



EFFECTIVE COMMUNICATION: COMMUNITIES AND BUSHFIRE

FINAL PROJECT REPORT

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Cover: At left, residents gather at a neighbourhood bushfire safety meeting. Photo by the Bushfire CRC.

At right, a volunteer explains bushfire preparation strategies. Photo by CFA Communities and Communication.

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About this Report

This report has been developed by the Centre of Sustainable Organisations and Work (RMIT University) for the Bushfire Cooperative Research Centre. It is the final report of the research program 'Effective Communication: Communities and Bushfire' (2010-2013).

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Abbreviations

ABC	Australian Broadcasting Commission
ABS	Australian Bureau of Statistics
AEMI	Australian Emergency Management Institute
AFAC	Australasian Fire and Emergency Services Authorities Council
AIDER	Assist Infirm Disabled and Elderly Residents (NSW)
BRAG	Bushfire Ready Action Group (WA)
CALD	Culturally and Linguistically Diverse
CCB	Community Capacity Building
CE	Community Engagement
CFA	Country Fire Authority (VIC)
CFG	Community Fireguard
CFU	Community Fire Unit
CRC	Cooperative Research Centre
COAG	Council of Australian Governments
DEC	Department of Environment and Conservation (WA)
DSE	Department of Sustainability and Environment (VIC)
FESA	Fire and Emergency Services Authority (WA)
FT	Forestry Tasmania
GIS	Geographic Information System
ICT	Information and Communication Technology
MFB	Metropolitan Fire Brigade (VIC)
NGO	Non-Government Organisation
PWS	Parks and Wildlife Service (TAS)
RARE	Responsibility, Authority, Resilience and Expectations
RFS	Rural Fire Service (NSW)
SES	State Emergency Service
TFS	Tasmania Fire Service
VDPO	Voluntary Disaster Preparedness Organisations

The participant identifiers used in the chapters (of the form CRC[state]000) refer to the anonymised interview transcripts held at RMIT University.

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Executive Summary

1. Bushfire is an increasing threat in Australia, with population movement and mobility, shifts in climate patterns and the unevenness in preventive measures across the country. It raises specific questions for populations living in localities as well as for governments and agencies tasked with the question of how to ensure the ongoing safety of the communities that constitute these localities. Effective communication is central to the processes of bushfire preparedness and response. Two approaches are possible, one focusing on the modes, forms and content of communication in the event of fire (media research) and the other examining ways communication takes place within complex social relationships, involving citizens, residents, workers, protective and service agencies, and governments. It is the latter that is the focus of this project.
2. The context of the project is the increasing bushfire risks resulting from rapid climate, socio-economic and demographic change, especially in peri-urban and rural communities. This project generates critical knowledge and theory of effective strategies and options for communication in bushfire risk communities as well as providing an understanding of the bases of community mobilisation around risk. It has designed, developed and tested tools to enable effective communication strategies for optimising community safety.
3. The analytic focus of this research examines the intersection between communities and bushfire authorities and agencies, with reference to the forms, media and processes of communication. It has identified strengths, shortcomings and complexities in communication as well as examining the salience of formal and informal relationships and their dynamics within communities and community networks. Education and capacity building strategies were assessed in terms of identifying and exploring the ways that organisations can optimise the relevance, quality and timeliness of information they provide, the modes of dissemination they employ, and enhance the willingness and capacity of people to hear, understand and act on safety messages.
4. The project comprises focused case study research within selected communities in four states. Utilising ethnographic type research techniques the research focused on the intersection between authorities, agencies and community groups. This research examined propositions derived from the case study field research. The research developed two related work packages to take up particular themes, each building on the case study research and utilising methodologies developed in previous research. First, an action research program was initiated to identify ways of building and strengthening social networks that will facilitate effective communications. Second, a focused enquiry

was undertaken into the role and place of education and awareness strategies as forms of communication in the process of capacity building and awareness development.

5. Within this interdisciplinary project, utilising mixed methods of research, the research questions were addressed via two stages as follows:

- a. Communities and agencies.
- b. Two linked work packages.

Each stage of enquiry constitutes a ‘field’ of institutions and agents that successively interpret and ‘re-contextualise’ or adapt the frameworks, texts and decisions that not only define the communication, awareness and educational approaches in relation to risk and safety but the relation between institutions and community.

6. The project developed and tested a comprehensive suite of strategies for evaluating the broad range of bushfire community safety communication programs in Australia. It highlights (i) an approach that has the potential to lead to a comprehensive and sound evidence base for identifying which strategies work best and why, for whom and in what settings; and (ii) the provision of a consultative and collaborative approach to working with authorities, agencies and the community. These outcomes include briefings, option building and reports.
7. The project offers an innovative approach in applying a robust socio-political framework to understand communication strategies and their effectiveness. The use of this perspective offers a significant opportunity to critique and update existing understandings as well as provide a way of assessing and evaluating communication strategies. It employs the concept of relational networks to understand the links between social institutions such as the fire authorities and citizens.

8. Recommendations

The recommendations focus on the inter-related concerns of localities, agencies and promoting awareness:

1. The localities

- a. *Agencies should consider ways of transforming their approach to communication from a transmission model of communication to an interactive mutually reciprocal one. Such a shift would begin with a consideration of the socio demographic features of communities.*
- b. *Evaluation processes should be implemented. Formal and regular evaluation principles should be applied as a matter of urgency to improve resource allocation, increase effectiveness through ‘lessons learned’ and to ensure that the repetition of recommendations does not become part of the problem rather than the solution.*

- c. *Consideration should be given to the development and implementation of audience- centred forms and modes of communication to increase the effectiveness of campaign messaging.*
- d. *The bases of segmentation and cohesiveness in communities should be mapped periodically and inform policy development. It is imperative that all communications practitioners are aware of the varieties of audience segmentation and understand that diversity needs to be taken into account with message design and dissemination.*
- e. *The particularity of gender must be recognised and acknowledged, and agencies should structure their internal practices as well as the texture and focus of policies, with questions relating to gender at the forefront. Recognition of gender relations is critical and long overdue in bushfire communications.*
- f. *Awareness materials, and the development of these resources, should be explicitly and systematically informed by an acknowledgement of the complexity and sequencing of decisions to be made in preparation for bushfire events.*
- g. *Agencies should be encouraged to note the complexity of household decision-making in relation to bushfire events. If the possibility of disagreement within the household was openly acknowledged in the available support materials for residents in bushfire prone areas this may assist in making bushfire safety communication from agencies more effective.*
- h. *Agencies should be encouraged to build into their communication strategies, recognition of ‘time’ demands that members of localities face, in relation to preparation, active involvement in bushfire related events and the ability to participate in general.*
- i. *Alongside mapping activity, agencies should conduct or commission periodic ethnographic studies to portray the multi-faceted ways that people learn and develop understandings of bushfire events.*
- j. *Overall, awareness strategies should be grounded in relation to the detail and the socio-demographics of communities as localities.*

2. Agencies

- a. *Consideration should be given by agencies from all states and territories to the ways in which a sense of ‘community’ may be generated and promoted by formal awareness workshops.*
- b. *In preparing awareness materials agencies, and self-organised groups in localities, should map divisions that often characterise community populations and then develop strategies which take divisions into account in positive ways.*
- c. *Where tensions are evident within localities it is incumbent on those concerned with awareness development in relation to bushfires to explore ways that populations can be encouraged to deliberate on these questions in positive ways.*

- d. *Agencies and their volunteers should consider how they influence social divisions, given their role and status in communities.*
- e. *Steps should be taken by agencies to develop uniformity in the practice of communication. This will require greater collaboration between agencies and across states and territories.*
- f. *Agencies should actively explore the development of knowledge management systems as mechanisms for monitoring and evaluating the quality of generation, production, content, and dissemination of communication materials. While steps have been taken in this direction by a number of agencies, further work should be done, both within agencies and across agencies.*
- g. *Agencies should introduce formal and comprehensive feedback mechanisms to evaluate and then adapt communication procedures. This measure will enable agencies to employ comprehensive understandings of the effectiveness and the outcomes of communication procedures and practices on an on-going basis.*
- h. *Agencies should review and update their material production and dissemination in conjunction with the development of formal knowledge management processes and practices in order to enhance the management of knowledge-based resources.*
- i. *Agencies should develop targeted and organised ways of disseminating material to ensure that the transmission model of communication does not dominate and overlook the complexities of localities.*
- j. *Consideration should be given to how agency personnel understand their roles and organisations. Such consideration when resourced and undertaken on a regular basis can help address complex issues such as shared responsibility.*
- k. *Agencies should be encouraged to develop holistic frameworks for understanding communities as localities. One such framework is the Resilience, Authority, Responsibility, Expectations (RARE) approach that aids perceptions and understandings of emergency services.*

