PRE & RAPID:
Community Impact Assessment for Disaster Recovery

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EXECUTIVE SUMMARY

Aim

The aim of this project was to develop a method or "tool" for the effective assessment of community recovery needs (at the local level)in first few days following the occurrence of a hazardous event.

In the course of researching the project, it became increasingly apparent that not only was there a demand for an immediate post disaster impact methodology (RAPID), but also a need for a methodology which effectively *anticipated* community recovery needs and capacities (PRE).

Research Methods

The research for this project was primarily based on ascan of the relevant literature (academic,

BACKGROUND

This project arose out of discussions between Andrew Cumberland (the then Director of Queensland Department of Communities) and Alison Cottrell (researcher at the Centre for Disaster Studies) during a workshop on recovery issues held at Emergency Management Australia's facilities at Mt Macedon in 2006. It was inspired by a commonly perceived need to develop a more systematic, effective and efficient approach of assessing community recovery needs following a disaster. Recovery services need to be delivered in a timely and efficient fashion without duplication or gaps in services, and in ways that are appropriate to family, individual and local needs. If services are provided in such a manner, community members are more likely to be satisfied in the way they are treated, agency staff can feel that they have responded appropriately, and social conflict and/or dissatisfaction may be minimized. This may also facilitate greater accountability on the part of service agencies. This project report is intended to go a substantial way in satisfying such demands through the introduction of two 'tools':

