, service providers and subgroups with common interests; together, they form a complex network of need-satisfying relationships. A community can be likened to a crystalline structure with social units and subsystems bonded to each other in patterns of varying strength and distance as shown in Figure 1. Each community is differentiated in its own way, providing a unique fingerprint.

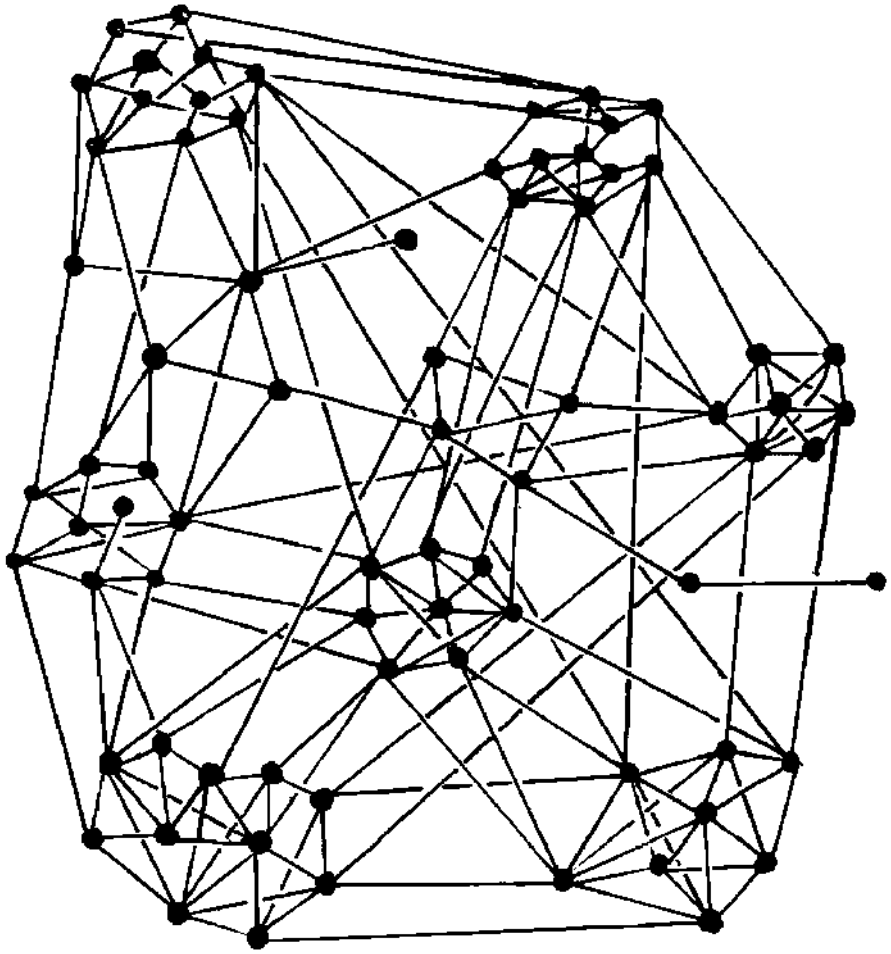


Figure 1. The community as a structure of social units and sub-systems bonded to each other on a variety of dimensions.

Figure 1 only shows one dimension, but the complexity of social systems requires mappings for many. Elements close to each other on one dimension may be distant on another. For example, neighbours may have different occupations in terms of their social-relatedness; colleagues in the same workplace may have distant religious, cultural or political affiliations. An informal system based on personal relationships exists alongside the formal one. Yet, as a whole, the structure provides a complex texture of stronger and weaker bonds that complement each other on different social dimensions, giving each person a unique identity; members divided on one dimension have bonds of mutual interest on others. Conflict is inherent to social life and structure, and can be seen as another type of bond. In functional communities, sets of close bonds compensate for weak, distant or conflictual ones.

Social relationships provide more than emotional support and comfort; people only function effectively as part of a working social system. Emotion, cognition, attitudes, identity and other essential aspects of personal functioning are inherently social and supported by participation in ordered social life (Harré, 1993). However, a disaster or emergency occurs on a scale beyond the capacity of existing community arrangements and imposes a threat that falls outside the functions of existing social bonds. The informal social system is often overwhelmed and people have to draw on their neighbourhood and formal community systems, perhaps for the first time. It has

an inherently social dimension, assaulting social structures (bonds) and functions (interactions) holding the community together (Kaniasty and Norris, 1999). The organisation and processes of the social environment comprise the greatest resource for personal recovery, mitigate the impact of stress and trauma, and determine the effects on health and well-being in the aftermath (Freedy et al., 1992). It is crucial to their recovery that the social system adapts to these needs, which means specific communicational relationships and opportunities.

Phases of Emergency Recovery

Research in emergencies has identified a sequence of community phenomena (Drabek, 1986), usually described as an initial state of disorganisation or shock on impact, followed by a rebound or 'heroic' phase in which the community demonstrates altruism and cooperation to organise itself for rescue. Then follows a period of high morale, common action and organisation for recovery, often referred to as the 'high' or 'honeymoon'. However, the unity does not last and a period of conflict and discord ensues between affected groups, government and recovery providers. Morale falls; people become prey to depression, despondency and emotional exhaustion, leading to misunderstanding and alienation at all levels of the social fabric. Often those who develop psychological problems after emergencies are found to be casualties of the isolation common in this phase (McFarlane and Girolamo, 1996, Kaniasty and Norris, 1999). Eventually this period subsides as reconstruction proceeds and normality is reconstructed, leading to a return to effective functioning. Although the extent and duration varies, the phases observed are consistent in spite of varied terminology, suggesting a social process, which, if better understood, may enable it to be more effectively managed to mitigate psychosocial health hazards.

Impact of the Emergency

The emergency imposes an immediate threat of death, injury or loss. Survival tasks replace the continuity and assumptions of normal life. Instinctual mechanisms are activated in people involved, causing a dramatic change in functioning. They become emotionally and physiologically aroused, with attention focussed on their immediate experiences and engaged in highly motivated survival activity (van der Kolk, 1996). Individuals in the same place at the same time often have different emotional experiences and social bonds are distorted as they struggle to survive the threats.

Emotional responses are usually suppressed in favour of action that is rational, given their knowledge, experience and understanding of the situation. However, it is often unclear what is happening, which may lead to apparently irrational actions. Panic is almost non-existent in disasters (Johnson, Feinberg and Johnston, 1994; Mileti, 1999; Cornwell et al., 2001). People cooperate, behave altruistically and preserve community values; officials fulfil their responsibilities, often overriding fear (Drabek, 1986). They are rarely unable to function or become dependent on outside help (Salzer and Bickman, 1999). Only when the entire physical and social environment is destroyed are survivors shocked and dazed, wandering aimlessly, dependent on outsiders for help, such as in Hiroshima (Mileti, 1999). However, people may experience strong emotions or numbing and a sense of unreality; in most cases, they have not experienced such a state of mind before and may not understand their responses. They may be confused, making it difficult for them to come to terms with what has happened. People may also feel euphoric identification with others and make heroic efforts in rescue and repair.

The normal social system is set aside because the immediate threat requires they act as individuals or in loose associations with those who happen to be near, regardless of previous relationships. Roles are discarded in favour of improvised responses to the immediate threat. Individuals or small groups act alone and feel isolated from the larger social unit (Salzer and Bickman, 1999). People alone at impact are likely to show more severe reactions, while those in groups have greater capacity to function; in organisations such as local government, businesses and emergency services, normal lines of communication may be suspended on impact and responses improvised, reducing consultation but increasing autonomy and decision-making at lower levels (Drabek, 1986).

Debonding from the Social System

Emergencies disrupt communication, which means social bonds as the medium for organising normal social interactions are suspended in favour of new improvised roles, because they are not adapted to meet such acute survival needs. As long as survival is uncertain, victims fall out of communication with others in their networks and focus on themselves. The priorities of normal social life recede in favour of survival tasks. Because of its importance, this situation means the normal purpose of social life—to remove threats of survival and allocate them to specialist social systems—fails, and the community is temporarily irrelevant. The accompanying separation and loss of communication means those involved fall out of the complex, multidimensional social system. People are often separated, not knowing what has happened until after the event. The area of the flood, or fire, or the building of a siege or massacre where people's fates are unknown, lies beyond a communicational boundary and beyond bonds linking them to the social organisation. Bonds to absent members are temporarily set aside, and those who do not abandon familiar roles of conduct may have reduced chances of survival (Johnson, Feinberg and Johnston, 1994; Cornwell et al., 2001). Those affected 'debond' from each other and from the social system, since communicational relationships are the expression of social bonds; they are plunged into the uniqueness of their own individual selves. Debonding is the suspension or setting aside of bonds that constitute the fabric of normal social life. It is a central concept in the social process inaugurated by disasters, since debonding, even for a short time, has repercussions on the community.

- The loss of the Tasman Bridge in Hobart disconnected two parts of the city and had far-reaching effects on the social relationships of people separated. Here, physical isolation led to a form of debonding.
- In a city shooting disaster, a worker went to the window of his office building when shots were heard. When his supervisor told him to return to his desk, he said, 'You're not the boss of my life!', indicating the social bonds of boss/worker were suspended in favour of survival needs.
- When the bomb exploded in a Bali nightclub, a young man was at the bar while his friend was on the dancefloor nearby. He was blown onto his hands and knees, with burning debris all around him. His response was to run out the back, climb through a window and over a wall into the lane at the side of the building. He was uncertain which way to go to safety; people were rushing past him. Then he thought of his friend and went back and found him injured. Only when he got him to medical care did he realise his own back and arm were severely burnt. Debonding is evident in his initial flight and confusion, and then, in another form, by the exclusive focus on his friend and ignoring himself. This persisted until the sense of safety was established when the evacuating plane landed in Darwin.
- A couple were approaching the café at Port Arthur, Tasmania when they heard shots. The husband knew their meaning from his army experience, took his wife's arm and walked her calmly past the building and away to safety. During the walk, which to the woman seemed an eternity, she expected a bullet in the back at any moment, was terrified, dazed and could only follow her husband's instructions unthinkingly. After spending hours hiding, not knowing where the gunman was, they returned home, but she was unable to communicate about the experience with anyone. She tried to go to work the next day and was prevented by continual vomiting; it did not occur to her that this might be related to the previous day. She debonded in the face of the threat, even in the presence of her husband, and this persisted in debonding from herself and led to an extended post-traumatic reaction.

The Disaster Event Horizon

Wherever communication is disrupted there exists an 'event horizon', marking the impact zone separating victims from the rest of the community. Event horizon is a term borrowed from the physics of black holes in space. Black holes are caused by ancient stars that are collapsing in on themselves. The gravitational field around them is so strong as to prevent the escape of light or other radiation and nothing can be known about them. However, at a critical distance away from

the star, the gravitational field is weak enough for light to escape, and events can be detected; this line is called the event horizon. The disaster event horizon is where communication between victims and the rest of the social system is disrupted, such as behind the fire front, within the flooded area, or inside the siege building or the police cordon where a gunman is active. For a time, those in the intact social system do not know what is happening or the fate of those inside, nor do the latter know what those outside know or whether they will arrive in time.

Debonding across the event horizon is disconnection from the social system. However, at the time, it is often submerged in the priority of survival and only felt later, when people become aware of how difficult it is for those outside the disaster to appreciate their experiences. At the time, debonding is adaptive, focussing on survival and making available their resources in dealing with the crisis. When debonding occurs to the members of a group or a locality in a large-scale disaster such as a natural disaster, bushfire, flood or earthquake, the social system described in Figure 1 undergoes a loss of structure. Instead of a multidimensional crystalline structure of interlinked social elements bonded together by communication, there are two zones of change. The first immediately precedes impact, where warning produces a tightening and multiplication of communicational bonds as people attempt to come to terms with the threat and decide what to do: this can be considered as 'hyperbonding'. The second zone is behind the event horizon, where the threat leads to debonding as those affected battle or struggle to survive, out of contact with each other and the larger social system. The effect of the emergency on the community structure is like a blunt instrument, wiping away existing bonds, rupturing the lattice of interrelated sub-groups, debonding elements, setting them adrift to avoid the threat as best they can. This situation is portrayed in Figure 2 below.