3. Promoting awareness

- a. *Agencies and related bodies, such as municipal councils, should take steps to encourage social network building around bushfire events as this is one way that the cross cutting linkages that make up communities can be addressed in positive ways.*
- b. *Networks should be encouraged to facilitate their internal operation and their public profile. Recognising how individuals interact is critical for bushfire preparation, as is promoting networks to ensure their continuity and impact.*

- c. *Agencies and related bodies should consider the ways that social capital can be strengthened through various supportive systems, informal meeting places and resources.*
- d. *Network building should be encouraged and publicised within agencies so as to promote end-user engagement with social networks for bushfire preparedness.*
- e. *Agencies should initiate and promote educational programs about bushfire events. A grounded approach that focuses on extending educational programs and ensuring they reflect the risk perspective of those considered at risk.*
- f. *Agencies should give consideration to the experience and characteristics of populations in different localities when developing and delivering education programs.*
- g. *Agencies should recognise that locations vary and that focused approaches will be necessary. Specific communication practices as education strategies may be required in each location.*
- h. *In developing education programs consideration should be given to the touch points for engagement. Using language, which considers the values of the audience, for example, home-owners, can increase the uptake of education programs.*

9. Future Research

Based on the key themes and recommendations we conclude the report with opportunities for future research to improve the effectiveness of bushfire communication strategies.

1. Communities

- a. *Research should be commissioned to review and consider the ways of working with groups with different and conflicting interests can be brought together to address contentious issues.*
- b. *Research is urgently needed into audience segmentation among populations living in bushfire-prone areas of Australia.*
- c. *One related area of neglect in relation to understanding communities is in relation to households; little is known about household organisation, composition, activity and resources.*
- d. *Little is known of the ways in which informal relations, involving conversation, local meeting places and related social practices, and the ways they may have a bearing on bushfire preparedness and response.*

2. Communication

- a. *Further research should be undertaken to understand and leverage the benefits of knowledge management in this context.*

- b. Research on social capital-focused understanding should be undertaken, to understand and develop procedures in relation to communication and bushfires.*

3. Agencies

- a. In view of the complex relations defining emergency bushfire services, it is necessary to develop a theory of authority that fits with current brigade practices both at a state and regional level, including volunteer brigade.*

4. Gender

- a. More critical assessment is needed into the gendered dynamics of household decision making and communication around bushfire safety.*

5. Social networks

- a. There is a pressing need to extend the understandings of social network building into a fully developed research program, so that the insights to date can be consolidated, extended in relation to strategies for development and the recognition of network building as central to effective communication*

6. Education

- a. It would be valuable to commission research into the ways in which education can open up and embed social practices in relation to community engagement*

Chapter 1: Effective Communication: Communities and Bushfire

The number of bushfires is predicted to increase and the expansion of urban development into rural areas is exposing more people to the risk of bush and/or grass fires. Internationally, governments and their emergency agencies are devising ways to involve populations in localities to prepare for and recover from these events (Fairbrother *et al.* 2013). Localities across the globe are facing increased exposure to bushfires through population growth and relocation (Hughes and Mercer 2009; Mell *et al.* 2010) and climate change (Pausas 2004; Liu *et al.* 2010). Predictions for Australia, for example, report that there will be an increase in the average number of days when the Forest Fire Danger Index is very high or extreme (Climate Council 2013).

Complementing this information, international evidence suggests that with an increased risk of bushfire, there are attempts to develop more collaborative fire and emergency management arrangements (see for example China: Zhang *et al.* 2013; US: Steelman and Kunkel 2004; and Fleeger 2008; Honduras: Lineal and Laituri 2013; and Australia: Fairbrother *et al.* 2013).

Background

With the events of 2009 and in particular Black Saturday and the Royal Commission, there is a renewed urgency to address the bases of communication and community mobilisation in the context of bushfire risks. The final report of the Victorian Bushfires Royal Commission (Teague *et al.* 2010) notes significant government and agency failings in information and warning services and recommends major reforms. This observation is particularly relevant given previous research and submissions to the Royal Commission indicated that the ‘stay or go’ message is not well understood by many and that the communication around the message ‘essentially simplifies a decision which, in reality, is far more complex’ (see Teague *et al.* 2009: 193). While specific to Victoria, the questions raised by the Commission are general and have important national implications.

The Effective Communication: Communities and Bushfire project examines and provides an understanding of the social, political and historical bases of community awareness and resilience in bushfire contexts. The research focuses on the intersection between community, institutions and organisations in relation to communication. As a broad concept, communication is the process of establishing meaning, encompassing all forms of social interaction from the personal to public announcements. Communication takes on significance at multiple levels within the community, from organisational and operational communications, such as bushfire warnings, to community education programs and the communication of messages and information via public campaigns.

For people to appreciate the risk of the ‘hazards on their doorsteps’ one claim is that they should be personally engaged with the messages coming from the emergency services organisations (King 2000: 226; Prior and Paton 2007). Another claim is that key messages should be

consistent, easy to understand and relevant to the area where people live (Fairbrother *et al.* 2010). Thus, it is not enough to just send generic material and expect that people have the knowledge and skill to apply that information to their own situations (Prior and Paton 2007). Bushfire-related communication, whether awareness or education, should engage individuals directly, provide relevant, tailored information and maintain preparedness. The research investigates the interactions between communication and behaviour through a study of the multiple relationships between community, authorities and agencies engaged with fire prevention, preparedness and recovery.

While there is an extensive body of international research to date on risk communication that addresses some of the dimensions of the communication process (e.g., Kaspersen 1987), there has been little integrated research focusing on the community and its intersection with the authorities and agencies engaged in bushfire safety and risk management, including how this affects the effectiveness of messages. Three aspects should be considered in relation to community awareness, preparedness and resilience. First, community is a contested concept that will be rigorously defined and substantiated in relation to bushfires as disasters. Second, the bases of mobilisation at a locality level in relation to bushfire risk involve a consideration of organisation, capacity and capability. In this respect, social networks that are built up over time in localities provide the possibilities for awareness, preparedness and resilience in the context of bushfire risk. Third, authorities and agencies, such as emergency services and local, state and federal governments, often appear disconnected and poorly co-ordinated with ill-defined or overlapping jurisdictional authority and roles. This focus on institutions, the way they organise, interact and affect community extends to how formal and informal rules, as forms of communication, facilitate or impede appropriate forms of social organisation and operation in relation to bushfire risk.

The **objectives** of the research program are:

- To develop and extend theory to provide an understanding of the conditions for effective communication in relation to individuals, households and communities in fire-prone areas.
- To locate this understanding of communication in relation to the long-term preparation and mobilisation of citizens in fire-prone areas and the role and place of emergency and fire-related authorities and agencies in this process.
- To analyse the relationships between warnings and related forms of communication in the long-term, and not only when bushfires occur but also when expected fires and related events do not take place.

Themes

The primary analytic focus is ‘community’. While a contested term that is open to overlapping and different understandings, the concept of community attempts to capture the dimensions of social life at a local level (Crow and Allen 1994; Wellman 1999; see also Fairbrother *et al.* 2013). It is also important to draw attention to the way understandings are developed in

relation to the specificity of localities (Snow *et al.* 1986; Paton and Jackson 2002; see also Fairbrother *et al.* 2013). There are a number of dimensions to take into account. First, there is the question of geography. An increasing number of people belong to geographically dispersed communities of interest, rather than forming reciprocal ties among a 'community of place' (i.e. people living in a specific geographical area). Second, there is evidence of a general decline in the level of trust in government and authorities, and the members of a community may be shifting their focus from the public to the private and personal (Robinson, 2003). Third, there is also evidence of 'fragmentation' in some communities of place with complex relations relating to knowledge, commitment and engagement involving long-term people and incomers (Bourdieu 1973; Boyle and Halfacree 1997). Residents in such places make up permanent households, non-permanent/newly arrived households, holiday-home owners and tourists. It is possible that they *lack* strong, reciprocal relationships. Such fragmentation may take other forms and be associated with the shifts in service provision in rural society, involving education, financial and legal support, provisions, and leisure. These different aspects provide the context for the Effective Communication: Communities and Bushfire project, which is grounded in the ways communities organise and operate.