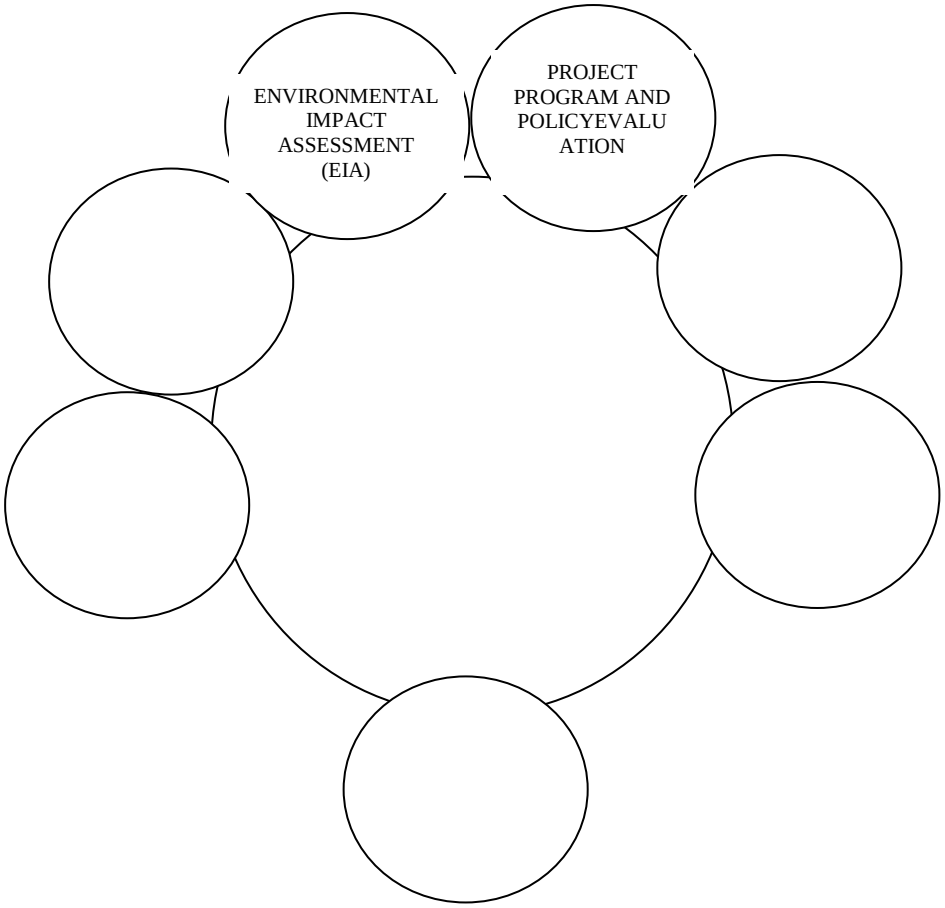
SOCIAL ASSESSMENT IN THE CONTEXT OF HAZARDS, DISASTERS AND RECOVERY

Studying the details and experiences of past disasters, hazards or crises can help provide valuable information to reduce vulnerability and enhance resilience of individuals, families, and communities. Important lessons learnt and understood are ideally incorporated into emergency management, organisational practice and community awareness and preparedness activities (King, 2006). The endeavour of researching and analysing such information is often referred to as 'post-disaster' studies. Individual case studies can vary in terms of the hazard type; the time elapsed since the event; the scale of the event; and the size of the community affected. Many post disaster studies have traditionally focused on the negative elements of any event, in complete disregard of any inherent community resilience and/or positive outcomes. Contemporary post-disaster assessments similarly need to appreciate that hazard events may potentially impact all sectors of a community (even indirectly) on a short, medium and/or long term basis. A systematic, comprehensive post-disaster study attempts to appreciate and recognise all of the vulnerabilities, capacities and latent resources within any community.

Social Impact Assessment, Post-Disaster Studies and Social Assessment

Although often commissioned as independent research projects, social impact assessments and post-disaster studies are intrinsically related activities. Conventionally, social impact assessments om

Figure 1:
The relationship of Social Assessment with other impact assessment projects



Adapted from Barrow, 2000:7

SOCIAL ASSESSMENT RESEARCH METHODS

Social assessment research for community disaster recovery

Systematic and purposive social research in the disaster context has an extensive and well established foundation. The Disaster Research Centre (DRC) in Boulder, Colorado, boasts an ardent fieldwork tradition and associated literature base which spans over five decades. In Australia, relevant research material, resources and training has been primarily established through Emergency Management Australia. Evidence of complementary research efforts however also exists within a diversity of professional and academic disciplines including: anthropology, economics, medicine, psychology, development sociology, human geography and humanitarian aid. Operating within both the public and private domain, areas of the insurance industry specialise in processes of comprehensive disaster risk assessment and recovery appraisal. Demonstrating such

variability of research agendas, practices and contexts, it becomes rapidly apparent that there is no constant or universal methodology for social disaster assessment,

Figure 2.

Common Social Assessment Variables

Population Impacts

Population change

Influx or out flux of temporary workers

Presence of seasonal (leisure) residents

Figure 3.

Potential Data Sources for Key Social Assessment Variables

Census

Population Census

- Area & population size
- % urban
- Labour force structure
- Labour force productivity
- Family income
- Education level
- Migration patterns

Housing Census

- Dwelling
- Household modernity
- Owner occupied homes

Agriculture Census

- Value farm products sold
- Mean farm size
- Agriculture tenure

Business & Industry

- Per capita retail sales
- Economic complexity
- Unemployment rate
- Government complexity

State/admin records

Marriage rate
Birth rate
Death rate
School attendance
Welfare payments
Education spending
Mining/resource permits
Crime rate

Private Records

Disposable income per c.
Median family income
Bank receipts

Council/local records

Improved local roads
Deed transfers
Real estate values

Per capita education
Land use patterns
LGC welfare

State & Federal Records

DPI etc
Lands
Heritage etc.
Health, Education & Communities etc.

Archives

Newspapers
Transcripts of hearings
Cost benefit analyses

Informant Interviews

Place, history, governance

Source: Burge 2004:25

UNDERSTANDING COMMUNITY DISATER RECOVERY

To ensure a common approach towards social assessment for community recovery it is important to develop a consistent understanding of the basic terminology and conventions.

Community Recovery Definitions

Recovery **(**in the more generic context of community disaster research**),** is a function which coordinates the efforts and processes to effect the immediate, medium and long-term holistic rehabilitation of a community following a disaster.

Ideally, it refers to a developmental and remedial process encompassing the following activities:

Minimising the escalation of the consequences of the disaster
Rehabilitating the emotional, social and physical well-being of individuals within communities
Taking opportunities to adapt to meet the physical, environmental, economic and psychosocial future needs
Reducing future exposure to hazards and their associated risks.