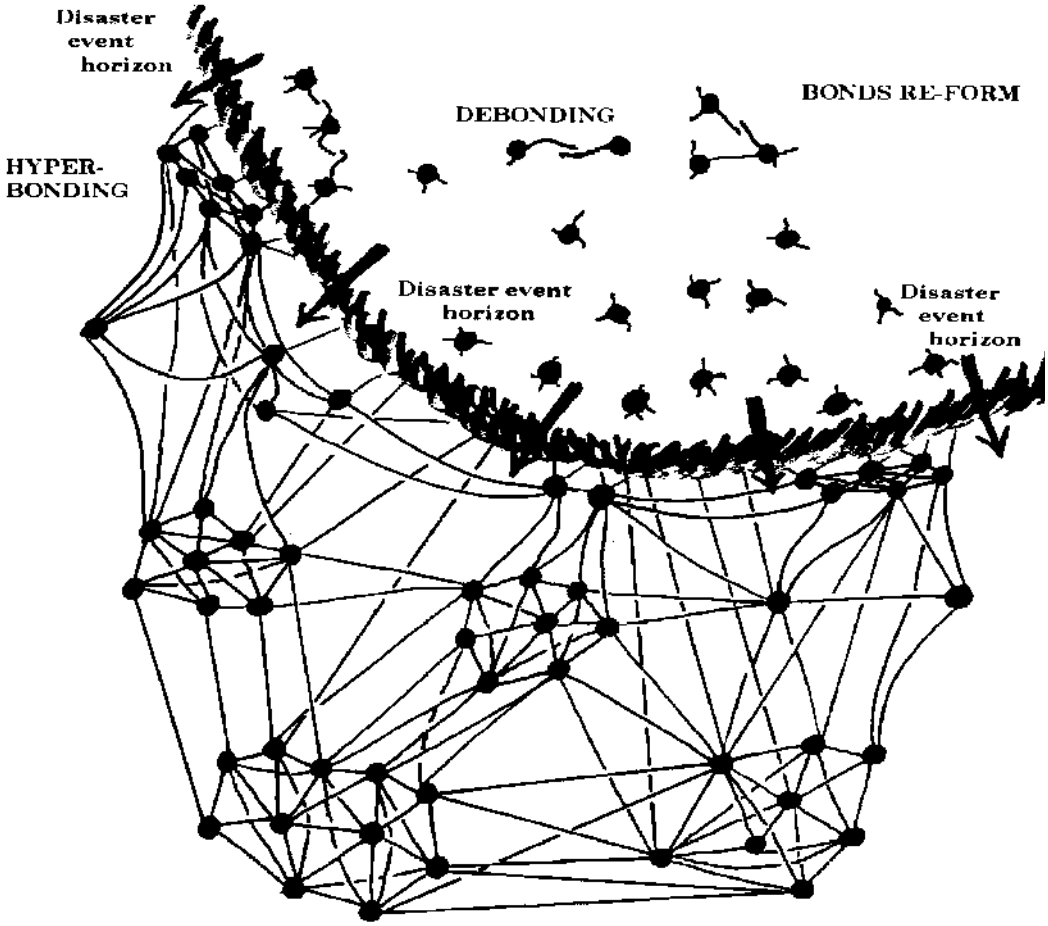


Figure 2. The disaster event moves across the community. Increased warning communications produce hyperbonding; communicational bonds are then severed at impact as people confront the threat individually, creating a communicational event horizon beyond which members are debonded.

Debonding initiates the social process that occurs in the recovery period. It represents a drastic alteration in the social environment and in its capacity to support its members (Gordon and Wraith, 1993). Isolation and disconnection from others, if too pronounced or lasting, seriously undermine a person's well-being (Kaniasty and Norris, 1999). Early intervention in the form of social contact and support as components of psychological first-aid is crucial to recovery (Gordon, 1997). Debonding initiates a compensatory search for connectedness as soon as the threat is removed, and this leads to the next process to be described.

Debonding in Event Disasters

Disasters that are more restricted in their impacts, such as transport accidents or terrorist attacks, can be likened to a sharp instrument devastating part of the community, severing specific structures and creating structural changes. Figure 3 portrays the disaster event slicing into the community fabric, wounding it by severing the bonds in its path and debonding immediate, adjacent and distant structures with bonds to the affected elements.

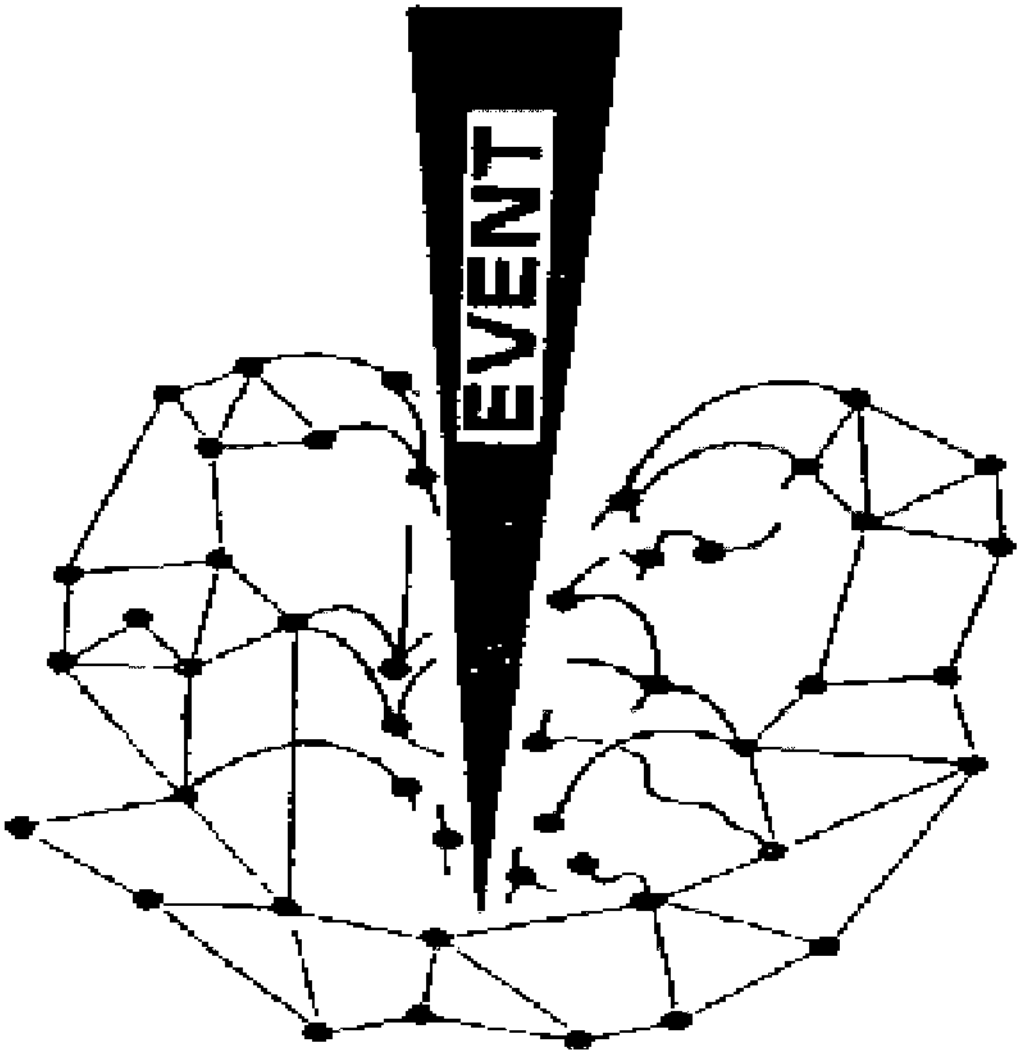


Figure 3. Debonding of community structures on impact of a limited scale event disaster.

- The boundary between those affected and those not affected may constitute debonding, as described by a victim of the Tokyo subway sarin attack. The victims were brought to the surface and lay in the roadway as others, unaffected, continued on their way to work. As described by the victim, 'The half of the roadway was absolute hell. But on the other side, people were walking to work as usual. I'd be tending someone and look up to see passers-by glance my way with a "what-on-earth's-happened-here?" expression, but no one came over. It was as if we were a world apart' (Murakami, 2000).

The pattern of impact differs in these two situations. Nevertheless, in each case the community as a whole is affected. Everyone is touched, depending on their proximity to the events, position in the structure, support systems and other factors. Debonding accounts for the confusion common in the immediate aftermath, since structures needed to deal with the disaster are, themselves, affected (Auf der Heide, 1989). The social aspect of disaster results from the structure, itself, being subjected to trauma, although no-one can see the community as a whole, since each person only sees his or her own part.

Limitations and Variation of Debonding

Like all social processes, debonding is variable. It indicates the existing community structure has been temporarily abandoned. Although described as a moment and part of a sequence, it may be incomplete or not for the whole community at the same time. Debonding may be partial or pervasive, depending on the severity of the threat. Some people debond more fully than others, while some rebond more rapidly than others. It may be predominantly psychological when a person expects to die and readies themselves by detaching from loved ones and their future; it may be predominantly interpersonal when a person is changed by their experience and the assumptions on which their relationships have been based no longer seem important; it may be predominantly social when isolation or lack of knowledge mean other people or the community are not available or cannot be relied on; or it may be a combination of all three. Debonding is a psychosocial process, indicative of the normal social structure being set aside because of the threat, and may occur at any point in the sequence. In a drought, for example, debonding develops gradually, where economic hardship and fuel costs stop rural people travelling and they neglect social interaction. Wherever a highly arousing threat occurs that falls outside normal social life, some form of debonding can be expected.

Immediate Post-impact

As soon as the threat has passed, victims become rescuers, bursting into action, usually in a controlled, rational manner, providing or seeking help with skill, competence and effectiveness (Mileti, 1999). High levels of altruism and self-sacrifice are common in most disasters. Up to 75 per cent of healthy survivors engage in search and rescue activities without waiting for official response and make their own way to medical or other resources, turning first to familiar local providers (Drabek, 1986). Social networks are strengthened with common values of sacrifice and altruism, and barriers tend to disappear (Leiversley, 1977). People gather in the affected area and milling is common by those not directly affected. Convergence on the disaster site, combined with the state of high arousal and natural rebound from debonding, motivate intense social connectedness as people re-establish communication.

Behaviour in the aftermath initially involves seeking information and contacting loved ones and community members. However, information is often incorrect or unavailable, continuing the isolation or initiating stress if the event horizon persists and debonding cannot be reversed. Reuniting family members leads to a temporary heightening of morale and reduces the emotional impact of the emergency (Grossman, 1973). Where officials interfere with the need to re-establish contact with family members, it is common for people to become aggressive and disobey efforts to control them (Drabek, 1986). When the safety of others is established, groups spontaneously form around tasks, but demands often exceed capability. Coordination and authority are lacking, community preparedness and experience are often low, and the scope of the crisis is ill-defined. Community resources re-orient towards recovery tasks by reducing some functions, and formal channels of social participation are replaced by informal mutual support (Drabek, 1986). Many pre-disaster functions are not suited to the aftermath, encouraging new groups and community leaders to emerge; disaster-specific norms and principles begin to organise those involved (Drabek and McEntire, 2002).

A disaster community is created by the combination of convergence, altruism and high arousal. People are united by immediate, obvious tasks. Community identification is strengthened and public order spontaneously upheld. Intolerance of outsiders and temporary reduction of social

distance, especially class boundaries, mean inter-group differences decrease conflict and increase cooperation. The influx of workers and volunteer helpers and their intensified involvement with each other often results in loss of normal boundaries between individuals, families and groups. This state has been called the 'altruistic' or 'therapeutic community' or 'democracy of common disaster' (Drabek, 1986).

Rebound from Debonding

People require systematically organised bonds and relationships to function effectively. Their loss is highly threatening. Therefore, debonding is countered by a powerful tendency to establish new networks as soon as possible. This process of rebonding may last minutes, hours or days. Debonding may persist longer in some situations than others, and rebonding may occur in one locality, while debonding persists elsewhere. However, debonding evokes the need to rebond. In the immediate aftermath, a complex process of setting aside, breaking and reforming the various types of bonds occurs.