One way of developing a theoretical understanding of the social relationships that characterise community and civic participation is derived from social capital theory (Putman 1993, 2003). Involvement and engagement in community life lays the foundation for social cooperation, civic engagement and trust. These understandings are further developed in relation to the types of social interactions that allow capacity building to take place in the context of community diversity and social inclusiveness (Cooke and Morgan 1998; Cuthill and Fien 2005). Such analytic frameworks provide the basis for developing accounts of why there may be variation in the way in which communities respond and develop to disaster threats. Thus, the basis will be laid for moving beyond the evocative accounts that can be provided about specific communities towards explanations of the conditions for effective forms and aspects of communication.

A further related theme is to address the processes surrounding local mobilisation in relation to communication within the context of community networks. This part of the research sought to answer a number of questions: 1) how people develop awareness; 2) who is typically involved and who is not; 3) how people prepare for the possibility of bushfire and organise under the auspices of authorities and agencies; 3) how they utilise educational and awareness practices; and 4) how they exchange information and learn from one another and specialists.

The next step on from social capital theory is to consider the circumstances, condition and outcomes of community engagement and network building. Theories of deliberative democracy necessarily open up these issues in relation to civic participation (Wright, 1995; Bohman and Rehg 1997). This focus is complemented by the study of risk awareness, motivations and capabilities (Tierney 1999; Marske 1991). There may be different degrees of emphasis in these processes, particularly in relation to the technical aspects of fire and the ways communities prepare and deal with bushfires. The key problem is that it is not clear what the conditions for participation and awareness are or how authorities and agencies through the messages they promote and disseminate may facilitate them. Some of these themes have been addressed in social movement literature focusing on the processes of mobilisation, considering organisation,

capacity and purpose (Voss and Sherman 2003; Fairbrother and Snell 2010; Lévesque and Murray 2010). These ways of developing awareness and understandings bring into contention the ways of framing, developing and expressing understandings (Melucci 1996; Obach 2004). It may be the case, that with appropriate education, awareness sessions, coupled with forms of network building and engagement within these contexts, that local people in conjunction with relevant authorities and agencies could organise, develop capacities and elaborate understandings.

A final theme examines issues surrounding the coordination of communities in response to bushfire preparedness and emergency response. As noted above, many authorities and agencies are charged with the responsibility for coordinating community action. These organisations create policy and/or rules to direct community action. Problems arise when communications are inadequate, not received or, if received, are not understood or followed, or when people face mixed messages from different agencies, organisations or communicators. The creation and implementation of formal and informal rule frameworks can be viewed as a form of communication (Ayres and Braithwaite 1992). There is a need to better understand the relationship between key organisations, their authority to formulate rules, to communicate and to encourage compliance with those rules.

The propositions that inform the research are:

1. Effective communication is dependent upon the degree of social cohesion that characterises the community. The project maps the sources and forms of cohesion within each of the selected communities and develops strategies for effective communication. A mix of communities were selected to ensure a variety of demographics, regional particularity and related matters. The outcome is a comprehensive set of transferable strategies for dealing with communication in preparing for bushfires, responding in the event of bushfires and dealing with the consequences of bushfires. A limitation of many current models is that they are top-down, whereas the focus of the present project is on the community, developing effective communication, the enhancement of community resilience and building of social capital. This analysis addresses the community experience and has implications for the mode of delivery, taking into consideration audience needs and differentiation, message development, modes of communication and evaluation.

2. Four sub-propositions further guide the project:

a. **Communities as localities organise and operate to respond to fire and fire threats in complex ways.**

The socio-demographics of at risk communities are very varied, including rural and agricultural areas, bush areas and semi-urban. In addition, these localities vary by a range of factors, including age profiles, residential patterns, and gender patterns. There are two aspects to this proposition, one focusing on the mapping and auditing of interrelationships and connections within localities and between residents and organisations and the other focusing on the social processes at work that enable residents

to organise, utilise their capacities and develop understandings of threat and risk. What this research reveals is the complex response profile that exists within the communities.

- b. **The relationship between communities and fire-management authorities and agencies affects communication in both positive and negative ways.**

Some relationships are integrated, some are dispersed and some are voluntary, while others are professional. There are more fragmented relationships, sometimes conflicted, between communities and local authorities, which can impact on the communication and effectiveness of the community response. These creative tensions need to be harnessed to build more effective and cohesive communication networks.

- c. **Access, understanding and response to communication can depend on social context, life experience, status and position of both the communicators and receivers.**

The range of communication strategies is complemented by different forms and processes whereby communication takes place. Comparable studies suggest that the way in which power and authority is exercised in relation to communications are inter-related. This draws attention to gender relations, life experiences and histories of residents, the organisation and operation of authorities and agencies. The result is a diverse array of processes that should be considered in the assessment of effective communication.

- d. **Communication strategies need to be tailored to the various community groups at risk and supported by appropriate guidelines.**

This research and related work undertaken by the team explored the processes of communication effectiveness, in the context of ‘community’ cohesiveness and fragmentation. Action informed by rigorous sociological models resulted in cohesive and inclusive acceptance (i.e. buy-in) as opposed to indifference and resistance.

Research Approach and Methodology

The Bushfire Cooperative Research Centre (CRC) enquiry under the Community Self-sufficiency for Fire Safety Program, and in particular the project ‘Evaluating Bushfire Community Education Programs’, from July 2004 through to June 2009, provide one starting point for an enquiry that addresses this topic. The program concluded that education initiatives should be ‘targeted to residents and communities at high risk’ and that they should be ‘tailored to the priorities and capacities of local individuals and communities’ and be ‘flexible and responsive to differences and changes in individuals and communities’ (see Stevens 2007; Elsworth *et al.* 2009).

The project reported here builds on the earlier program. Increasingly fire and land management agencies have turned their attention to evaluate and understand the programs that have been put in place, by state and territory. It builds on the foundations laid by Project C in the Bushfire CRC and a current CFA (Victoria) commissioned study (1 October 2009 – 31 August 2010) focusing

on the Community Fireguard (CFG) fire awareness program. A dedicated RMIT research team led by Professor Peter Fairbrother examined awareness materials, processes of recruitment of facilitators, training of facilitators, and the support for Community Fireguard groups. In addition, an action research team led by Dr Yoko Akama focused on communication design and engagement strategies at a community level. The 'Effective Communication: Communities and Bushfire' program of research was also distinctive in that it lays the foundation for centre-staging the inter-relationship between state and emergency services agencies, the related local government, natural resource management organisations on the one hand, and the communities in bushfire prone areas on the other.

A mixed-method social research approach was utilised in the 'Effective Communication: Communities and Bushfire' research program. The core of the research was a set of carefully selected case studies, in New South Wales, Tasmania, Western Australia, and Victoria. It involved 12 community case studies, three from each state. They are complemented by two work packages, taking up specific aspects of the project. These covered (1) social networks and communication and (2) educational processes as communication. Together they comprise a comprehensive and focused project.

Case Study Research

Case studies were selected on the basis that they are located in a bushfire-prone area. Some localities were chosen because they had gone through a bushfire in the last five years, on the basis that this experience constitutes a critical case. The selection of cases was based on replication logic rather than a sampling logic for the purpose of generalisation to (disaster and social capital) theory (Yin 2003: 47-52). As Yin (2003: 47) argues, the careful selection of multiple case studies must follow one of two logics, either to (i) predict similar results (a literal replication) or (ii) predict contrasting results but for predictable reasons (a theoretical replication). The selection of the communities was based on the second logic, where outcomes will be influenced by institutional organisation and arrangements, socio-demographics of the community (permanent and semi-permanent residents), physical size and terrain of the community (bush, grasslands, crops, reserves, urban clusters), technologies and work methods utilised by authorities and agencies. This selection is for studying the conditions for the preparing and dealing with bushfires in communities.

Communities are not simply residences and associated facilities, but are essentially relational processes. Other actors involved in transactions with these communities include the state (e.g., departments), agencies (such as the fire authorities and State Emergency Services), local government; civic bodies (such as Landcare); employers, workers and their unions, and citizens/residents. The objective is 'to understand [that] networks and their embedded relations requires us to probe into the socio-spatial constitution of these [actors]' (Dicken *et al.* 2001: 91). A relational analysis of these networks will illustrate the ways in which emergency and disaster hierarchies are constituted to construct policies and practises in relation to bushfires.

A network methodology allowed us to 'operationalise' the relational perspective by specifying the principal conditions that must be satisfied by research. This procedure involved the

identification of actors in networks and the relational processes and structures in which, and through which, power and authority is exercised. Such analysis is critical in the context of voluntary and participative action in relation to bushfire preparedness and resilience, the multiplicity of geographical and organisational scales at which networks are manifested, and the territorial embeddedness of institutional networks (Dicken *et al.* 2001: 92). This methodology generated a rich description of these processes to understand the causal mechanisms and underlying factors through which community preparedness and resilience is constructed.