Although representative of a shared objective, recovery service providers often differentiate between processes of *disaster recovery* and *community recovery*.

Disaster Recovery: is most often viewed as the reconstruction of critical infrastructurei(di)2(f)5(f(a)6i5(e.53 0 T

Principles of Community Recovery

Responsible, effective and accountable community recovery should be premised in good governance. The following principles are strongly advocated within any community recovery effort:

Do No Harm – All aid has the potential for both positive and negative impact. The goal of managed recovery is to maximize the benefits and minimize the negative consequences. A coordinated strategy helps reduce possible conflicts between various assistance strategies.

Provide Leadership – Losses cannot be managed by simply allowing things to unfold. The local authority must step forward to coordinate the many recovery participants in an effective and visible way. Doing so will help forestall the freelancing, duplication of effort, and gaps in recovery services that may otherwise occur.

Foster Collaboration – Many recovery organizations can collaborate by working together to achieve specific goals and to undertake specific projects for mutual benefit. The Recovery Organization should include a structure that encourages collaborative thinking and decision making, one that does not unduly restrict or constrain organizations. By sharing common goals in recovery and promoting respect for each other's mission and diversity, the many organizations contributing to recovery can be more effective and build a stronger sense of community.

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Community Disaster Recovery Service Provision

Irrespective of the hazard type, scale, or community size, the following elements are considered central to effective disaster recovery service provision:

Comprehensive Disaster Recovery Management Planning

Although commonly perceived as any decision and/or activity undertaken after a hazard event, systematic community disaster recovery should comprise part of a comprehensive risk management approach. Recovery from disaster is most effective when *planning for recovery* is embedded within every related phase of disaster management practice –mitigation/risk reduction/prevention, preparedness/readiness, response and recovery. Despite the apparent frequency and propensity of certain hazards types within any community, comprehensive risk management is also intended to address all hazards - natural, manmade and technological. This process promotes a holistic approach to recovery, which appreciates both the diversity of community needs pre-event and the opportunities that exist post-event to reduce future hazards and associated risks.

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Ideally a proactive planning initiative undertaken in advance of any hazard event to minimise potential impacts and adversity, in many communities it is often the advent of a disaster that becomes the stimulus for implementing disaster planning.

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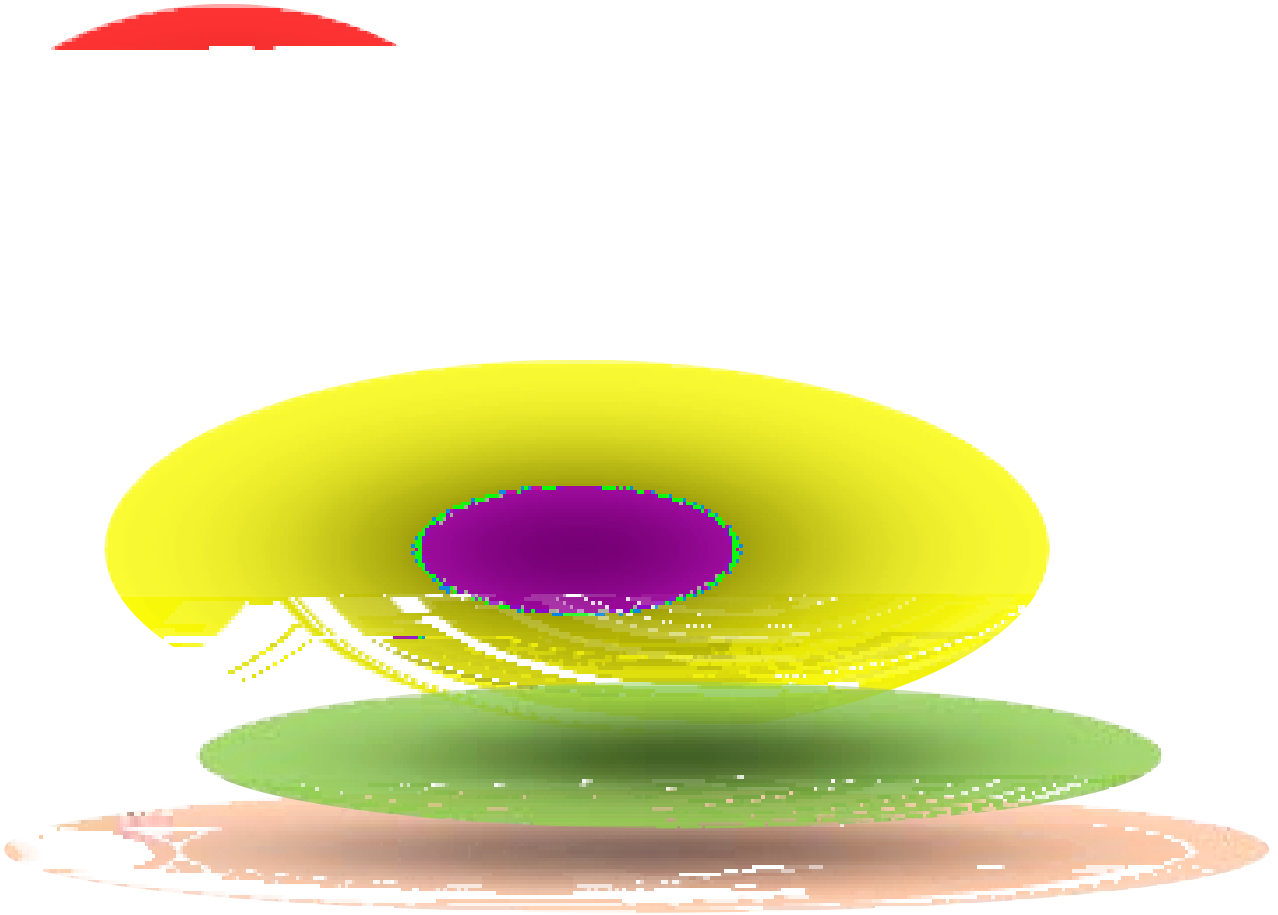
resource commitment. The facilities and coordination arrangements set up for response may also be available for recovery use.