The social structure arising in these conditions is not the crystalline structure of Figure 1, since survival issues are still paramount. People form indiscriminate, intensely bonded survival-oriented groups. The atmosphere of intense comradeship and high morale is referred to as the 'honeymoon' or 'high' because of the altruism and cooperation, indicating the closeness and uniformity of the bonding (Raphael, 1986; Drabek, 1986). The intense relationships formed do not acknowledge differences, but are conditioned by the needs of the situation. The community becomes an undifferentiated unit. People are strongly bound into a survival-oriented, unified group, organised along simple communication lines based on the disaster response system and immediate needs. Bonds re-form out of the multiple communications, constituting a relatively homogeneous network.

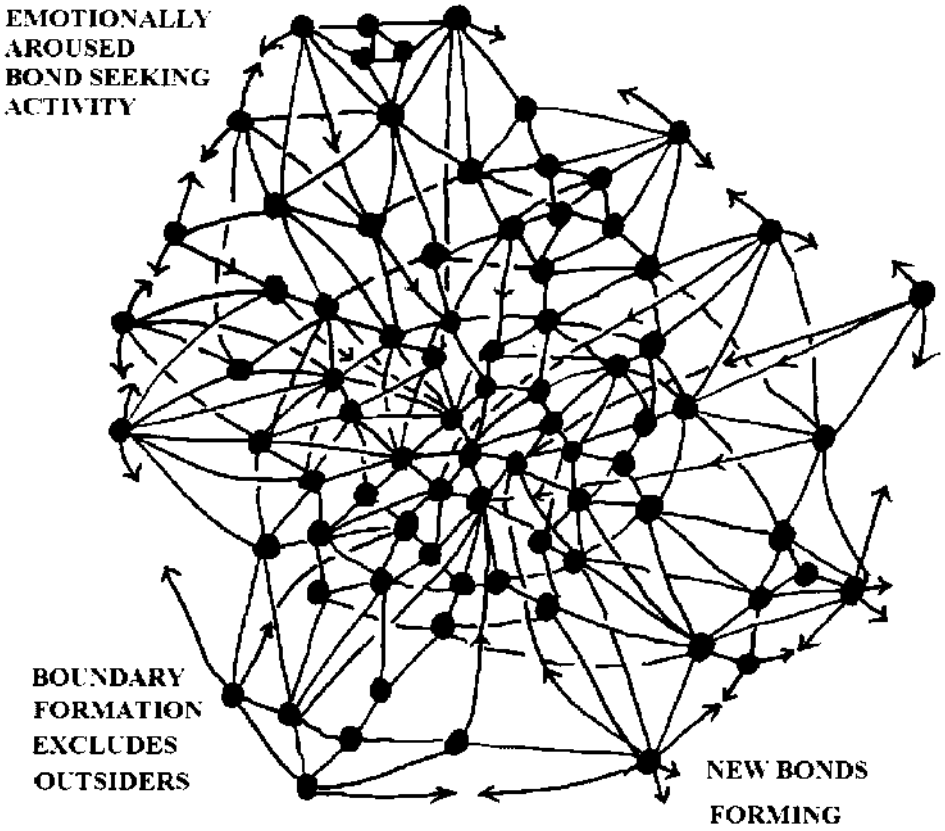


Figure 4. Following impact, debonded community members form intense, indiscriminate social bonds based on the common disaster experience and the tasks required, forming a 'fused community'.

It is a social system defined by the survival task, but it dispenses with the formality and functions of normal social life that are not directly related to the emergency. The new system has little hierarchy and involves everyone in a common process. It combines personal support functions and practical tasks, unifying the previous formal and informal social systems. Since it lacks the intricate communication structures in the pre-disaster community and the distance between clusters and sub-groups is lost, it can be described as a 'state of fusion'. Figure 4 shows the community in a state of fusion following an 'area disaster' with a widespread impact.

Bonds formed under the pressure of these circumstances display a number of characteristics. They tend to be:

- task-focussed;
- present-oriented;
- uni-dimensional around the disaster;
- hyper-aroused because of the danger and unusual situation;
- indiscriminate, as people attach to whomever is available;
- stereotypic around the common experience;
- differences are viewed as irrelevant; and
- unstable.

The bonds draw community units closely together into a cluster rather than the pre-disaster differentiated lattice.

Specific emergency scenarios may determine different patterns in these phenomena. A bushfire or hurricane impacting on a whole community causes a relatively uniform process; in droughts, slow-moving floods or economic emergencies, the process is more gradual and inconsistent. Fusion may exist alongside debonding and, while many social activities cease due to economic hardship, people readily group together for mutual aid outside normal structures, but remain focussed on the crisis.

- In an evacuation centre surrounded by bushfire on Ash Wednesday, 1983, people waited, not knowing if the building would burn with them in it. They sat in family groups, with pets and animals, barely talking. As people came in, they announced what they knew, which was rapidly passed from one to another. At the height of the danger, someone started singing and everyone joined in, except for a few who were in tears. This describes the fusion where previous relationships and differences are set aside and replaced by the emergent relationship of collective survival.

Fusion in Event Disasters

In an 'event disaster' such as a criminal event, only part of the community is affected, so rebonding and fusion are more restricted. Rebonding occurs wherever debonding was brought about. Affected structures fuse along the line of impact. While the surrounding structures maintain their previous relationships, impacted structures fuse like the formation of scar tissue in an untreated wound. Like scar tissue, fused structures contract, pulling surrounding organs out of position and interfering with their proper functioning. In the community, this is expressed by affected parts forming an intensely bonded sub-system whose characteristics relate more to the disaster experience than pre-disaster functioning. But surrounding structures still maintain normal roles. There is a discrepancy between impacted and non-impacted parts of the system. Figure 5 shows fusion resulting from rebonding along the line of impact in such an emergency.

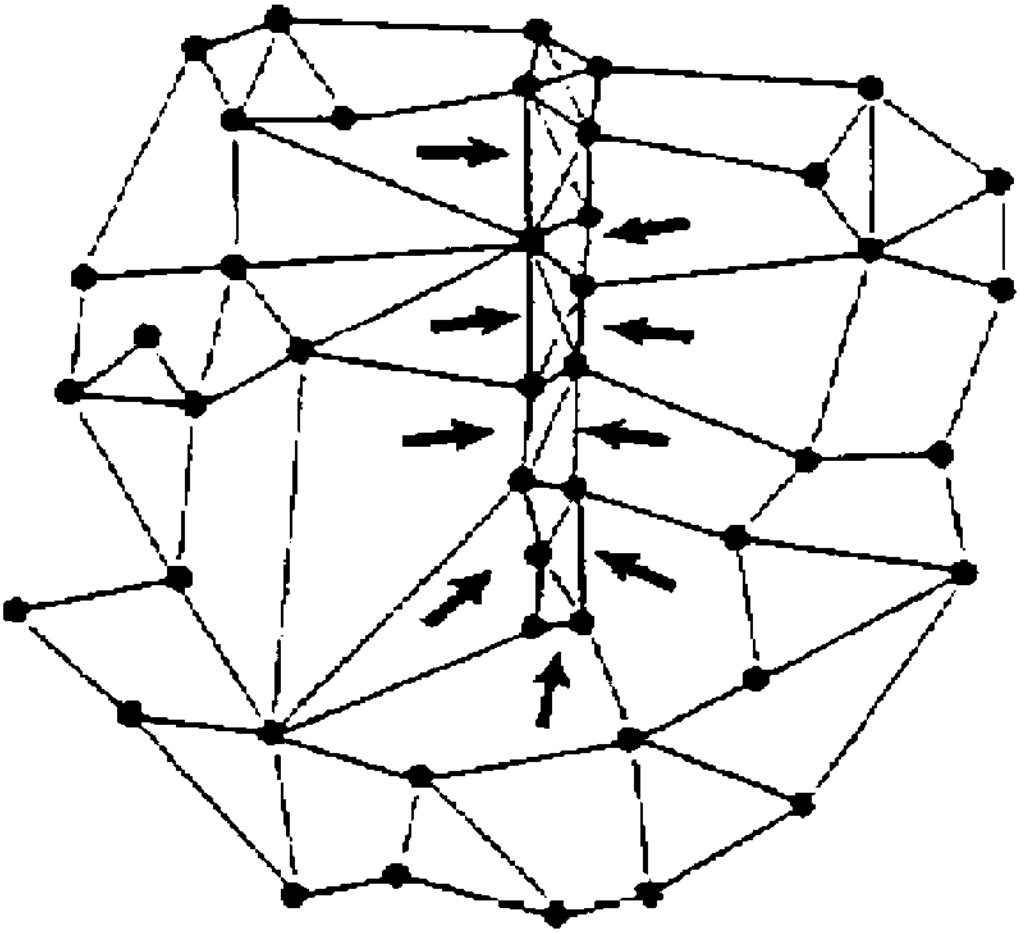


Figure 5. Rebonding and fusion of affected structures in a restricted impact or event disaster.

Fusion as Mobilisation of Recovery Resources

In the state of fusion, members identify with each other because they share the same experience; they feel strong emotional attachments because of what they have undergone together and rapidly develop a shared disaster culture of stories, incidents, symbols and memories. It is a radical reorganisation of the pre-disaster structure, directed to new goals. Compared to the normal system, it is deregulated, but adapted to meet the requirement for a social structure to fill the gap caused by debonding. In the fusion, the community expresses determination, makes heroic efforts, combining many people largely without disputes and disagreements. Fusion has a protective function, immersing members in collective action. If it is prevented by evacuation and loss of contact with other victims, debonding may be reactivated and recovery impaired in spite of being embedded in the wider society (Kaniasty and Norris, 1999). The more total the fusion is, the better the recovery commitment, but the greater the social disruption.

Heightened community solidarity, intolerance of outsiders and temporary reduction of social distance, especially across class boundaries, occurs. Inter-group differences are lessened, cooperation is increased and conflict reduced. Unification of the community compensates for reduced organisation. Community cohesion in the fusion is favoured by external threat, high consensus about priorities, urgent common problems, focussing attention onto the present, levelling social differences and strengthened community identification (Drabek, 1986). The presence of others sharing the same fate helps individuals evaluate the impact and validate their judgments, but may also encourage them to make light of their own problems compared with others. Mobilising community support and sharing the experience allow assumptions that may have been shattered by the event to be re-established by collective experience. However, if all members are affected, supporters may be unable to meet the needs owing to their own condition (Kaniasty and Norris, 1999).

As community resources re-orient towards recovery, some functions are neglected, such as enforcing regulations and laws irrelevant to the situation; crime is likely to be reduced (Siegel, Bourque and Shoaf, 1999). Formal channels of social participation are replaced by informal mutual support functions. Disaster-specific norms and principles organise activity. While there is continuity of social resources and culture, there is discontinuity of functions not suited to the emergency situation as new groups, organisations and leaders emerge (Drabek, 1986). Emergent roles are filled because of people's experience, skills or other relevant qualities, rather than their formal position.

Fusion as a Threat to Community Integrity

Some destructive consequences of the fusion begin to follow as the loss of interpersonal distance becomes more evident. People may feel they lose privacy and respect from the recovery system. They may initially commit themselves deeply to the recovery task without regard to their own needs, and then feel obligated and unable to take time or privacy to attend to their personal and family life. The community may predominate at the expense of individual needs. The fusion also sets up personal and community expectations that prove impossible to meet and may lead to tensions and conflicts later. The closeness created also means anyone not present at the point of fusion is felt not to be 'one of us'. It is expected they cannot understand what it was like or they lack genuine concern for the community. The social system becomes overloaded because everyone needs more than is available, and its changing emotional state makes it unstable. There is rapid boundary formation between the fusing social structures and others, resulting in exclusion, gate-keeping and rejection of non-affected others, even when their help is needed. The boundary around the community forms for protection and to facilitate organisation, although it has the effect of excluding or treating outsiders with suspicion, even when they have legitimate roles and contributions. The fused community orients around the common problems and intensity of relationships and this risks debonding it from the larger society on which recovery depends (Drabek, 1986).

If they are not present as the community fuses, incoming recovery workers may have difficulty in gaining acceptance as they endeavour to insert themselves and restructure the system to serve recovery needs. Recovery agencies and service providers who are present are welded into the system and become part or it. A similar attitude can develop between sub-groups of directly affected people and other less-affected parts of the community. The fused community or those parts in fusion are also likely to overvalue their own capacities and not clearly identify their need for outside help, or they may reject help at the expense of exhausting their own resources.