The data was derived from: (a) **Documents:** relevant reports, position papers; (b) **Interviews:** with key respondents, covering citizens, educational activity, fire prepared groups and institutions and authorities and agencies; (c) **Observation** of community activity; and (d) **Panel Interviews** as part of the case study research.

The methodology for the study of each case study community relied on multiple sources of data and evidence, in real-life contexts (Yin 2003: 12-14). The field research involved ethnographic-type work developing a cross-sectional approach. It involved two by three week periods of research in each community, as well as some targeted follow-up. Field research at each site involved the observation of work activity and key respondent interviews. The interview totals for are as follows:

1. Documentary analysis: the policies and procedures followed in relation to each state and case study area were collected and analysed. An adapted and schematic content analysis was used.
2. Interviews: The research team conducted 249 face-to-face individual interviews, joint and telephone interviews with 265 participants and ran 13 focus groups involving 71 participants. Key respondent interviews were conducted with members of each local fire authority, two with local emergency services staff, two with local government officers, two with community bushfire leaders. Interviews were held with members of established community networks as well as with people outside these networks (since many people have multiple roles, precise numbers are difficult to specify, although the target was six in each category).
3. Observation: The research involved mapping, detailing networks and relations, observational work of agency personnel and residents in meetings and related activities. Digital mapping processes were deployed to develop comprehensive scenarios of bushfire possibilities and community engagement.
4. Panel Interviews: Focus groups comprised of community residents and ten interviews were conducted, in some cases with a selection of staff in the principal community safety unit (e.g. Community Fireguard in Victoria and Bushfire Ready Action Group in Western Australia).

This material was captured, classified and prepared for analysis, using standard social science procedures. It was transcribed, anonymised and is securely stored at RMIT, according to University data management requirements.

Two work packages, focusing on specific themes that are central to the project were conducted.

1. Work Package One: Building and Strengthening Effective Social Networks for Communication

Social learning and knowledge construction is facilitated by dynamic and organic interaction among social network structures (e.g. Barnett *et al.* 1993; Cho *et al.* 2002). Furthermore, the work by Gladwell (2000) identified a pattern whereby a small number of people in every social network can spread an 'idea' to a large network of people (e.g. connectors, brokers) quickly and with credibility. Even so, asymmetrical relations may make it challenging to understand, predict or model these social networks. This understanding is pertinent for an examination of how bushfire awareness messages travel through and penetrate a community.

A previous study of a community network in the Southern Otways, Victoria, has revealed that there is more research needed to trial how to leverage the connectors and brokers, or identify 'community champions' and facilitate their role in relation to bushfire awareness. The study by Dr Akama and Dr Ivanka developed approaches to harness community capacities and capabilities. This study revealed that time is needed to establish trust, build personal relationships and develop a rapport (Akama and Ivanka 2010).

In a series of workshops and complementary field research these themes were examined. Methodologically, this research involved a form of Action Research.

2. Work Package Two: Education as Capacity Building

Education and awareness programs contribute to and effect the positive communication between authorities/agencies and social networks in the community. The government and various fire agencies and related authorities have deployed a wide variety of communication strategies on bushfire awareness. However, there is evidence that although media campaigns can help convey key messages to a wide audience, this method alone is not enough to increase people's preparedness for bushfire (Robinson 2003). Irrespective of clear, accessible information displayed on websites or receiving brochures on household preparation, many residents have voiced views that these have not led them to be more proactive towards bushfire preparation. Rather it appears that informal messages were more effective than the formal communications from emergency services authorities like radio messages, brochures and television advertisements (McGee and Russell 2003: 11).

One of the rationales of community education is that it bridges the gap between authorities and agencies (and regulatory requirements) and communities (Fairbrother *et al.* 2010). Education programs that encourage communities to work collaboratively to take responsibility for their own preservation, such as the CFA's Community Fireguard in Victoria, can increase social

cohesion while enhancing individual responsibility for fire safety (McGee and Russell 2003: 11). The approach used in this program engaged the participants directly, works locally and may fill some of the gaps in knowledge and awareness that members of some of the studied communities have demonstrated.

This work package built on the detail and focus of the case study work. The work package undertook a rigorous comparative analysis of educational strategies as a key form of communication. This dimension was complemented by an analysis of the conditions for these strategies, including resourcing at a community level by authorities and agencies, the organisation and operation of social networks, the processes of mentoring and facilitating, as well as different media for achieving effective results. The outcomes are a model for developing appropriate and tailored educational and communication strategies that address prevalent community diversity in Australia. This will enable local people to manage bushfire risk more effectively.

Chapters

The report is organised as follows, via a set of stand-alone but inter-related chapters:

Chapter 2: Invocations of community are increasingly being used in Australian public policy. Yet the term ‘community’ is often used in confusing and conflicting ways. This chapter explores the origin of this approach to public policy, and its connection with related notions of social capital and community capacity building. The three different usages of the term ‘community’ are explored and the social-capital approach to community-based policy is examined and explored, particularly from the perspective of the voluntarist nature of Australian bushfire agencies.

Chapter 3: The main purpose of this chapter is to explain the importance of adopting a knowledge management approach to the development and dissemination of bushfire communication products. The present communications practices regarding bushfire preparation in Australia are often *ad hoc*. As part of the research project, a bushfire communications grid was developed which preserves a snap shot of communications products used. The effectiveness of the approach is also analysed and critiqued, and some recommendations are made regarding how to improve the current system.

Chapter 4: This chapter gives further context to the complexities of bushfire preparedness communication by analysing the interview responses from communication professionals. Interviews were conducted with professionals working in fire agencies and government departments in New South Wales, Tasmania, Victoria and Western Australia. The participants provided a wide variety of responses and this chapter focuses on accounts of message development and evaluation, as well as attitudes to audience segmentation and diversity. A social marketing approach to public communications is adopted here and it is argued, firstly, that there needs to be a greater emphasis on the evaluation of messaging and, secondly, that further research into audience segmentation and diversity is urgently needed in order to potentially develop more effective bushfire safety and preparedness campaigns in Australia.

Chapter 5: This chapter develops a framework of analysis to examine communication practices, with the focus on fire and other agencies. It is based on narrative accounts of participants' professional roles concerning communication, community engagement and operational responsibilities. The analytic framework comprised four themes: Resilience, Authority, Responsibility and Expectations (RARE). Of note resilience is an emerging theme in such narratives. These findings suggest that examining the ideas of resilience, authority, responsibility and expectations are one way to develop a way of conceptualising the state's response to bushfire.

Chapter 6: There is a tendency for debates concerning community to be informed by broadly positive underpinnings. Such discussions, especially those about recovering a lost sense of community, are characterised by an emphasis on social relations that are harmonious and united. This chapter draws on other critical perspectives that argue that viewing community based on commonalities fails to account adequately for difference and unequal power relations within communities. Using participants' accounts of conflict and difference, this chapter highlights the complexity within communities as well as examples of problematic interactions with agencies. The question for agencies is whether or not a more nuanced understanding of the social relations can be incorporated into communication strategies.

Chapter 7: This chapter considers community communication practices undertaken by fire and other agencies across Australia from the perspective of community engagement. Tensions exist within agencies and brigades concerning the role and nature of community engagement. Based on a thematic analysis of interview data, this chapter argues that a less fragmented approach to community engagement should be adopted which takes community communication practices as a process at a whole of brigade/organisation level.

Chapter 8: Unlike the formal communications processes analysed elsewhere in this report, this chapter considers the more micro-level, informal communication about bushfire preparedness and response between members of households. In particular, this chapter focuses on the notable gender differences in preference for early evacuation or 'staying to defend', and the way in which these differences are negotiated within couples. Data from 107 interviews with residents in nine localities, across three different states, was coded as part of the analysis, making this one of the most comprehensive studies of gender and bushfire in Australia to date. The study suggests that disagreement about bushfire safety within households, especially between members of heterosexual couples, is common and that this may impede the ability of individuals and families to develop adequate bushfire preparedness and response strategies. Bushfire agencies need to be aware of these intra-household dynamics and it is concluded that further research is required in order to understand the way in which the social construction of gender may affect the development of household bushfire plans.