Recovery

While the disaster management process, including recovery, is consistently characterised through such phases or time frames, reality demonstrates that it is often impossible to delineate a definitive conception and/or resolution of most community disaster recovery activities. The recovery process essentially spans all phases in the manner indicated in Figure 5.

However, for the convenience of conceptualisation, administration and management towards effective recovery service delivery, it is constructive to provide tools in the form of templates applied in the pre event context – ie for proactive planning (PRE), and for the immediate days after an event has occurred (RAPID).

PRE-CRISIS PERIOD



PROJECT DEVELOPMENT - PRE AND RAPID

The research methods used to specifically develop the **PRE** and **RAPID** recovery assessment tools were based on a scan of the literature on recovery and recovery methodologies (references are provided); previous experience of the researchers in the Centre for Disaster Studies; social impact assessment literature; and very importantly, interviews with staff from a variety of government and non-government agencies with substantive experience in disaster recovery.

Aim

Consistent with the initial proposal the primary aim is to provide a comprehensive conceptual framework to assist rapid community recovery assessment and appraisal in the immediate post-disaster period (**RAPID**) (generally within 48 – 72 hours of a major hazard impact or "trigger" event). A secondary aim is to encourage proactive regional evaluation and planning(**PRE)** in order to facilitate more effective recovery service delivery. Complementary to well-established Emergency Management Australia (EMA) and Emergency Management Queensland (EMQ) disaster management practice, this document supports a holistic and sustainable approach to community recovery encompassing:

All hazards
All phases
All agencies
All resources

The document provides generic templates for

proactive regional evaluation and planning(**PRE**)
rapid assessment post impact of a disaster (**RAPID**)

PROACTIVE REGIONAL EVALUATION

(PRE)

TEMPLATE

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PROACTIVE REGIONAL EVALUATION AND PLANNING FOR RECOVERY –PRE

Risk Management Planning for Community Disaster Recovery

Comprehensive risk management planning for community disaster recovery represents a systematic process inclusive of local community stakeholders. As any hazard event has the possibility of affecting a community, risk management represents the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse impacts. In the context of community disaster recovery needs, anticipated risk levels are often identified though the conduct of a vulnerability and capacity analysis. Resultant assessment and community risk registers ideally inform management and decision making in the advent of a disaster.