The fusion breaks the continuity of normal community structures in a highly energised reorganisation of the communicational system. It is a secondary source of disruption after debonding and a threat to the pre-emergency structure that provides for long-term needs. Provision of short-term emergency needs may be at the expense of long-term recovery and return to normality. Tension develops between these trends, which reverse the fusion state, often within a month (Sweet, 1998). Pre-existing social, ethnic or group tensions cause fusion in groups rather than the whole community, resulting in the early manifestation of disaffection and conflict. The fusion state is unsustainable and relatively brief, leading to the next process.

Short-term Personal Responses

Although many people do not suffer from traumatic stress reactions, numerous common responses indicate the acute stress that has been experienced and register the unusual efforts and emotions involved in surviving.

- Psychosomatic symptoms are common such as fatigue, high blood pressure, digestive problems, overeating, headaches, diarrhoea, constipation, rashes, hair loss, sweating and trembling.
- Symptoms of high arousal persist, such as exaggerated startle responses, over activity, reluctance to rest, lack of awareness of needs, restlessness and sleeplessness, anxiety, nervousness, irritability, anger, and feeling overwhelmed and hopelessness about the future.

- Cognitive problems include difficulty with memory and decision-making, thinking clearly and setting priorities.
- Emotional reactions include feeling confused, dazed, numb or detached, unable to feel it is real; moods fluctuate, swinging between enthusiasm, optimism and confidence at times, and then depression, pessimism and feeling overwhelmed. Other common feelings are guilt, fear of the future, blame and inappropriate humour.
- Interpersonal reactions express continuing debonding, by feeling withdrawn or detached, or fusion in clinging, insecure feelings and wanting to know where loved ones are all the time.
- Social reactions show heightened concern for others, anxiety and compassion, perhaps competing with self-centred concerns and greater involvement with community events. Indications of support or lack of it from the larger society are deeply felt. They may be portrayed by the media or political actions, relief measures or other events that have symbolic meaning for the affected community.

Over-involvement in the collective action of recovery may postpone or interfere with the resolution of personal reactions by continuing a coping mode which prevents people from identifying and attending to their needs (Forster, 1992; Yates, Axsom and Tiedeman, 1999).

Stabilisation and Social Differentiation

As the emergency and its consequences subside and demands of life accumulate, the unity of the fusion breaks down. The fusion as an unstable, expedient measure to cope with threat cannot provide for longer-term needs. Its temporary arrangements must give way to the re-emergence of the normal multidimensional crystalline structure. Compared to the homogeneity of the fusion, this involves a process of 'social differentiation', as social units and subsystems previously unified around the common values and priorities of the emergency reorganise themselves into a complex system around differences of role and relationships. Ideally, this is a planned transition from the highly energised, improvised collective state to the pre-established community. However, lack of planning, inexperience, conflicting agendas and social inequality introduce tensions and conflict. While the differentiation process itself is necessary and inevitable, it proceeds according to the nature of the emergency and community. Two pathways can be described; first, uncoordinated resurgence of differences causing differentiation through conflict; second, coordinated development of social complexity integrating emerging needs into the existing system.

Structures to serve normality must be re-established. Although there is a tendency to maintain high emotional arousal, unrestricted personal interaction and communication, people soon feel the need for separation, privacy and disengagement. Formal systems reassert normal functions, which seem ponderous and bureaucratic to those still highly aroused. Shared experiences and emotional responses make the fusion like a pressure cooker, and social interaction exacerbates stress and increases aloneness. Rumours amplify conflicts and inequalities, resulting in growing tension (Sweet, 1998). Seasonal and political timetables demand the society returns to its normal functioning and exclusive concentration on the disaster cannot be maintained. It has to convert from a social system oriented around the disaster to one in which the disaster is only one of many problems.

Signs of the developing conflict phase include general disorientation about the recovery situation, failure of leaders and recovery organisations to respond effectively to needs, agencies clinging to pre-disaster modes, reduction in social controls, weakening of the rights and obligations defining members' roles in the community, disruption or breaking down of traditional groupings and interpersonal loyalties, practical or emotional inability to plan for the future, and reduced openness to innovations (Klinterberg, 1979; Kaniasty and Norris, 1999).

Differentiation of the Fusion

The fusion is attacked by three distinct forces attempting to develop a differentiated structure, but for different purposes. The first and most obvious is the need to shift from a survival-oriented system to a recovery system with a variety of integrated short and longer-term services. This

system has not existed before if the disaster is a new event in community history, and it involves new agencies and personnel and must relate to organisations outside it. It has to be formed from the existing fused community and imposes rapid change on it.

The second force is the pre-disaster community structure, which is not designed to meet disaster demands. It was a highly organised system consisting of local government, local services and agencies, and local branches of state services, as well as individual community members. It must undergo rapid change to adapt to the new requirements, but also re-establish itself and take stock of how the disaster has affected its ability to carry out the task. It must emerge from the cooperative mass of the fusion and establish formal links of communication and procedures. This can be seen as meaningless bureaucratic activity compared to the emotional high of the fusion.

The third force operating against the fusion is the emotional reaction of community members. The unity conferred by everyone having been through the same events is a basis for comradeship, but the differences separating members from each other soon reappear. It becomes evident that the sense of unity no longer applies, and conflict occurs. In a bushfire, those who have lost houses have very different needs from those who have not, yet they also are affected, sometimes severely. It may be difficult for these groups to understand each other when decisions have to be made. The intensity of emotion initially bound up in the collective sharing of the fusion takes on a more personal meaning as the consequences of the disaster sink in. Anger begins to emerge and there is often a search for someone to blame.

These three forces struggle simultaneously in the same space with the same material—the community members and resources—in order to achieve their objectives. The fusion can break up constructively by establishing a recovery system, which integrates the forces by recognising the various elements—emergent disaster groups, pre-disaster community structures, formal and informal recovery agencies and services, and those planning for future development—and integrating them into a communication and decision-making system. Tensions and problems can then readily be identified and tackled. But the local system must ensure the recovery program is appropriate to the community and takes account of historical and other factors, or else it will make mistakes and impede the recovery process. However, if these forces are not managed as they arise, differentiation may be destructive. The re-emergence of the pre-existing local system carries its own tensions and historical conflicts that use the uncertainty of the recovery period to gain advantages, and power struggles may occur.

Emergence of Cleavages

Pre-existing divisions and conflicts overridden by the initial fusion begin to re-appear. Social, political, ethnic, cultural and economic ‘fault lines’ reassert themselves. Sometimes, established social tensions associated with ethnic or disaffected groups emerge; in technological disasters, solidarity develops in interest groups rather than the whole community (Mileti, 1999). This often occurs at a precise turning point, when the various forms of deprivation begin to be felt, which marks the beginning of a conflict or ‘bitch phase’ (Drabek, 1986). Conflicts develop between community organisations, disaster relief agencies and emergent organisations, exacerbated by pre-existing group, organisational and community differences. Emergent groups, themselves, often begin to manifest internal divisions in this phase. The disaster and its effects may be exploited for political purposes. Conflict is amplified by politicising recovery, activating ideological values that do not reflect loss patterns (e.g. equal opportunity, anti-discrimination) and vested interests inconsistent with community needs (Drabek, 1986). Experiences and emotions are communicated in the close interdependence of the fusion, where social interaction and emotional contagion exacerbate stress and increase the sense of aloneness rather than alleviating them. Rumours thrive, amplifying conflicts and inequalities. Personal relationships reflect these qualities, as couples find each other unable to be supportive and listen to problems because of their own stress (Drabek, 1986, Kaniasty and Norris, 1999).

A ‘pattern of neglect’ is often evident, with some groups receiving relatively less services than others, such as older people, those on the lowest incomes and the ethnically marginalised.

Outsiders without prior personal involvement in the community may be able to assist in bridging these conflicts. Aid provided to common community services tends to be less divisive and more generally accepted. However, a 'pattern of concern' is also often present that identifies vulnerable groups and mobilises community resources to assist them. Support networks and help patterns are extensions of pre-emergency personal and community relationships, indicating the therapeutic community is not purely emergent but the enhancement of pre-disaster resources. Those who trust the community and its structures are more likely to provide help to others (Drabek, 1986). In spite of this, support available is often insufficient to compensate for the deterioration in personal and community relationships as social networks become overloaded. Disappointment, disillusionment and cynicism develop, as the idealistic, altruistic atmosphere is lost, which, for some people, can lead to lasting bitterness (Kaniasty and Norris, 1999).

The emergence of differences in the unified experience of the emergency comes into conflict with stereotypic assumptions engendered by the focus on external circumstances of the emergency. Pre-existing differences and those deriving from the complex effects of the emergency tend to be set aside by the fusion, but become important with time. The emotionally charged communication of the fusion promotes rumours, myths and irrational beliefs about the actions or responsibilities of community groups. Tensions are amplified since fused social structures have inadequate systems to evaluate information or manage emotions, and they develop into conflict and rivalry. They are expressed personally, but represent differences in impact of the disaster on groups. People have said the fusion 'represented a high point' in their lives, 'why couldn't such cooperation always exist' and 'now you can see how much good there really is in human nature': its loss is a great disillusionment. If these events are not managed constructively, they can harm the community and aggravate members' post-disaster reactions.

The boundaries between these groups generate animosity, competition and conflicts as their representatives meet in public forums. The multiple differences embedded in the apparently unified social system of the fused community, when brought into salience by recovery processes, risk splitting it into bitterly competing groups. The differences cut across existing disaster-related or pre-existing bonds and sever their connections in the intense emotions generated. The boundaries between these groups can be likened to 'cleavage planes' in the community that split a previously cohesive unit. Cleavage planes in gems denote a plane in the structure where the bonds are weakened and it will break if cleanly hit. In the social structure, cleavage planes are contact boundaries between groups with different interests, attitudes, backgrounds or experiences. Normally, multidimensional bonds holding the community together inhibit cleavages from occurring, but, after disaster, the community is vulnerable to such splits because the fusion is one-dimensional around the disaster. Any issue differentiating members or sub-groups constitutes a potential cleavage plane. Figure 6 shows cleavage planes splitting the social fabric of the fused community as various types of differences come into operation during the recovery period. The effect of this is to sever bonds by the breakdown of effective communication. They include loss, differences in experience, compensation, locality etc.

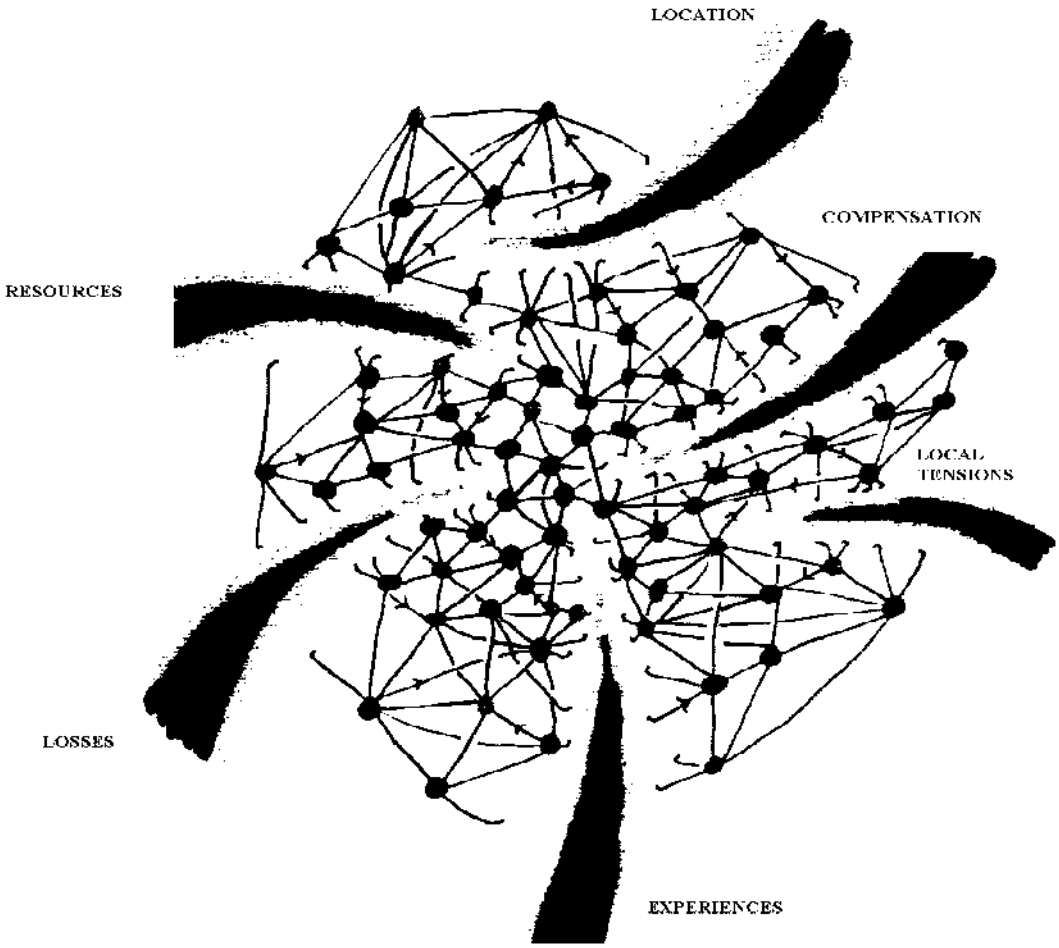


Figure 6. Cleavage planes develop in the fused community on the basis of divisions between groups affected differently by the disaster or recovery factors.