Chapter 9: One of the tasks facing fire agencies is to develop communication strategies aimed at localities undergoing social change, often as a result of migration, usually from urban areas, into fire-prone areas. These localities include region-urban areas and sea-change/tree-change places. Within such areas there is the movement of younger families to the urban fringe, middle age and older persons retiring to such areas, holidaymakers and others. Such movement often

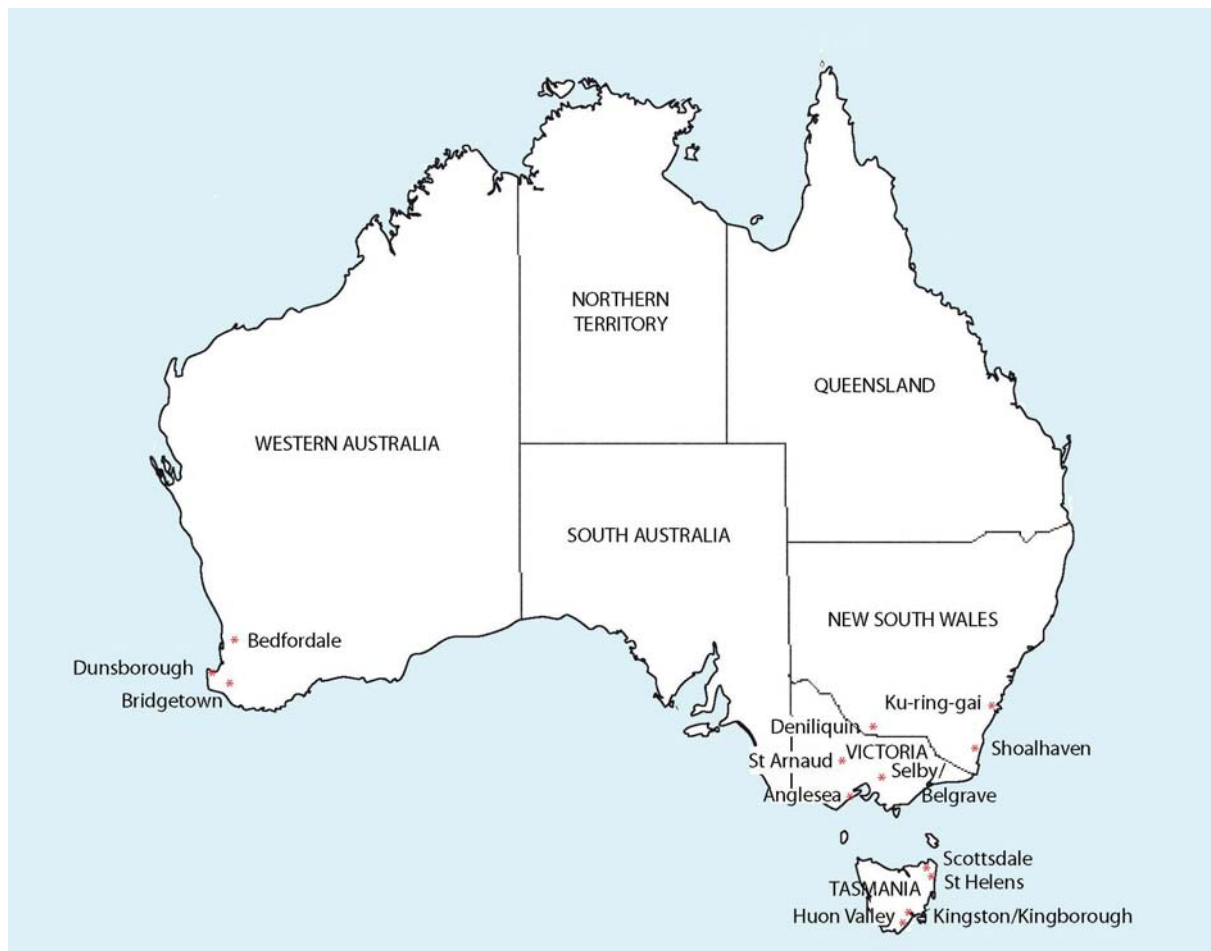
throws established relations and practices into sharp relief, raising questions about bushfire preparedness and responses. In some cases there is evidence of tensions between different sections of the community about bush retention, cleaning up vegetation waste, and related life style preferences. Via study of these two types of locality, these themes are addressed.

Chapter 10: The social networks and bushfire preparedness study aimed to understand the quality and characteristics of a social network that can aid bushfire preparedness. We took the view that a community is generated by and manifested in both formal and informal networks that exist between people, groups and organisations (Gilchrist 2009). A network perspective adds a neglected dimension on how information and local knowledge flows, often informally, are passed from one person to the next in a community- of-place, where the locality and situatedness are shared. Understanding how and why networks develop reveals the latent resourcefulness of communities and the bridging interdependence that has been under-researched so far, particularly in bushfire literature. Our study presents a framework of **bonding, building** and **linking** in ways that can build community resilience. While such relationships can involve groups of social actors, in this analysis we present a framework that highlights the key roles played by individuals in connecting people and organisations.

Chapter 11: Community-based bushfire education is a key strategy in the attempts to promote bushfire safety and should be seen as part of an all-hazards approach to risk. Evidence shows that the abundance of educational materials and programs engages those already interested in bushfire mitigation measures. It appears that information or risk awareness does not convince people to adopt a more proactive response to bushfire safety. Such education occurs within wider social, political and economic contexts. It is suggested that education strategies could be understood as an integrated (planned) or as a variegated (loose) approach. Education efforts should involve local people in their design and delivery, be localised to account for specific contexts and fire agencies should work towards a more collaborative model that promotes authentic community engagement. Further work is required to develop education materials that affirm people's values, rather than challenge predisposed worldviews. Delivering community education and engagement strategies is challenging work requiring long-term resourcing and a commitment to understanding people and their communities.

Chapter 12: The research findings are presented in the form of a list of recommendations grouped into three key areas of concern: localities, agencies and promoting awareness. The chapter concludes with a set of suggested themes for future research.

Figure 1 - Location of Studies



References

- Akama, Y. and Ivanka, T. 2010. Birds of a Feather: Emboldening community spirit and connectedness for bushfire resilience. <http://www.rmit.edu.au/browse;ID=tf3nrmdmr6tm1>
- Ayres, I. and Braithwaite, J. 1992. *Responsive Regulation: Transcending the deregulation debate*. Oxford University Press: New York.
- Barnett, G.A., Danowski, J.A., and Richards, W.D. 1993. Communication Networks and Network Analysis: A current assessment. In Richards, W.D. and Barnett, G.A. (eds) *Progress in Communication Science*. Ablex: Norwood, NJ.
- Bohman, J. and Rehg, W. (eds) 1997. *Deliberative Democracy: Essays on Reason and Politics*. The MIT Press: Cambridge, MA.
- Bourdieu, P. (1973) Cultural Reproduction and Social Reproduction. In Brown, R. (ed) *Knowledge, Education and Cultural Change*. Tavistock: London.
- Boyle, P. and Halfacree, K. (eds) 1997. *Migration to Rural Areas: Theories and Issues*. Wiley: Chichester.
- Cho, H., Stefanone, M. and Gay, G. 2002. Social Information Sharing in a CSCL Community. In Stahl, G. (ed.), *Proceedings of CSCL 2002, Boulder, CO*. Lawrence Erlbaum Associates: Hillsdale, NJ.
- Climate Council. 2013. Angry Summer 2013/2014. <http://www.climatecouncil.org.au/angry-summer>
- Cooke, P. and Morgan, K. 1998. *The Associational Economy: Firms, regions and innovation*. Oxford University Press: Oxford.
- Crow, G. and Allen, G. 1994. *Community Life: An introduction to local social relations*. Harvester Wheatsheaf: Hemel Hempstead.
- Cuthill, M. and Fien, J. 2005. Capacity Building: Facilitating citizen participation in local governance. *Australian Journal of Public Administration*, 64(4): 63-80.
- Dicken, P., Kelly, P.F., Olds, K. and Yeung, H.W. 2001. Chains and Network, Territories and Scales: Towards a relational framework for analysing the global economy. *Global Networks*, 1(2):89-112.
- Elsworth, G., Goodman, H., Gilbert, J. and Rhodes, A. 2009. *Evaluating Bushfire Community Education Programs*. Report No. C.06.09. Bushfire CRC: Melbourne.