While such proactive planning may direct disaster response and recovery activities, the value of any information is reliant on the accuracy and availability of relevant knowledge and social indicators. Specific information on community demography, available resources and the psychological state within the community are considered critical to the provision of appropriate services. Many local governments already outline a basic community profile in documents such as social atlases. An identified challenge for contemporary disaster recovery planning is to expand existing databases to encompass the broad range of detail, experience and information that exists across many independent local service agencies and organisations. Such information and data sharing remains contingent on successful collaborative network development between government agencies (at all levels), non-government organisations and key stakeholders within communities. Where feasible, a central database of social variables and relevant community information needs to be accessible to authorised personnel at short notice.

Designed and structured specifically to inform the proposed rapid appraisal for community disaster recovery template (RAPID), the PRE – Proactive Regional Evaluation template guides the collection and appreciation of significant social assessment data. Congruent with integrated risk management planning, the information collated in a PRE assessment process should be regularly monito -1.32 TD 0.001 Tw4 Tc 0.001 1oe(,)Tj aon

SOCIAL/PSYCHOSOCIAL

TYPE OF INFORMATION	

		Caravan/mobile home

		Specialist medical services/equipment
		Immunisation
		Nutrition
		Endemic diseases/risks
		Staff availability -doctors -nurses -paramedics
		Quantities - essential drugs - vaccinations - blood/blood products
Mental/Social Health	Department of Health – mental services Counselling services Justice	*Protection Issues:* - Substance abuse/addiction - Domestic Violence - Criminal behaviour - Suicidal behaviour/depression/chronic mental illness - Child safety
		Availability trained professionals/resources
Education	DEET DEST	*Literacy*
		Average level of formal education
		Proportion in full time education
		Institutions (number, location, staff, students) Primary Secondary Tertiary
Community services/facilities	Yellow pages Business Service Directory Local Council Maps Insurance Provides Chamber of Commerce Department of Primary Industry Religious/cultural organisations	*Capacity/access/availability:-*
		Commercial services - Banks/financial institutions - Service/fuel stations - Supermarkets - Clothing stores - Chemist - Department stores

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		Transport, postal and warehousing - vehicles - fuel - infrastructure/access
		Wholesale and retail trade
		Accommodation and food services - tourism - hospitality - entertainment
		Financial and insurance services
		Rental, hiring and real estate services
		Public administration and safety
		Health care and social assistance
		Education and training
		Art and recreation services
		Informal sector - market production - subsistence
Insurance		*Uninsured*
		Inadequate
		Adequate
Finance		*Access/services*

INFRASTRUCTURE

TYPE OF INFORMATION	SUGGESTED SOURCES	INFORMATION
Engineering lifelines/utilities:	Public works departments and transport ministries Public utilities: Ergon Elgas Telstra/Optus Port authorities Surveying departments Engineering regulatory institutions Contractors Water and sewerage agencies Maps	*Capacity, access, availability:-*
		Gas
		Electricity - primary supply - backup generators (fuel)
		Water - quality - distribution - drainage
		Sewage/ Garbage (sanitation)
		Local food supply/distribution network
		Telecommunications - media broadcast/transmission capacity and services (radio, television, newspaper, Internet) - infrastructure - mobile/satellite communications - static/landlines - alternate options
Critical facilities/infrastructure		*Capacity, access, availability:-*
		Shelters - Evacuation - Temporary accommodation arrangements
		Hospitals and Nursing Homes *Emergency services* - Fire and Rescue

		Animal shelters
Transport Network		*Capacity, access, availability:-* *Roads*

		Food and merchandise distribution - markets - wholesalers - retailers
Built Infrastructure		*Residential housing*
		Commercial/industrial property
		Rural farmland
		Public building/assets
Redevelopment Planning Issues		*Mitigation* - construction design - structural retrofitting - building codes/standards - land use planning/regulations - rezoning - set-backs - public information/education/advice