- In a flood or bushfire, the groups comprise those who lost houses versus those who lost other possessions, those who are insured versus those who are not, those eligible for assistance versus those who are not, those who remained during the emergency versus those who did not, those who intend to rebuild versus those who do not. Those who lost houses sometimes excite envy among some of those who did not; snide comments are passed about the size of new houses compared to old ones. However, the new house is often unwelcome to its owners, who ask friends not to visit until it feels lived-in instead of like a motel.
- In a city office massacre, those from unaffected floors accused those whose lives were in danger of creating problems out of nothing by talking about it, when those affected were unable to get the events out of their minds.
- A public meeting, in which a politician announces aid measures, splits those who are advantaged from those who are not.
- After a sudden flood, the residents of a country town saw that only some areas were evacuated by police; the used car dealer had been warned and moved his stock to higher ground. Low-income areas were not evacuated and rumours accused the police of being corrupt and taking care of their mates. However, the flood fell outside the areas designated on flood maps used to evacuate designated flood-prone areas. By the time they realised the maps were obsolete, police could not access those areas. There were cleavages between citizens and police, local government and state officials, between residents from evacuated and non-evacuated areas, between those flooded and those not, and between small business and residents.

- After bushfires, cleavages occur between ‘greenies’, who live in the area for the environment and want to revegetate, and others who blame the fire on trees and advocate extensive clearing and more stringent local government regulations. These conflicts can only be worked out as part of a comprehensive re-development plan for the entire district.

Cleavages are defined by emergency and recovery circumstances including how arrangements unify or differentiate community members. They are circumstantial and inconsistent with pre-emergency attachments or structures. The impact of the disaster creates differences and boundaries that bear little relation to the structure of groups and relationships that form the social support networks of community members. Families and close friends provide support to each other, but if one is insured and the other not, it is likely to interfere with their ability to assist each other. Cleavage planes disrupt the fusion’s tendency to unify people, diminish their group or personal resources, and emphasise their uniqueness or what they share with sub-groups. They fracture support structures independently of pre-disaster social structures at the point they are beginning to emerge from the unit of the fusion. They tend to remodel the community system so that it incorporates the disaster effects into its structure. New identities, systems of communication, common values and boundaries are formed and maintained at the expense of earlier systems. Bonds are not broken and reformed by normal social affiliation, but out of the sufferings brought on by recovery.

Cleavage Planes in Event Disasters

Figure 7 shows a disaster affecting a portion of the community in an event disaster; cleavage planes occur within the fused part, and between it and the surrounding structures, with consequent destructiveness of both directly affected and other structures.

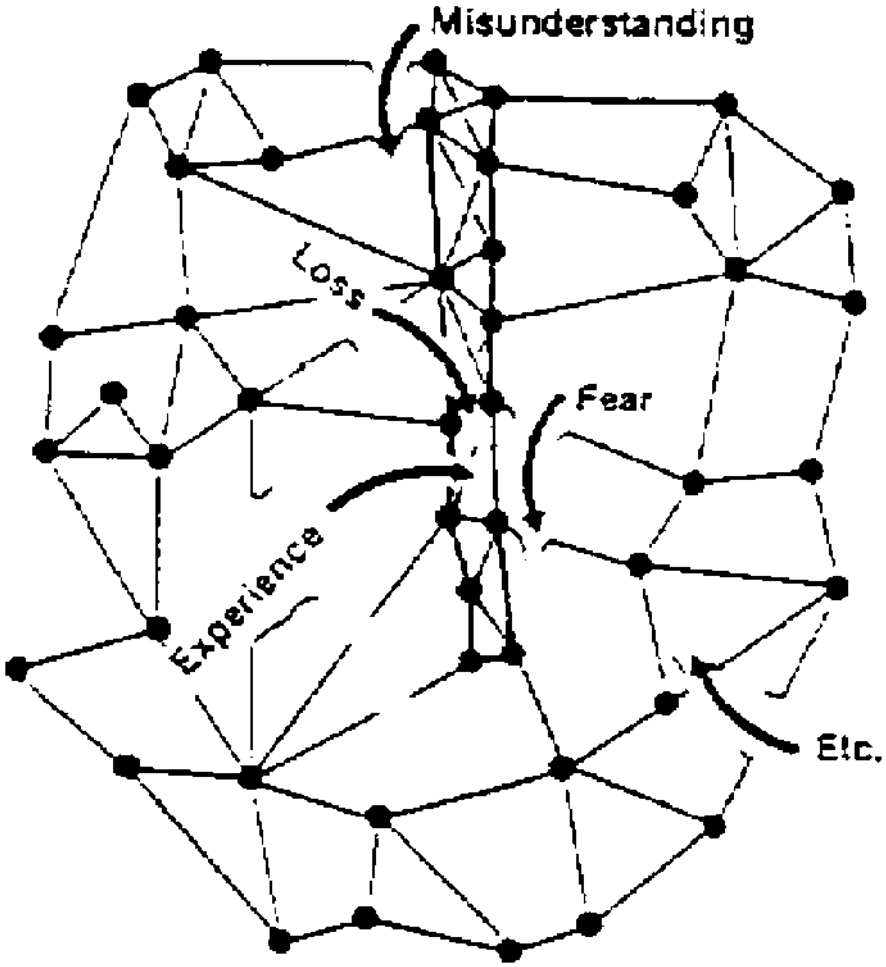


Figure 7. Cleavage planes in a community with fused structures following an event disaster.

Signs of this loss of solidarity include disorientation about the recovery situation; failure of leaders and organisations to respond to needs effectively; agencies clinging to pre-disaster modes of functioning; reduction in social controls; weakening of the system of rights and obligations defining members' community roles; disruption or breaking down of traditional groupings or social forms that provide the framework for interpersonal loyalties; practical or emotional inability to plan for the future; and reduced openness to innovations (Klinterberg, 1979).

Cleavage planes are not just a function of differences in recovery; they are also driven by the need to dismantle the fusion and allow community members and groups to re-establish their identities. The same principle is evident in individual or family development where relationships that do not allow enough independence lead to conflict as a means of creating the required separation. Cleavage planes have an adaptive function in the absence of more constructive processes of differentiation and separation. They are not just a function of real differences, but also of how they are perceived. Their potency can be reduced if an active program to support early differentiation of community groups begins before the fusion breaks down. Co-ordinated differentiation, beginning as soon as possible, is the basis for an alternative process to the development of cleavages.

Managing Community Differentiation

New organisations create new links and associations with each other and with established services, forming a 'synthetic community' (Thompson and Hawkes, 1962). The community is restructured with a modified network of organisational relationships that may involve new and more extensive agencies. As stability is attained and normal relationships are restored, the synthetic community gradually loses its function, with the return to more complex, pluralistic decision-making and allocation of resources.

Management of destructive differentiation and cleavages requires development of a social system that integrates post-disaster social forces within a comprehensive recovery plan. Based in local government or other community agencies, it can establish relationships with the various interest stakeholders to ensure consultation and participation in needs assessment, planning and delivery of services. Where possible, it promotes groups to form and advocate for their own needs or helps them cater for themselves and ensures recognition of the extent of the impacts. Empowering and supporting victims' abilities to cope is a keystone for their recovery (Benight and Harper, 2002).

Plans to manage recovery using adaptations of normal community systems can be activated, and by incorporating emerging groups into a broad system of communication, existing community processes and structures can reorganise themselves to adapt to recovery needs. Appropriate policies and resources are essential, but not sufficient to successful recovery. The need for cleavage planes as social organisers is diminished as long as the complexity of sub-group and individual differences is acknowledged and equitable relief measures are backed by appropriate support. But rigid reassertion of pre-emergency relations of power and control will not recognise emergency needs and will motivate cleavages. Coordination depends on adequate information about all parts of the community and differentiating groups around their legitimate needs and differences. This can be seen as a complex communication task, ensuring that interest groups are validated and integrated into a larger coordinating group.

A community and social infrastructure must deliver services to affected people as they need them, and provide constant feedback about changing needs that allow them to be effectively targeted. This means developing a set of new flexible bonds to bind the multiple, disparate elements into a functional system. As discussed above, social bonds are expressed as communicational relationships. Constructive differentiation is supported by developing a communicational infrastructure to define and integrate the community, while establishing boundaries, intimacy and distance. Such a system becomes a supportive environment for individuals to set about the task of integrating the trauma and reconstructing their lives. The community will be reshaped by the disaster, but if recovery is harnessed to a broader community development strategy, disaster recovery and the ongoing life of the community become complementary.

Social bonds as products of communicational relationships provide a technique to transform the fusion into a new crystalline structure. New bonds need to form as issues and differences arise, breaking up the fusion to serve the changing affiliations of community members. New communication channels facilitate opportunities for new bonds, and new bonds lead to new structures, which, in turn, establish new post-disaster identities. These structures will be adapted to recovery if communication is focussed around identifying needs and difficulties within the community. Each issue needs to be related to the whole so there is scope for a new sense of community that can integrate the disaster into its history and facilitate development of new support networks among those who have new disaster-related issues to bring them together.

The constructive differentiation process is illustrated in Figure 8, as an intermediate step towards the establishment of a new crystalline structure. A coordinating group in the centre (usually with a combination of managers, service providers and community representatives) facilitates communication between the emerging groups so that as concerns become evident they are communicated throughout the system and acknowledged (even if not necessarily remedied). A social environment is promoted in which individuals and groups can find new relationships around new needs; pre-disaster support networks are also preserved by ensuring rumours and myths are detected and corrected by effective communication, consultation and decision-making.

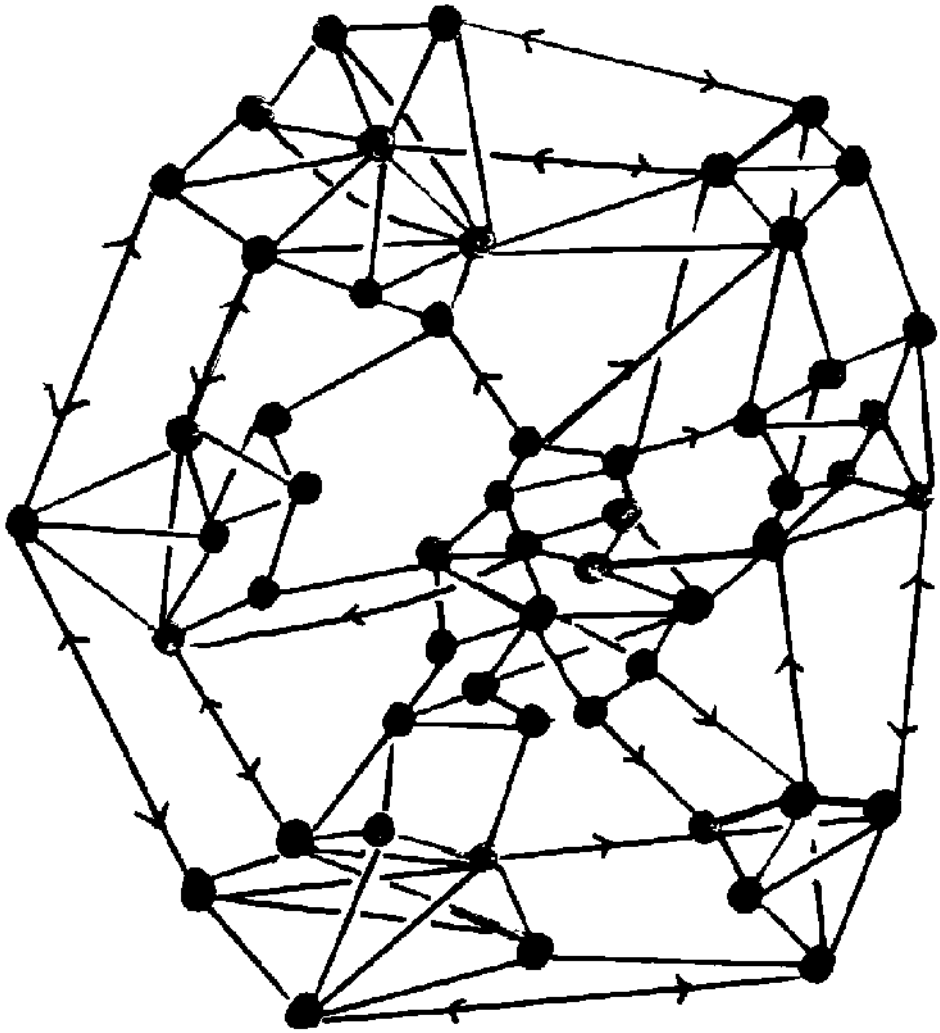


Figure 8. Constructive differentiation through coordinated development of interest groups and building active communicational relationships between them and the coordinating body forming new social bonds.