- Fairbrother, P. and Snell, D. 2010. Unions as Environmental Actors. *Transfer*, 16(3): 411-424.
- Fairbrother, P., Hart, A., Stratford, J. and Prokopiv, V. 2010. CFA *Community Fireguard Review: Improving quality control and assurance*. RMIT University: Melbourne.
- Fairbrother, P., Hart, A., Mees, B., Phillips, R., Stratford, J., Toh, K. and Tyler, M. 2013. Creating 'Community'? Preparing for bushfire in rural Victoria. *Rural Sociology*, 78(2): 186-209.
- Fleeger, W. E. 2008. Collaborating For Success: Community wildfire protection planning in the Arizona White Mountains. *Journal of Forestry*, 106(2): 78-82.
- Gladwell, M. 2000. *The Tipping Point: How little things can make a big difference*. Little Brown: Boston.
- Hughes, R. and Mercer, D. 2009. Planning to Reduce Risk: The Wildfire Management Overlay in Victoria, Australia. *Geographical Research*, 47(2): 124-141.
- Kasperson, R. E. 1987. Public Perceptions of Risk and their Implications for Risk Communication and Management. In McColl, S.R. (ed.), *Environmental health risks: Assessment and management*. University of Waterloo Press: Waterloo.
- King, D. 2000. 'You're on Your Own': Community vulnerability and the need for awareness and education for predictable natural disasters. *Journal of Contingencies and Crisis Management*, 8(4): 223-228.
- Lévesque, C. and Murray, G. 2010. Understanding Union Power: Resources and capabilities for renewing union capacity. *Transfer*, 16(3): 333-350.
- Lineal, M. and Laituri, M. 2012. Community-based Integrated Fire Management Planning: Linking ecology and society in Honduras. *Community Development Journal*, 48(1): 58-74.
- Liu, Y., Stanturf, J. and Goodrick, S. 2010. Trends in Global Wildfire Potential in a Changing Climate. *Forest Ecology and Management*, 259(4): 685-697.
- Marske, C. 1991. *Communities of Fate: Readings in the Social Organisation of Risk*. University Press of America: Lanham, MD.
- McGee, T. and Russell, S. (2003). 'It's Just a Natural Way of Life...': An investigation of wildfire preparedness in rural Australia'. *Global Environmental Change Part B: Environmental Hazards*, 5: 1-12.
- Mell, W.E., Manzello, S.L., Maranghides, A., Butry, D. and Rehm, R.G. 2010. The Wildland-urban Interface Fire Problem – Current approaches and research needs. *International Journal of Wildland Fire*, 19: 238-251
- Melucci A. 1996. *Challenging Codes: Collective action in the information age*. Cambridge University Press: Cambridge.

- Obach, B. 2004. *Labor and the Environmental Movement*. The MIT Press: Cambridge, MA.
- Pausas, J. 2004. Changes in Fire and Climate in the Eastern Iberian Peninsula (Mediterranean Basin). *Climatic Change*, 63(3): 337-350.
- Paton, D. and Jackson, D. 2002. Developing Disaster Management Capability: An assessment centre approach. *Disaster Prevention and Management*, 11(2): 115-122.
- Prior, T. and Paton, D. 2008. Understanding the Context: The value of community engagement in bushfire risk communication and education. Observations following the East Coast Tasmania bushfires of December 2006. *The Australasian Journal of Disaster and Trauma Studies* 2008-2. [n.p.]
- Putnam, R. 1993. *Making Democracy Work*. Princeton University Press: Princeton.
- Putnam, R. 2003. *Better Together: Restoring the American community*. Simon & Schuster: New York.
- Robinson, L. 2003. Education for Resilience: Community safety communication for natural hazards http://www.enablingchange.com.au/Resilience_and_risk.pdf
- Snow, D.A., Burke Rochford Jr., E., Worden, S.K. and Benford, R.D. 1986. Frame Alignment Processes, Micromobilization, and Movement Participation. *American Journal of Sociology*, 51: 464-481.
- Steelman, T.A. and Kunkel, G.F. 2004. Effective Community Responses to Wildfire Threats: Lessons from New Mexico. *Society and Natural Resources*, 17(8): 679-699.
- Stevens, K. 2007. *Improving the Bushfire Safety of Communities Through Community Awareness, Education and Engagement: A review of policy directions in six recent Australian reports*. Bushfire CRC: Melbourne (unpublished).
- Teague, B., McLeod, R., Pascoe, S. 2009. *Victorian Bushfires Royal Commission: Interim Report*. Government Printer: State of Victoria, Melbourne.
- Teague, B., McLeod, R., Pascoe, S. 2010. *2009 Victorian Bushfires Royal Commission: Final Report*. Government Printer: State of Victoria: Melbourne.
- Tierney, K. 1999. Toward a Critical Sociology of Risk. *Sociological Forum*. 14(2): 215-241.
- Voss, K. and Sherman, R. 2003. You Just Can't Do It Automatically: The transition to social movement unionism in the United States. In Fairbrother, P. and Yates, C. (eds) *Trade Unions in Renewal: A comparative study*. Routledge: London.
- Wellman, B. 1997. An Electronic Group is Virtually a Social Network. In Kiesler, S. (ed.) *Culture of the Internet*. Lawrence Erlbaum: Hillsdale, NJ.

Wellman, B. 1999. The Network Community: An introduction. In Wellman, B. (ed) *Networks in the Global Village: Life in contemporary communities*. Westview: Boulder, CO.

Wright, E.O. (ed.) 1995. *Associations and Democracy*. Verso: London.

Yin, R.K. 2003. *Case Study Research: Design and methods*, 3rd edition; Sage: Thousand Oaks, CA.

Zhang, X., Lixin, Y. and Zhao, D. 2013. Community-based Disaster Management: A review of progress in China. *Natural Hazards*, 65: 2215-2239.

Chapter 2: Understanding ‘Community’: Concepts of Community, Social Capital and Public Policy

National, state and local governments in Australia are currently looking to integrate notions of community, social capital and community capacity building into a variety of policy areas, including bushfire preparedness and safety. This development is part of an international trend towards formally acknowledging the benefits of ‘strong communities’ and the importance of fostering links between communities and government institutions. As Marsh and Buckle (2001) note, however, the use of the term ‘community’, although widely established in the context of Australian bushfire management, has often been used in different and conflicting ways. Linked with the voluntarist nature of the bushfire agencies, understanding what is meant by ‘community’ is an essential first step in developing a clearer conceptualisation of what a community-predicated approach to bushfire management may mean and entail. This chapter provides an overview of the concepts of community, social capital and ‘community capacity building, including an outline of how the use of these terms is varied and contested, as well as insights into the limits of relying on notions of ‘community’ in policy. This lays the foundations for the following chapters of this report, which often refer back to these understandings of community, connection and communication.

Community

Historically, the term ‘community’ has been employed to represent various collections and constellations of interests. The term literally denotes an expression of commonality (cf. Latin *communis* ‘common, general, universal, public’, *communitas* ‘community, society, fellowship, friendly intercourse’), but the first use of the term in the Australian context was to rural townships, the establishment and value of community health services and to involvement in local organized activities such as community gardens. The term could (and still can) refer to sections of the populace that are associated with one another by dint of ethnicity or activities, such as the Chinese, Italian or Jewish community, or the business, sporting or motoring community. Its usage in newspapers and other forms of civic discourse has traditionally occurred most remarkably in terms of service and benefit ‘to the community’ at large, however, rather than particular communities (cf. Radford 1939; Bayne and Lazarus 1940).

The term community may connote the nation, a state, region, or even a small locality. In these cases it acts to unite diverse sections of the collective population under one banner of belonging. At the same time, it often combines the idea of benefit with an imputed sense of civic obligation. Thus the notion of ‘community’ has often traditionally been held up as an ideal by which Australians should recognise a duty to the rest of the populace. This ideal has come to be especially connected with the ethic of volunteerism which characterises the bushfire services in Australia and the standards that all members of a populace can be expected to hold (Murray and White 1995).

The usage of the term ‘community’ has often reflected the way that the nineteenth-century German sociologist Ferdinand Tönnies (1887) defined community (German *Gemeinschaft*), in opposition to society (*Gesellschaft*). For Tönnies, *Gemeinschaft* described a sense of community that included traditional social relations formed around face-to-face interactions. Tönnies separated associations into real or organic (a feature of *Gemeinschaft* – ‘community’) and imaginary and mechanical types (a feature of *Gesellschaft* – ‘society’). According to Tönnies, ‘society’ represented the informal, distant and short-lived aspects of modern associative life, ‘community’ a sense of closeness, longevity and the personal. Beginning in the 1960s, critics of the distance between government and the people that public policy is supposed to serve saw calls to establish a renewed community-based kind of democratic association (a ‘neo-Gemeinschaft’) that restored a sense of the personal, deep and immediate to both local and public life (cf. Greeley 1966; Rivera and Erlich 1981; Kenny 2011).