ENVIRONMENT

TYPE OF INFORMATION	SUGGESTED SOURCES	INFORMATION
Environmental quality	EPA Research institutions	- Air - Water - Soil - Exposed surfaces
Sensitive environments:	EPA	*Hazardous materials* - industrial - commercial - medical - munitions storage
		Toxic release sites
		Oil facilities
		Ports
		Marinas
		Discharge sites
		Catchment areas
Ecosystems and protected areas	Research Institutes Geographic information systems On - site, aerial or satellite photographs or films, relief	*Natural assets/heritage:-*
		Agro ecosystems
		Forest ecosystem
		Freshwater ecosystem
		Grassland ecosystem
		Coastal ecosystem
		Rare or unique habitats
		Biological corridors
Species Protection		*Highly diverse biological communities*
		Highly productive habitat (woodland, wetland, estuary, reef)

		Area of seasonal importance in species feeding/reproduction
		Areas that maintain a wild bank of domesticated species
Environmental Management		*Policy*

RAPID ASSESSMENT POST IMPACT OF A DISASTER

(RAPID)

TEMPLATE

Template to facilitate the rapid synthesis of secondary data with real time information (primary data) in the disaster context

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What are continuing or emerging threats that may escalate the situation?
What are people's expectations of themselves?
What are people's expectations of response and support agencies?
What resources and capacities are already present (e.g., infrastructure, organisations and institutions) that could assist in the response/recovery, and what are the immediate capacity gaps?
What are the key information gaps which should be addressed in follow up surveys and/or qualitative assessments?
What processes/resources are there to record, review and disseminate the information?

Data collection and analysis:

Primary data/information is gathered directly by observation or interviews with people directly affected by or working in the affected area (such information is typically generated through emergency service providers, first responders, outreach personnel, resident contact and field sampling). While physical disaster impacts and damage are relatively apparent, many community psycho-social impacts may be less visible and/or tangible. Awareness of such issues is often considered intuitive or experience-based however, an effective appreciation can be facilitated by prior training and familiarity with the relevant indicators.

Secondary data/information for rapid disaster assessment comes indirectly in the form of written or verbal reports, documents, maps and images. Proactive regional risk and disaster management planning processes which include established community vulnerability and capacity assessmmarTT0 1 Tf -4d

SOCIAL/PSYCHOSOCIAL

TYPE OF INFORMATION	SUGGESTED SOURCES

	Insurance providers Department of Housing RTA ABS	*Housing status* - private tenant/rental - public housing - owner/occupied - other (boarder, hostel/home/facility, caravan park)
Public Health	Department of Health Private Health Care providers AMA Centrecare Aged Care Disability Support Services	*Access to medical treatment/assistance* *Access to safe drinking water/food* *Hygiene/sanitation services* *Medical support dependency* *Respite care/nursing* *Health facilities affected (affedaM4]24.7p.482van np12 36iliti*

	Reconnaissance	*Schools/institutions affected* - Permanently destroyed - Damaged, unusable but repairable - Damaged but partially usable (estimate gravity %)
		Institutional details - Available staff/teachers - Enrolled students
Community services/facilities	Yellow pages Business Service Directory Local Council Maps Insurance Provides Chamber of Commerce Department of Primary Industry Religious/cultural organisations	*Capacity/access/availability:-*
		Commercial services - Banks/financial institutions - Service/fuel stations - Supermarkets - Clothing stores - Chemist - Department stores - Hardware/building supplies - Public transport/access - Postal services
		Established government relief services eg. -Centrelink - DPI - Department of Communities
		Local NGOs eg. - Lifeline - Salvation Army - St Vincent de Paul - Endeavour Foundation
		Community/neighbourhood centres
		Kindergartens/day care
		Religious/spiritual centres
		Cultural/heritage venues
		Entertainment/recreational - Sporting clubs - Entertainment venues