Medium-term Personal Responses

The social reorganisation following the disaster usually leaves some people more vulnerable than others. The altruistic therapeutic community does not incorporate all community members, and those who are overlooked, excluded or rejected feel alienated and abandoned. In large scale or highly traumatic disasters, emerging needs often outstrip resources, leading to disappointment and disillusionment. Support mobilised is often insufficient to compensate for the gradual deterioration in personal and community relationships as social networks and relationships become fractured and overloaded. The impact of the disaster also interacts with concurrent social processes such as rural–urban drift; changes during recovery interfere in community identification, disrupt support networks and reduce resources (Kaniasty and Norris, 1999). As recovery proceeds, post-impact helping relationships and altruism gradually fade. Volunteers return to their other lives. A significant number of people develop psychological difficulties such as stress responses, reactive depression to losses, psychosomatic conditions, anxiety, post-traumatic responses and survivor guilt (Fullarton and Ursano, 1997).

Frustration, stress, exhaustion and helplessness result in anger, blaming and conflict, often directed at those responsible for providing services. Helpers may retreat into increased bureaucracy and regulations. Loss of privacy and constant involvement with agencies interferes with reconstituting personal social support networks. The perception and evaluation of loss depends on awareness of others' losses. Community reactions alleviate or aggravate personal reactions, while individual reactions may be exaggerated when shared by other community members (Kaniasty and Norris, 1999). Individual and collective responses are simultaneous facets of a whole.

Longer-term Recovery

Although many of the most urgent problems are resolved in the first few months after the emergency, recovery takes years. Throughout the first year, each new phase brings new problems because of the changes in life and context. Some social consequences do not show up until the same season comes round again or support services are withdrawn. Recovery interventions need to adapt normal community systems to current disaster-related needs, recognise emergent groups and establish specific recovery activities attuned to changing needs. They provide a template for the development of a new social infrastructure embodying the norms and values of recovery that can then gradually be converted back to normal life in a planned way.

Longer-term Personal Responses

For those affected, long-term recovery brings many challenges. A survival lifestyle may develop, lacking enjoyment or leisure. There may be loss of attachment to place and reduced participation in community events, suggesting reduced morale and a tendency to put social life on hold. The structure of social relationships is permanently changed. Expectations of support from extended family and friends declines, leading to disappointment in the availability of help. Family cohesion and quality of relationships may be enhanced, but social relationships also deteriorate in diffused, delayed and not easily recognised ways, particularly where provision of recovery services has disregarded natural groupings and networks (Drabek, 1986).

While approximately 10–20 per cent of people are likely to incur significant disability from post-traumatic stress, anxiety, depression, substance abuse, and social or interpersonal changes that persist for long periods (more than six years), about 10–15 per cent consider their mental health to have improved (Drabek, 1986). Other individual reactions are associated with impersonal and inefficient support systems after the event (Kaniasty and Norris, 1999). However, most people make a good recovery in the long term, but have lasting effects including reduced attachment to material possessions, changed values and life priorities, heightened sense of vulnerability associated with preparation for protective action, greater understanding of the supportive capacity of their community, feeling closer to family and community, pride in their ability to meet a challenge and increased religious feeling (Drabek, 1986).

Long-term deterioration in physical and psychological health includes headaches, irritability, nervous tension, depression, worrying, fatigue, sleep problems, weight change, digestive disturbances, shortness of breath, rheumatism, hypertension, bladder problems and ulcers. Serious emotional problems may develop as delayed reactions when normality has returned.

The Dynamics of Recovery

The community processes set in train by a disaster are not confined to the incident itself. It initiates a rolling series of repercussions in different parts of the system, which continue through debonding, fusion and differentiation. Other factors add to the disruption. Physical or climatic changes provide a dramatic increase in stress levels, such as the first rains after a bushfire, which create a quagmire in the ground devoid of vegetation while many are still living in caravans. Political events, like the announcement that a state of disaster will not be declared after a fire, may seem like a callous rejection by government. The death of a local child in a car accident during the recovery period seems the start of a series of tragedies. The planned restructuring of a corporation following a massacre disrupts support networks and adds multiple losses, through retirements to the deaths from the disaster. Other repercussions are evident later. When burnt-out or flooded farmers expect the autumn pasture, they realise it will take several years before they can run stock. The closure of businesses ruined by a disaster reduces employment in the area. Such changes are an integral part of disasters and must be anticipated by the recovery process.

This model of the disaster process is represented in Figure 9 as a graph of community functioning, which is shown falling at impact and rising in the subsequent recovery period where it is met by a series of other disaster-related repercussions, which impede recovery and reduce community functioning in each case. Successful recovery anticipates, prepares for and meets these repercussions as the emergency reverberates through the community systems.

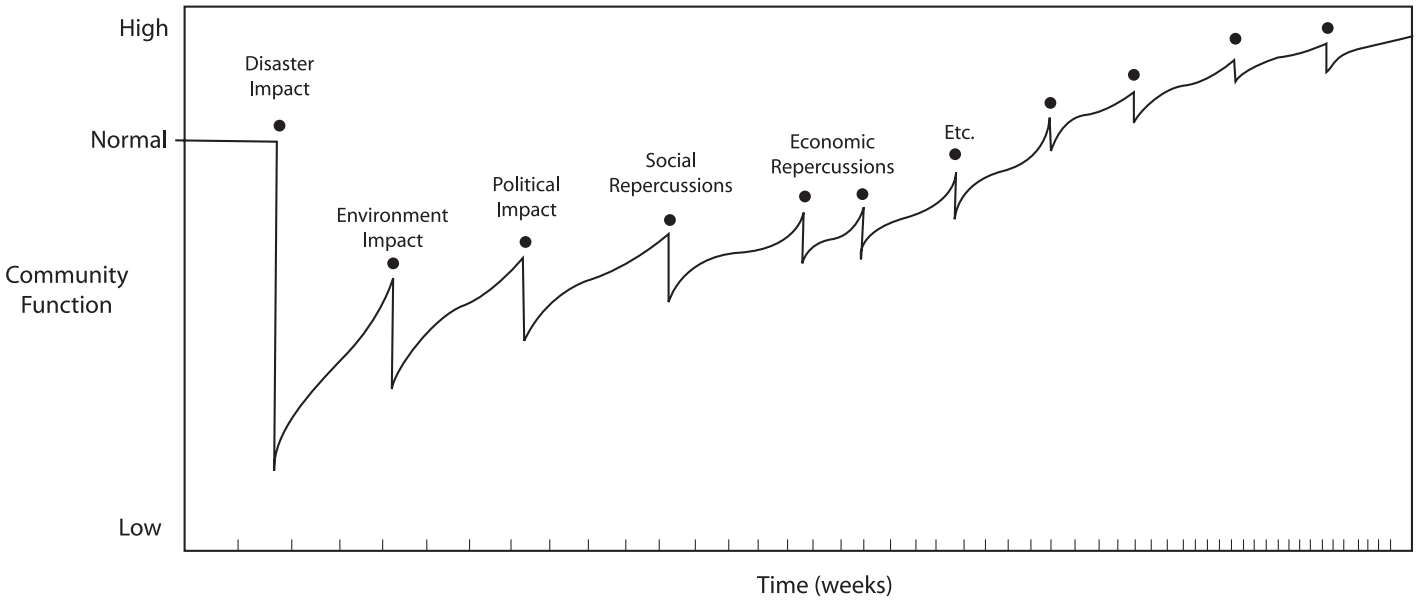


Figure 9. The disaster repercussion process with multiple impacts reducing community functioning.

Strategies for Recovery

Disruption of social support networks and community cohesion undermines recovery and increases psychological distress, but strategies that preserve social organisation reduce the destructive effects (Salzer and Bickman, 1999). The theory of community process provides a framework for recovery strategies to intercept and mitigate debonding, fusion, cleavage planes and differentiation. It is tempting to see them as discrete phases, but this is simplistic. It is more accurate to consider them as interlinked processes initiated when an emergency threatens a social system that is unable to respond. It is a matter of assessing when and how much debonding has occurred and to whom, how much fusion occurs in consequence, and how the fusion responds to the need for differentiation as opposed to forming cleavages. The principle that social bonds are constituted by communication relationships suggests strategies to mitigate these processes.

Strategy 1: Prevent Debonding

Anything that prevents or reduces debonding intercepts the process at its start. The following strategies assist with this.

1. Planning and preparation mean roles and tasks are practised and ensure survival does not require suspending normal structures, otherwise the system debonds and improvised, emergent structures have to appear (Drabek and McEntire, 2002).
2. Provide roles and tasks related to the emergency to preserve social organisation. This occurs in orderly evacuation and in areas with regular emergencies such as regular cyclones, where debonding is unlikely.
3. Preserve pre-disaster organisation by adapting it to the emergency. When the disaster is not outside the range of possible events, existing systems are adapted to the response rather than improvising emergent systems.
4. Preserve continuity of social systems, community norms and availability of personal support.
5. Leadership needs to be committed to cooperation and coordination rather than command and control (Drabek and McEntire, 2002) to preserve normal community decision-making processes.
6. Curtail the event horizon by establishing and maintaining communicational continuity with victims as soon as possible.
7. Preserve communication links to affected people to reduce debonding and intercept the disorganising effects of fusion. Maintenance of communication enables immediate needs to be identified and met, and preserves continuity of care, reducing arousal and restoring normality (Gordon, 1997).
8. Provide relevant, accurate information about all aspects of the emergency to the community as a means of promoting common understanding and collective identity. Information activates communication, forms bonds, reduces uncertainty and provides knowledge, enabling people to initiate their coping capacities at the earliest opportunity (Benight and Harper, 2002).

Strategy 2: Minimise Fusion

Fusion represents the most significant discontinuity from the pre-disaster state: fusion disrupts it altogether. If the social units rebonded back into the previous structure there would be little disruption. However, abnormality and threat promote fusion. Reducing the intensity and disruptiveness of the fusion and promoting differentiation at the earliest opportunity, by re-asserting normal roles and processes, reduce disruption of the normal crystalline community structure. Strategies to promote this include the following.

1. Preserve or re-establish pre-disaster roles, functions and communication systems (Bosworth and Kreps, 1989). Ensure social and community structures for long-term recovery are built into it when fusion does occur.
2. Integrate new disaster-related tasks and roles into existing systems by extending and adapting them to meet emerging needs. The more inflexible the structure is, the more emergent

systems arise to fill the gap, but with increased complexity and loss of coordination (Drabek and McEntire, 2002).

3. Accurate information about the situation assists organisation and reduces arousal, myths, rumours and emotional contagion. Structured communication in group and community meetings, convened by those with responsibility, activates community processes.
4. Encourage checking and validation of information to discourage emotional contagion.
5. Provide for communication needs and dedicated media, such as meetings, newsletters, web sites, telephone hotlines etc.
6. Encourage community advocacy and self-efficacy through emergent groups, formal and informal networks, and other structures promoting self-efficacy. They are assets to recovery, provided they are integrated into the organisation (Drabek and McEntire, 2002).
7. Assist in defining the membership of interest groups and work with inclusive identities. Recovery managers need to define interest groups in the widest terms since the effects are uniquely social, unlike routine crises (Auf der Heide, 1989).