Yet considerable divergence appears in how the term ‘community’ is used internationally today. Blackshaw (2010: 5) notes that community is traditionally constituted by three dimensions: locale, social network and a shared sense of belonging. Complementing this perspective, Taylor (2003) argues that there is a similar breakdown of contemporary public understandings of community which are also usually anchored to one of three elements: geography, interest or relation. In both accounts, the three elements broadly align: geography with locality, relation with a sense of belonging, and interest with social network. Broader sociological studies of what precisely ‘community’ represents in the Australian context are lacking, but a similar threefold understanding of the concept is evident in much of the way in which the notion of community is understood in terms of bushfire preparedness presently (Fairbrother *et al.* 2013).

Community as locality

Understandings of community as linked to place are common in both popular conceptions and in policy initiatives. The geographical element of community typically takes a community to represent a collective of people hailing from a particular place (Eng and Parker 1994). But simply inhabiting the same space does not necessarily or automatically foster a sense of community, and so locality and community should not be conflated – it is not always correct to ascribe community status to a group of people simply because they live in the same area (Glen 1993). It is also important to understand that the senses of community which may be associated with a particular place are not inherently ‘good’. Some senses of community can, in fact, be exclusionary, and conceptualising communities as geographically bounded can engender nationalistic, racist, reactionary or fractious discourses (Brent 2004). Thinking of community only in terms of locality also, of course, overlooks other competing definitions of community which are not so firmly linked to place – for example, the senses of community felt by groups such as travellers and ethnic diasporas. It may, therefore, be more useful to remember that multiple and overlapping communities, or senses of community, can exist at any one time.

As Marsh and Buckle (2001: 5) note, however, the concept of community ‘is of obvious importance within the context of emergency management and community recovery’, but that ‘it is a much abused and misunderstood term’. Taking community as a geographically bounded

concept – an indication of where people live (i.e. in communities) – there has been frequent recourse to the notion and characteristics of community in discussions about preparing for bushfire and other natural hazards (e.g. Jones 1987; Beckingsale 1994; McClure and Williams 1996; Rohrmann 1999; McGee and Russell 2003; Cottrell 2005; Paton 2007; Cottrell *et al.* 2008; Chia 2010). This geographic framing ensures that potentially affected Australians, both individually and as members of ‘communities as a whole’ (Rohrmann 1999), are prepared for the possibility of bushfire and disaster (Chase 1993). Thus the community, as a locality, becomes the focus of activity in relation to bushfire preparedness (Raphael 1986; Cottrell 2005). Moreover Cox and Holmes (2000) have suggested that thinking about place is crucial also particularly when considering recovery from bushfire. Bushfires occur within a bounded geographic space that may or may not impact on particular populated localities, but sometimes do so with devastating consequences (see for example the Black Saturday Fires that impacted on Strathewan and Marysville; Teague *et al.* 2010).

Additionally, volunteer brigades are located and named after specific places, and most volunteer firefighters reside in close proximity to the local brigade headquarters in order to respond efficiently to any event – so their physical connection to a place is a feature of being part of a brigade. While locality may be a significant and relevant element of community with regard to bushfire preparedness, recovery or response, however, the geographical notion of community has limitations, particularly as locality does not necessarily explain or take into account other elements of personal association, such as a shared sense of belonging, or links and connections to others regardless of their geographical distance.

Community as a shared sense of belonging

Many contemporary definitions of community also refer to relational elements and an overall sense of belonging. Brint (2001: 8) views communities in this sense as ‘aggregates of people who share common activities or/and beliefs and who are bound together principally by relations of affect, loyalty, common values, or/and personal concern.’ Consequently, it is often thought that the contemporary experience of community is increasingly more concerned with the configuration and sorts of relationships which exist between people – that community, by its very nature, is enmeshed in notions of communication (Lyon 1989; Delanty 2003).

One of the most prominent understandings of community as a shared sense of belonging is Anderson’s (1983) contention that community is an ‘imagined’ phenomenon – that is, the focus of community is more on the sense of ‘belonging’ rather than on geography. The symbolism associated with this idea of community has been emphasised by Cohen (1985), where attention is given to the imagery, rituals and habits which are often seen to be markers of community. From this perspective, community is an extension of personal identity. As Blackshaw (2010) claims, the outcome from an analytical perspective has been a split in the basic sociological concept. On the one hand community can be seen as a socially grounded and focused analytical category (as far as sociologists are concerned) but on the other community can be used as a form of political appropriation. It is the use of the concept of community to capture a sense of belonging, illustrated by much recent public policy reference (Blackshaw 2010: 7-10; see also Brint 2001),

which has proved perhaps the most difficult aspect of understanding the idea of community as it is encountered in public discourse today.

The term community is often used as a symbolic reference to indicate a common way of life, a mutual understanding or a way of capturing a common resolution to deal with shared issues. But this concept of community (often in reference to a collective sense of ‘the community’) has been used variously, and somewhat confusedly, in more recent scholarly and public discussion. Indeed, an extensive debate about community and its supposed importance has emerged recently in discussion over current directions in Australian public policy (e.g. Adams and Hess 2001; Scillio 2001-2002; McDonald and Marston 2002; Reddel 2002; Simpson *et al.* 2003; Reddel and Woolcock 2004; Wiseman 2006; Brackertz and Meredyth 2009, Johnson 2010, Putt 2010). The use of the term ‘community’ has often proved both confusing and ill-defined, and raises a series of practical and methodological questions when it is viewed in relation to communication and bushfire. Marsh and Buckle (2001: 7) contend, for example, that emergency management planners need to ‘be more astute and sophisticated in the ways in which they analyse communities’. They need to understand that individuals are often members of multiple and overlapping communities, and that a community defined by locality cannot be assumed to be unified. Marsh and Buckle (2001) argue that if these new understandings of community are not incorporated attempts to implement community safety measures will be largely ineffective.

Community as social networks

Community can also be defined through ‘interest’ when features such as religious belief, sexual orientation, occupation or ethnic origin join interest-community members together (Smith 2001). Community expressed in this way can clearly represent a non-geographical phenomenon and shares much in common with the sociological conceptualisation of communities as being characterised by social networks (Stacey 1969; Hoggett 1997). The social network approach to community emphasises the links, ties and communications between individuals, and to a lesser extent, the connections between individuals and social institutions. Thus a community can be understood as a complex web of social connections, both formal and informal, which can be mapped. Indeed, the mapping aspects of social network analysis are becoming increasingly common in studies of community and the social sciences more broadly (Magsino 2009). Mapping these networks of social interaction is seen to be important in such studies because such connections are thought to be significant in co-ordinating everyday interaction and decision-making (Gilchrist 2000). Moreover, the mapping of networks is likely to be of particular interest to policy makers, and in *The Well Connected Community*, Gilchrist (2009) outlines why and how focusing on networks and network building may help governments in their efforts to create ‘strong communities’.

The development and uptake of information and communication technologies may also influence social networks (Clay 2008). Sassen (2002: 366) argues that mobile phones, email and the internet are social forms of technology as they have obviated the distance inherent to earlier communication technologies, and that traits of digital networks are dispersed access, interconnectivity and simultaneity. Consequently, virtual communities can be described as ‘thin’ communities, contrasting with ‘thick’ or organic communities based around tradition (Turner

2001: 29). Turner goes on to characterise ‘thin’ communities as ones that are not established around strong ties and are usually communities of strangers. One of the implications of this development is that such ‘thin’ communities may no longer be place or locality dependent. Castells (2001; and *cf.* Delanty 2003) suggests that these new forms of ‘personalised communities’ are grounded in networks and focus on the individual. Castells also notes that while virtual communities can frame and support existing social relations, they rarely facilitate the establishment of new relationships.

Social-network theorists tend to create an understanding of community that is largely descriptive, detailing the social ties, which exist within particular settings, rather than adopting a more normative approach that suggests what communities should be (Papacharissi 2010). Like other concepts of community, there is an acknowledgement within the literature that these networks can produce both positive and negative social outcomes. Social networks can bind people together and be useful for the sharing of knowledge and helping others. The importance of social networks in post-disaster recovery situations has been emphasised in some literature (Cattell 2001; Coates 2007; Jirasinghe 2007) and it has been contended that ‘networks enhance people’s ability to cope with difficulties and disasters by keeping hope alive and bolstering well-being, even in the face of ... sudden crises’ (Gilchrist 2009: 4). These networks may also provide useful material support in the wake of a disaster, with some evidence suggesting that community-based approaches to recovery are better-targeted and more effective than state-led initiatives (Coates 2007; Jirasinghe 2007).