		- Parks - Restaurant/hotels - Libraries/galleries
Socio-cultural context	ABS Migrant resource centre Relevant community/social groups Local council	*Potentially relevant religious, linguistic and ethnic factors* *Disaster subculture- relevant disaster experience/knowledge, mechanisms*
Intangibles (qualitative)		*Social disruption/change* *Social structure/dynamics – homogeneity vs heterogeneity* *Community values* *Adjustment/adaptation/resilience vs resistance* *Needs vs demands/expectation/perception* *Coping capacity/self sufficiency vs dependency* *Temperament (attitude, mood, emotions, anxiety, tension, distress)* *Emergent behaviour – productive vs adverse* *Trust (transparency and accountability)* *Security* *Equity/cohesion vs marginalisation of individuals/groups* *Gender issues* *Advocacy resources/services* *Local engagement, commitment, participation, vision, Inclusion* *Self determination vs external intervention, centralisation* *Leadership/local governance (informal and formal)* *Institutional arrangements* *Political cohesion/integration – horizontal and vertical* *Social assets - relationships/networks/partnerships* *Spiritual care*

ECONOMIC/LIVELIHOODS (economic and material)

TYPE OF INFORMATION	SUGGESTED SOURCES	INFORMATION
Individual/household		

		Manufacturing
		Transport, postal and warehousing - vehicles - fuel - infrastructure/access
		Wholesale and retail trade
		Accommodation and food services - tourism - hospitality - entertainment
		Financial and insurance services
		Rental, hiring and real estate services
		Public administration and safety
		Health care and social assistance
		Education and training
		Art and recreation services
		Informal sector - market production - subsistence
Material/Property damage	Insurance assessors Outreach Recovery Centre Maps Public meetings	*Structural*
		Non structural
		Infrastructure
		Contents: - equipment - furniture - personal possessions

		Loans/debt
		Savings/investment/assets

		- Confidence - Contracts - Staff *Community* -Environment impacts - Cultural and heritage loss - Reduced access to services and facilities

INFRASTRUCTURE

TYPE OF INFORMATION	SUGGESTED SOURCES	INFORMATION
Engineering lifelines/utilities:	Public works departments and transport ministries Public utilities: Ergon Elgas Telstra/Optus Port authorities Surveying departments Engineering regulatory institutions Contractors Water and sewerage agencies Maps	*Capacity, access, availability:-*
		Gas
		Electricity - primary supply - backup generators (fuel)
		Water - quality - distribution - drainage
		Sewage/ Garbage (sanitation)
		Telecommunications - media broadcast/transmission capacity and services (radio, television, newspaper, Internet) - infrastructure - mobile/satellite communications - static/landlines - alternate options
Critical facilities/infrastructure		*Capacity, access, availability:-*
		Shelters - Evacuation - Temporary accommodation arrangements
		Hospitals and Nursing Homes
		Emergency services - Fire and Rescue - Police - Paramedics - SES

		Roads *Bridges*

APPENDIX

COMMON SERVICES REQUIRED FOR COMMUNITY RECOVERY*

Accommodation: temporary/provisional/transit/permanent

Advocacy:

Financial Assistance: Provide financial assistance to those affected by disaster, such as financial aid and interest-

POTENTIAL COMMUNITY RECOVERY STAKEHOLDERS*

Queensland
Australian Red Cross

Commonwealth Agencies

AusAID
Australian Defence Force
Australian Maritime Safety Authority
Bureau of Meteorology
Coastwatch
Commonwealth Department of Human Services (Centrelink)
Department of Employment and Workplace Relations
Department of Families, Community Services and Indigenous Affairs (FaCSIA)
Department of Finance
Department of Foreign Affairs and Trade
Department of Health and Ageing
Department of Immigration and Multicultural Affairs
Department of Industry, Tourism and Resources
Department of the Prime Minister and Cabinet
Department of Transport and Regional Services
Emergency Management Australia

**While inclusive of prominent State and Commonwealth agencies that support community and/or recovery services, this list is far from comprehensive or exhaustive. Each disaster event will solicit different needs and issues necessitating a flexible and adaptable approach to response efforts. Where possible, recovery efforts should maximise inclusion of local community agencies and networks.*

COMMUNITY RECOVERY ISSUES IDENTIFIED BY RECOVERY WORKERS

In addition to the content and details that informed the PRE and RAPID template development, discussions with government and non-government agency staff experienced in the delivery of community recovery services highlighted a number of notable recovery issues which were similarly documented in the broader disaster literature (see reference list for sources). While greater elaboration is beyond the scope of this project document the following represents a list of established issues and concerns.