Strategy 3: Short-term Personal Support

Effective early interventions for personal support are based on a preventive care model, including the following.

1. Early education about responses, since people often do not understand their reactions.
2. Establishment of security, meeting physical needs, access to significant others, empowerment and advocacy (Ursano and Fullarton, 1997; Gordon, 1997).
3. Opportunities for informal contact with trained mental health professionals to facilitate gaining information about managing their reactions.
4. Disaster-related support organisations provide valuable support to victims when coordinated and staffed by local workers with community sanction.
5. Formal mental health services are utilised by about 20–40 per cent of affected people, depending on the severity of the trauma; where young children are involved, the proportion may be higher (Drabek, 1986), but most of the community uses information, education and advice about self-care.
6. Disaster-trained mental health workers have an important role as consultants and advisors to the other service providers.

Strategy 4: Intercept Cleavage Planes

Since cleavage planes come into operation because of perceptions of difference as much as actual differences, there is scope to reduce their effect by intercepting issues in a pro-active way as they develop. Some can be anticipated from the pattern of effects, pre-existing inequalities and tensions, while others are unpredictable and a function of emerging events.

1. Pre- and post-disaster inequalities need to be mapped so holistic services can be planned, recognising the range and complexity of issues, and anticipate the effect of the disaster on them.
2. Constitute a community ‘sense organ’ by convening groups and existing community networks, enhanced by representatives from disaster recovery services, to identify differences as they emerge before they become cleavages. If responded to piecemeal, they are less likely to be defused than if the broader pattern is the basis for intervention.
3. Support this with outreach programs to affected people to consolidate information and encourage representation of all interests in the coordinating system. Issues identified must be collated and integrated to identify community patterns.
4. View all anecdotes of tension and conflict as potentially inter-group events and identify whether the problems would be present for other members of groups involved.
5. Publicising common issues shared by groups, with strategies to ameliorate them, enables people to feel it is not just a personal problem but something others experience.

6. Information lacks and inequalities need to be identified and remedied with a comprehensive communication strategy using recovery-specific communication media, such as newsletters, letterbox drops, community meetings, paid advertisements and mass media.
7. The recovery system needs to take the initiative with community consultation and representation for affected groups.

Strategy 5: Bridge Cleavage Planes

Since the destructive consequence of cleavages is to sever bonds, information about what people have in common, in spite of their differences, can 'suture' the split by providing a new basis for communication. Strategies to bridge cleavages include the following.

1. Provide facts to actively manage rumours and myths.
2. Crucial information must be repeated throughout the recovery period, since people differ as to when they are able to absorb it and when it is relevant to them.
3. Provide overview information about events and actions so the context is evident, especially for decisions and policies.
4. Encourage inter-group communication and exchange; provide anecdotes that disrupt simplistic assumptions about effects and assist the developing structures to integrate around the recovery requirements.
5. Facilitate symbols and rituals to promote an embracing community identity.
6. Contrast backward- and forward-looking issues and place these all in the context of recovery.
7. Promote concepts of a new, inclusive future for the community.
8. Meet practical needs and provide care as the medium for communicating inclusion and respect.

Strategy 6: Medium-term Personal Support

Interventions directed towards mobilising social support and community cohesion benefit the psychological functioning of those involved.

1. Educating community members about the normality of their responses creates collective attitudes that avoid isolation and stigmatisation.
2. Over-reliance on individualistic medical models of helping and neglecting personal and social resources available in the community tend to undermine the autonomy of affected people. Formal crisis counselling services often only begin to be used a month or more after the event as stress accumulates.
3. Earlier interventions by mental health workers aimed at supporting, educating and consulting to the community form an effective base for planning and preparing more intensive formal services later (Drabek, 1986).
4. Meeting practical needs and providing care for community members needs to complement specialist mental health services, since competing demands prevent people addressing their psychological problems.
5. Practical support services can be integrated with the other services and supported by mental health consultation to make referrals for psychological assistance for the people who need it.
6. Re-establishment of recreational and leisure opportunities to discourage the formation of a stress-focussed lifestyle.

Strategy 7: Promote Constructive Differentiation

Recovery from disaster means the formation of a new community social system, which preserves continuity with the past but recognises it will never be the same. A new self-determined community needs to be promoted, and a new community fabric developed with a new communicational infrastructure to promote new patterns of social bonds. The disaster is a catalyst to review pre-disaster functioning. Circulation of information promotes communication, communication promotes the formation of social bonds, social bonds promote the formation of groups and

support structures, groups promote common action, and common action creates constructive differentiation. The following are some strategies to assist this.

1. Facilitate new, self-determined community structures and advocacy groups.
2. Work through community structures where possible, including forming community reference and advisory groups in conjunction with recovery managers.
3. Encourage self-management with resources to support people to make their own decisions. Assisting people's self-management and support enables them to participate in developing an effective new community.
4. Assist community communication in all its forms as the precondition to coordination.
5. Establish disaster-specific communication media to complement existing channels.
6. Spontaneous symbols and rituals of community recovery can be supported. Those created by the community re-build morale and identity.
7. Establish integrated social systems around the developing tasks of recovery.
8. The debate about redevelopment can contrast backward- and forward-looking issues on the basis that the only effective long-term recovery is promotion of a new future rather than re-establishing a lost past.

Strategy 8: Long-term Personal Support

In the years following disaster, there is a continuing, though reducing, need for support.

1. Easily accessible personal support services need to be maintained into the long term to assist people who develop chronic stress responses.
2. Counselling services are often in demand in the long term, but need to be non-stigmatising and preferably based in familiar community agencies.
3. Some people are not ready to utilise their entitlements until the second or third years after the disaster.
4. These services can be gradually handed back to normal community providers and integrated into enhanced services for the community.

Life After Recovery

Disaster accelerates the community process already operating, rather than completely changing its direction. Most communities eventually return to normal and show little adverse effects (Haas, Kates and Bowden, 1977). However, where damage from large-scale disasters is extensive, communities and their members may be seriously damaged in the long term, suffering economic, social and cultural deterioration without intensive governmental intervention (Mileti, 1999).

It is not just individuals who are affected, but also the community and social structures that provide the framework to manage the dynamic social process that disasters initiate. The model describes this in a schematic manner, although it may not be followed in any specific case. However, if a significant threat is associated with the impact, some form of debonding will occur. If there is debonding, then some sort of fusion will be the consequence in the aftermath. At this point, the formal services can engage with these social processes if they understand and anticipate them. No sooner has the fusion consolidated and stabilised the situation, than tensions emerge and cleavages form unless recovery services anticipate them and use strategies to intercept and bridge them. Constructive community differentiation builds on a community development orientation to review old, and develop new, community systems from the opportunity created by the disaster.

Disruption of the Life Continuum in Emergencies

Disaster, like all traumatic experiences, can have many effects on individuals and families. Some show themselves immediately, others appear months or even years later. Those easiest to recognise are direct and bear the imprint of the trauma. However, indirect effects also occur involving the trauma interacting with other issues in the individual's past, present or future life.

Short-term effects are likely to be clearly identifiable as stress effects, while longer-term responses may appear as personal problems. However, disaster responses are often normal responses to abnormal experiences and are misunderstood and mistreated if not recognised as such.

One of the most obvious effects of stress, trauma and crisis is the disruption of the continuity of life experience. The consequence of such a disruption is far-reaching and shows the presence of a connected, integrated series of experiences is normally taken for granted. The presence of an intact social environment is an essential component for preserving the continuity of life experience. Disruptions of the life continuum need to be understood if the importance of preserving the social context is to be recognised. Many problems that follow disaster are directly related to this loss of the 'life continuum'. The following model describes the social and personal structures in emergencies and traumatic events.

The life continuum can be understood as maintained at each moment by the person understanding the past, anticipating and planning for the future, and making big and small decisions that link past and future together in the present. However, living life actively does not happen in a vacuum. A person outside the structures of family and community relationships finds it harder to think, evaluate or plan. Disorientation and confusion are common outside one's accustomed social environment. Normal personal and social support networks are a series of relationships, attitudes and experiences that can be called on as required.

In Figure 10, 'existence' forms the base of assumptions and structures that support the person's existence. These include the beliefs, values and assumptions about the nature of life, humanity and the world in general. The line running from A on the left to B on the right, indicates the stream of life experience. It flows out of the past (A), where it is the memories of past events and history, into the present (C) and on into the future (B), where it is goals and plans. At C, in the present, it is essential to human life that the past and present are brought together so they can be linked through the processes of thought and decision-making. The two lines are not directly joined: they twine around each other and are linked within the personality by a third line, shown in the centre of the diagram, representing conscious planning, evaluating, deciding, acting and taking responsibility for life as an active agent. Integration is shown occurring within a protective space formed by a series of psychosocial structures, or 'membranes', which create the opportunity for life experiences to be woven into a continuum. It can be called the integrative space.

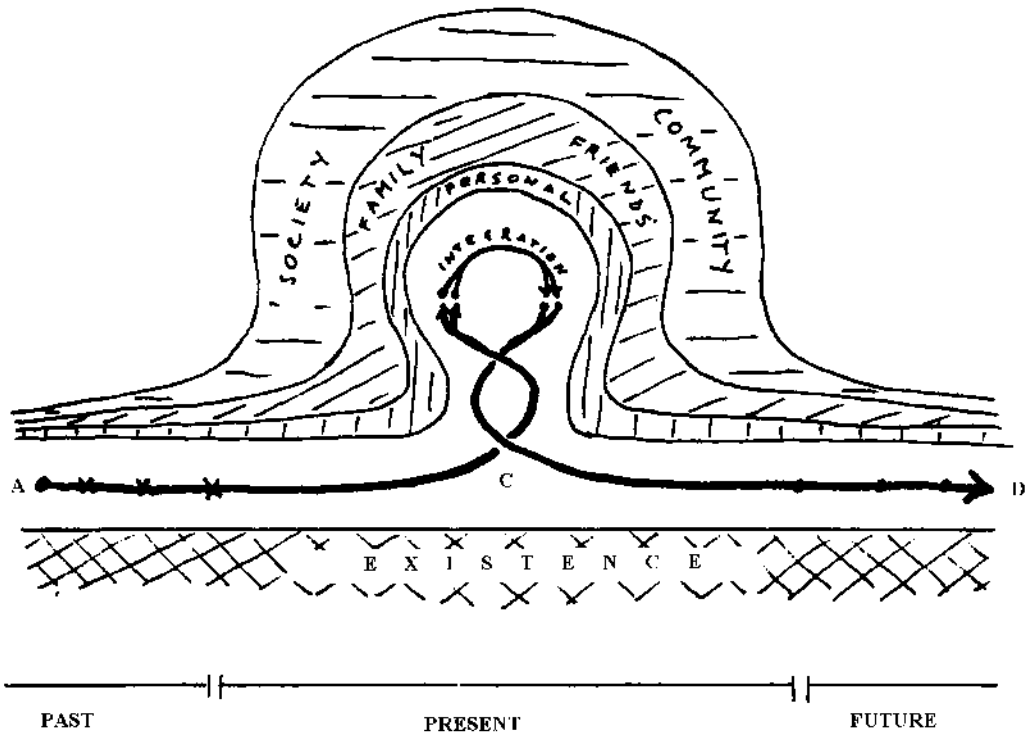


Figure 10. The life continuum maintained by personal, family and social-cultural structures.

The membrane structure forming the integrative space consists of three layers. The innermost layer consists of all the personal capacities and factors that combine to enable the person to function as an individual. Beyond and supporting the personal, is the family and friends membrane. This refers to the close, supportive social network of those people with whom the person associates in regular, face-to-face relationships. They support personal functioning and enable the person to gain advice, guidance and emotional support in the course of their integrative functions.

Beyond the family and friends membrane is the third membrane, which incorporates the diffuse relationships, assumptions and common content of the society, culture or organisational structure that contains the personal network. This is not normally recognised, since it is constant, although it is evident when people move to other cultures or immigrate to a new country. It is also evident in the difficulties when joining a new, complex organisation or in the disorganisation and inefficiency of restructuring. Together, these three membranes support each other in creating the space enabling integration to occur. These dimensions of the social network act as a protective psychological shell, safeguarding a sensitive and essential process. Past traumas are marked on the line of the past, while short- and longer-term goals are shown on the line of the future.

Figure 11 shows the effect of a traumatic event on the life continuum, erupting out of existence, rupturing the assumptions and beliefs constituting the basis of experience. The intensity and power of the trauma disconnects the past and future, breaking the continuum. It imparts such intensity to the various elements of life experience that they can no longer be contained or given meaning by the structure of membranes. In the personal membrane, this is shown by the fact that the trauma defies previous understandings and cannot be accepted. Consequently, the energised elements of experience pass through the membrane and fail to be integrated. Past and future remain disconnected.

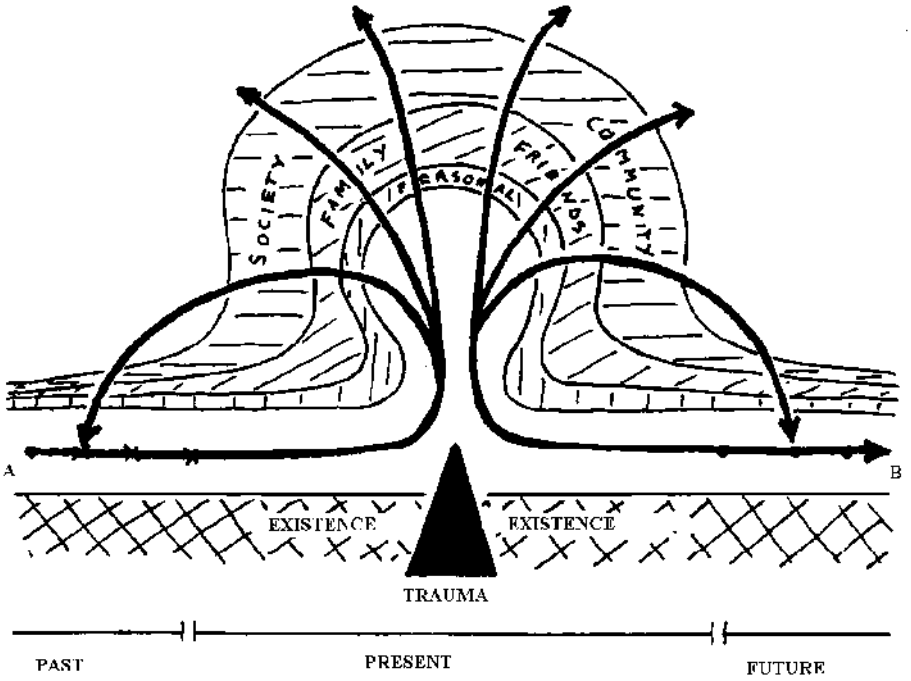


Figure 11. The effect of a traumatic event on the life continuum.

Instead of the lines of past and future being brought together within the protective framework of the family and community sheath, they become uncoupled. The affected individual feels unable to relate to the future or leave the past behind. This is shown by the line of the past turning back on itself. People become preoccupied or fixated on their past traumas when the disaster is before them. Sometimes they are unable to focus on the present. The line of the future also turns away into the future, creating anxiety about short-term goals and despair about the long term as the sense of disruption to life's plan sinks in. This is expressed as despondency and lack of motivation.

When the traumatised elements enter the second family/friends membrane, they are misunderstood and not accepted by those nearest, who often react in ways consistent with their own past experience, but fail to recognise this is no longer appropriate to the trauma in the person they wish to support. It can also cause the members of the support network to retreat from their own pain and fear, isolating the victim. The affected person feels their experience no longer has a place in the network that has been part of integration before, so the disruption continues and the life experience passes through these, too.

When it comes to the social membrane, the wider social setting often fails to react to the trauma in a sensitive way. This ranges from inappropriate media exposure to tactless comments by well-meaning acquaintances or misguided management by those in positions of responsibility. The affected person feels alienated from the wider society, and it fails to compensate for the inadequacies of the family and friends. An extreme example of this was the failure of the Australian community to recognise the returning Vietnam veterans, which was not rectified until their return march was done in recent years. It is also shown by the impact of inadequate management on people affected by trauma, who often feel as preoccupied and distressed by this as by the event itself.

Disasters attack individuals' experiences and their social networks, disrupting their operation and abolishing the order and routine they provide. Because members of these networks are simultaneously preoccupied with the same issues, they are effectively unavailable to the individual. Therefore, the effect of the disaster is shown impacting simultaneously on the continuity of life of the individual by disrupting planning and decision-making, and on the sheaths that support the process.

The destructive effects of the disaster impact on all levels at the same time. Involvement in a disaster is not the same as a lot of people undergoing a traumatic experience at the same time. The support systems essential for proper recovery are also disrupted, and further disruptions occur as the process unfolds. Many post-disaster problems can be put down to the problems of the recovery period, rather than to the disaster itself.

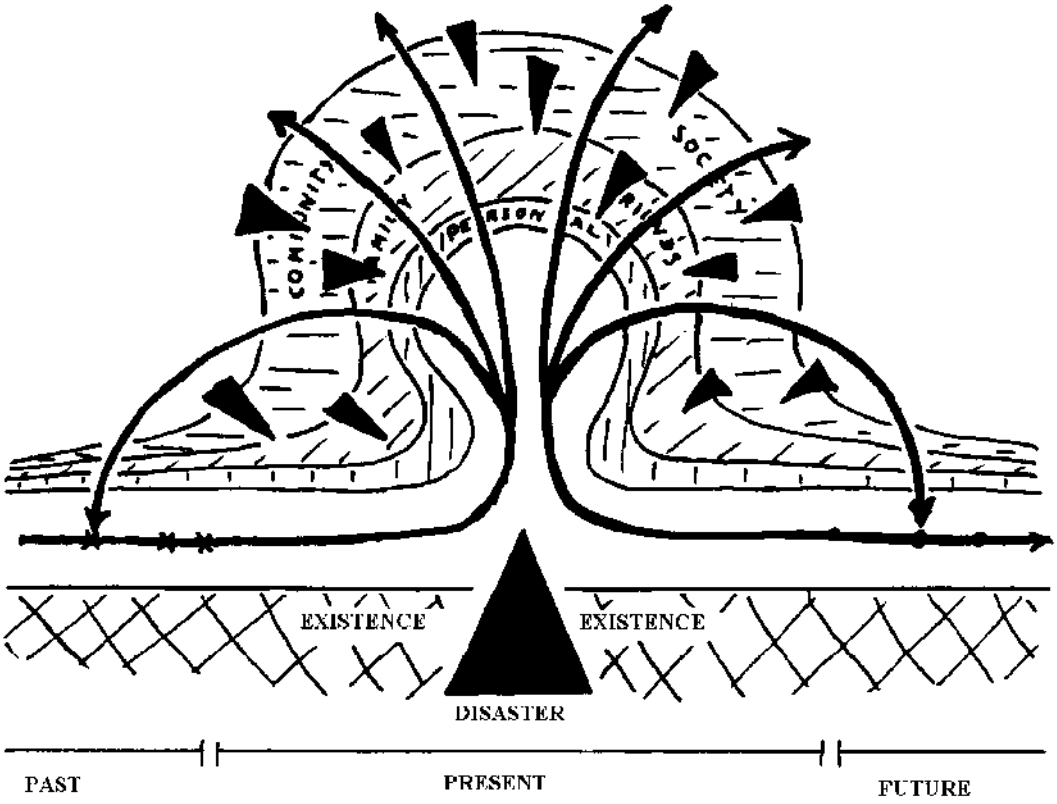


Figure 12. The effect of general community disaster on the life continuum.

In Figure 12, the effect of a general community disaster is shown. In this case, many other members of the social support system are likely to be in traumatic disruption as well. But since the family/friendship and social/community membranes consist of relationships with people, their fabric is severely disrupted, since their members having their own difficulties are unavailable to the affected person. The most important resource for recovery is ineffective or unavailable, and there are many points of friction or aggravation within the membranes. It is important to approach recovery both from the community and the personal perspectives to ensure that what is done for individuals is supported by the social network.

The prototype of the recovery system is shown in Figure 13. The lines of past and future are shown curving back and retracing the path from past and future, then returning to the present. The retracing is contained in the enhanced sheath of community support. The person is ready, once again, to reintegrate in the present. This represents the recovery phase and the series is completed by a return to Figure 10.

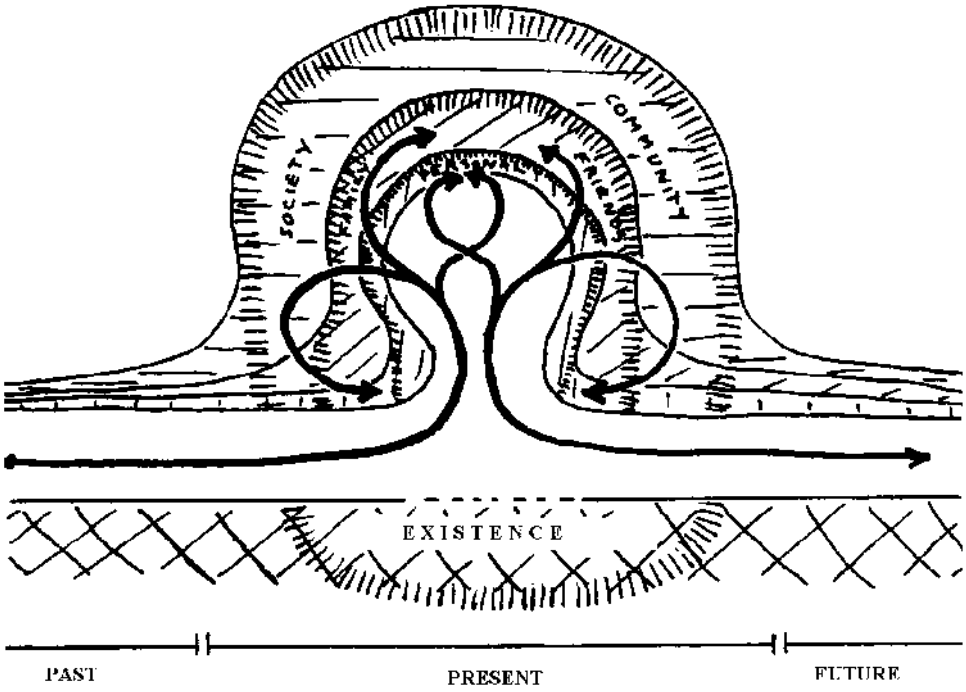


Figure 13. The provision of support structures to restore the life continuum.

This model shows that there is no separation between the personal functioning and the surrounding social system of the affected person. They constitute parts of a single system, which needs to be understood as the background for recognising the essential role of management and personal support in recovery from emergencies. There are denser skins in the three membranes that receive and hold the intensified experiential elements and return them towards the integrative space by holding and giving them meaning. In the personal membrane, the skin consists of such things as knowledge, preparation and training, information about stress and advice about undertaking recovery. In the family/friendship network, it consists of people with information about what has happened, who know how to support their colleague or friend. In the society/community/organisation membrane, it consists of effective management procedures, general support and the presence of support services that deal with the event as part of their own routine operations.

Recovery works to re-establish the sheath of social networks supporting the integrative process linking past and future. Community and family relationships need to embrace the recovery issues and include reviewing the past in the light of the disaster, assisting people to come to terms with a new future, and giving ample opportunities to exercise planning, decision-making and initiative in the recovery process.

Coming to terms with trauma and disaster, as outlined here, is a normal process, which everyone goes through to a greater or lesser degree. For some, it may be comparatively painless, for others it may be slow and difficult. For some, the community input may be limited because they have a well-developed internal network based on their own past experience. Others may need the involvement of others in their family and community in order to feel supported to work through the situation. However, the principles are the same whether someone retraces their past and re-evaluates their future goals in the privacy of their own mind, with neighbours, in community forums or in counselling.

This model shows that there is no separation between the personal functioning and the surrounding social system of the affected person. They constitute parts of a single system, which needs to be understood as the background for recognising the essential role of management and personal support in recovery from emergencies. Community interventions can do much to create understanding and opportunities for working through the trauma. The more the community is assisted to maintain its integrity and avoid destructive splits and conflicts, the more it supports the recovery of its members. Therefore, community recovery is at the same time the framework for personal recovery.

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