Planning –
Shared understanding/agreement of roles, responsibilities, mechanisms – MOUs, scope
Greater training/planning for medium long term community recovery issues (scenario planning)
Identification/inclusion of broader stakeholder groups/networks (NGOs, volunteers etc)
Level of actual community preparedness/awareness
Consistent understanding of concepts/issues
Indentifying vulnerability/capacity
Contingency planning
Procedures/framework

Staff/agency issues -
Competency levels
Qualifications vs practical experience
Relevant knowledge
Appropriate training
Retention/succession of experienced staff
Flexibility/adaptability
Human resources needs
Administrative support
Communication structures
Organisational structure (hierarchy)
Business continuity
Technical expertise
Stress/debriefing/rotation – burn out
Security, safety and stability
Deployment
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Informal and formal communications networks
Emergent behaviour -
Volunteers
Altruism
Non-government organisations/community groups

Income
Productivity
Business continuity
Second wave demand

Public health-
Special needs
Facilities
Resources
Capacity
Disease

Mental health/trauma -
Mentally unprepared
Dislocation/transition
Adults
Children
Volunteers
Availability of services
Access
Recognising problem/symptoms
Advocacy
Referrals
Case management
Stress

Transition
Displacement
Return migration
Service provision and withdrawal
Staggered withdrawal
Community development/redevelopment
Adjustment

Transparency and accountability
Documentation
Accuracy
Debriefing
Data retention

Flexibility and adaptability
Dynamic
Pragmatic
Multi-sector

Coordination/collaboration

Ownership of data/documentation
Duplication of effort
Gaps
Participation
Information sharing
Liaison

Debrief/Review/Revise
Lessons learnt
Parallel lessons
Common elements
Institutional adaptive capacity

Emergency Management Australia. EMA. (1998) *Community and Personal Support Services. Australian Emergency Manual Series Part III Emergency Management Practice Volume 3 – Guidelines.* Emergency Management Australia: Victoria

Federal Emergency Management Agency. FEMA. (2004) *Are you ready? An in-depth guide to citizen preparedness.* FEMA

Flax, L., Jackson, R. & Stein, D. (2002) Community Vulnerability Assessment Tool Methodology.*Natural Hazards Review.* 3 (4) pp163-176

Governor's Office of Emergency Service California (2004) *Disaster Recovery and Mitigation Handbook.* State OES: California

Handmer, J. (2003) We are all vulnerable. *The Australian Journal of Emergency Management*. 3 (1) 2003 pp55 – 60

Hills, A. (1998) Seduced by Recovery: The Consequences of Misunderstanding Disaster. *Journal of Contingencies and Crisis Management*. 6 (3) pp. 162-170

International Federation of Red Cross and Red Crescent Societies.IFRC. (2004) *World Disaster.*

Quarantelli, E.L. (1999)*The Disaster Recovery Process: What we know and do not know from research.* Disaster Research Centre: University of Delaware

Quarantelli, E.L. and Kreps, G. (1981) *A Perspective on Disaster Planning.3rd Edition Report Series*. Disaster Research Centre: Ohio State University.

Rozakis, M. (2007). The cultural context of emergencies: Seeking for a(n) holistic approach on disaster management. *Disaster Prevention and Management* 16(2): 201-9.

Shaffett, B., Tucker, J., Berry, A. & Cosgrove, S. (2006) Disaster Preparation, Response and Recovery Issues Encountered by Family Resource management Practitioners after Hurricanes Katrina and Rita. *Eastern Family Economics and Resource Management Association 2006 Conference*

Sopehr, J., Wilson, L., Barnett, K., Toth, T. & Watson-Tran, A. (2007) *Measuring Social Inclusion and Exclusion in Northern Adelaide.: A report for Department of Health.* Australian Institute for Social Research: Adelaide.

Standards Association of Australia (2004).*AS/NZS4360:2004 Risk Management*. Standards Association of Australia: NSW

Weller, J. and Kreps, G. (1970) *A model of community coordination in response to disasters. Working Paper 29.* Disaster Research Centre: Ohio State University.

Zamecka, A. and Buchanan, G. (1999) *Disaster Risk Management*. Queensland Department of Emergency Services: Queensland.