There is little doubt, therefore, that social-network approaches to community have much to offer policy makers and that existing research and policy on disaster recovery could potentially be extended to disaster preparedness. To suggest that interest in community and related terms is a contemporary development in policy-making, however, would be misleading. As Goodwin (2005: 95) remarks, ‘community’ development was already a theme in Australia in the 1960s and 1970s. Writing over 30 years ago, Bryson and Mowbray (1981), for example, criticised the sloppy and cynical use of ‘community’ in social policy. More recently, Gilchrist (2009) argues that despite limitations and criticism there has been an international trend towards the increasing use of notions of community in policy discourse. In the Australian context, there has been a recent focus on ‘community resilience’ (COAG 2011), ‘strengthening community’ (Pope and Zhang 2010; Govt of Victoria 2008), and a ‘shared responsibility between the community and the State’ (Fire Services Commissioner 2010). Assigning community status to certain groups, however, is only a relatively recent tendency among policy makers and social commentators (Glen 1993), and it is important to note that assigning the term ‘community’ to a group, simply to legitimate a political program or to support a plan of action, does not actually create communities (Ramphela and Thornton 1988: 29).

Social Capital

The notion of social capital is often invoked in contemporary discussions of community and the two terms are often seen as closely related (Coleman 1988; Kenny 2011). Social capital has become a concept used in a wide range of academic disciplines, but like community, an exact and

widely agreed-upon definition of social capital remains elusive. Social capital is usually understood to refer to the benefits acquired through the membership of communicative networks and other social structures (Portes 1998), however, and it is possible to identify the foundational theorists of the literature on social capital as Coleman (1988), Bourdieu (Bourdieu and Passeron 1965; Bourdieu 1985) and Putnam (1993, 2000).

Levels of social capital have been linked to a variety of issues, from economic growth to public health to political participation. There is also a growing interest in the relationship between social capital and the delivery of social and community services such as health-care provision (see, for example, Kawachi *et al.* 1997; Gillies 1998; Baum 1999; Campbell *et al.* 1999; Kawachi 2001). The idea of social capital usually includes a concern with levels of civic participation and the characteristics of local networks, however. And in this sense social capital can as Campbell (2000: 186) notes be a ‘useful starting point for conceptualizing those features of community that serve to enable and support the identity and empowerment processes that are most likely to facilitate health enhancing behaviour change’. In addition, as Gilchrist (2003a: 151) observes:

[T]he discourse on social capital recognises the importance of these [networks] in the terms ‘*bridging*’ or ‘*linking*’ ties, which are distinguished from the more intimate bonds of kin and friendship.’

Harpham and colleagues (2002) argue that ‘bridging’ capital refers to social capital which joins different groups or communities, whereas ‘bonding’ capital describes social cohesion within a group (Narayan 1999). Harpham and others (2002) also suggest that the ‘bond/bridge’ construct is able to account for the role of government and the state in the generation of social capital.

Research suggests that relationships and regular interaction with other people have positive effects on socially desirable outcomes such as health. For example, individuals who experience stable and varied networks lead happier lives compared to those who are more isolated or whose networks are uniform (Argyle 1987; Yen and Syme 1999). Social networks and social capital were found to have a positive influence on improving the quality of life for some participants in Cattell’s (2001) research, by ameliorating the effects of poverty and deprivation on health. As suggested by Cattell (2001), social networks and social capital produce different health-related outcomes, which might be explained by arguing that class structures are also reflected within networks. For example, middle class people generally have wider, looser and more resourceful social networks, whereas working class people have fewer opportunities to broaden their networks (Pearlin 1985; Willmott 1987). In addition, it has been argued that personal networks are crucial factors concerning the sustainability and effectiveness of the community sector and community life. For example, informal connections create a system of links and relationships, which promote and develop communication and cooperation (Gilchrist 2003a). The concept of social capital, then, bears particular relevance to the area of bushfire safety and the role of informal communication in bushfire preparedness and response.

Coleman's concept of social capital

The concept of social capital was first developed in relation to capacity building. Coleman (1988) explored the links between educational attainment and social inequality, and developed the concept of social capital to refer to resources that characterise family and community relations, which contribute to the cognitive and social development of young people. Thus, social capital can be viewed as a connection between structure and individual agents. According to Coleman (1988: s98), social capital is:

[D]efined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors... 'within the structure'... social capital is productive, making possible the achievement of certain ends that in its absence would not be possible... Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors.

Coleman identifies two important forms of social capital: information channels and social norms. For Coleman, information channels involve trusting others to give accurate information. Given the importance of communication in disaster preparedness and response, and the influence of informal networks on information channels leading up to and during a bushfire event, understanding social capital in this way may be of use in future bushfire research and policy.

The other important form of social capital Coleman identifies is social norms, that is, the behaviours which are accepted within a particular social network. Coleman suggests that social capital is promoted through the closed or restrictive nature of certain networks by members of such networks dictating the actions of others within the network through the threat of expulsion. In this way social norms, and hence social capital, are established and reinforced within a network.

Bourdieu's concept of social capital

The composition of social groups also draws attention to the exercise of power and Pierre Bourdieu's work has contributed significantly to the development of social capital theory in this area (Bourdieu and Passeron 1965; Bourdieu 1985). Bourdieu argues that in order to understand the social world the various forms of capital need to be explored, whether cultural, linguistic or social (all of which are rooted in economic capital). According to Bourdieu (1985: 243): 'Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group.'

Bourdieu, like Coleman, broadly defines social capital as the social ties or association to specific communities that generate resources, benefits and opportunities available to individuals. In other words, social capital is constituted by social processes, both within and between groups that result in the accumulation of resources.

Putnam's concept of social capital

The final of the three main contributors to social-capital theory is the American political scientist Robert Putnam. His work is widely known and he is often credited with bringing the concept of social capital to the attention of policy-makers. Gilchrist (2009: 9) contends that Putnam's 'more liberal approach has a particular resonance with communitarian models of social and family responsibility and therefore has wide appeal to politicians and policy makers'. Building on Coleman's work, Putnam defines social capital as those characteristics of social organisation – such as trust, norms and networks – that can enhance the efficiency of society by facilitating organised actions.

Whiteley (1999) suggests that Putnam's definition of social capital has three main aspects: first, a citizen's trust in other members of society; second, social norms supporting co-operation; and third, networks of civic engagement. Putnam's seminal study *Making Democracy Work* (1993) examines the differences in democracy and economic development in regions of Italy. Putnam quantifies levels of association and relations of reciprocity within a region by measuring factors such as voting activity, membership of sports clubs and newspaper readership. He suggests that involvement in such activities (especially voluntary) was a feature of a productive and engaged civic community. The overall finding of Putnam's study was that areas showing strong civic engagement and high levels of participation in civic associations were more likely to supplement the effectiveness and stability of democratic government. High levels of social capital correlate with positive government and economic performance.

According to DeFilippis (2001), however, Putnam redefines social capital in a number of ways. The concept of social capital evolved from being a process of interaction in the writings of Coleman and Bourdieu, to being a resource possessed by individuals or groups with Putnam (whether within areas, communities or countries). Social capital became fused with a particular interpretation of civil society and 'voluntary, non-governmental associations, based on trust, become the institutions through which social capital is generated' (DeFilippis 2001: 785). Social capital becomes a normative characteristic assumed to encourage democratic government and to stimulate economic growth.

Community Capacity Building

Community capacity building (CCB) is a term found in recent discourses in relation to community development that is closely related to social capital (Kenny 2002). Community capacity building, however, generally has clearer normative and political overtones (Phillips 2007; Craig 2007). Community capacity building is less used as a label in the way that 'community' and social capital are, but is more often put forward as a strategy for greater community participation and development. The CCB approach has produced debates over its usefulness in the Australian context (Adams and Hess 2001; Reddel and Woolcock 2004; Wiseman 2006; Verity 2007). And it has been suggested that more research is needed into 'latent and actual community capacities' to help further develop appropriate notions of shared responsibility between the state and local communities with regard to bushfire preparedness and response (Goodman and Gawen 2008: 35).

Origins and definitions

The origins of the concept of CCB can be traced to the idea of community competence. Different approaches to CCB have emerged but Hawe (1994) argues that the origins of the notion of community capacity building can be traced to community psychology. In 1966, a group of American psychologists severed its connection with the American Psychological Association, arguing that communities have the potential or capacity to address their own problems. In so doing, this breakaway group challenged the idea that practitioners and programs should focus on what was lacking in a community and, for example, came to view health professionals not as experts but as resources. These arguments were developed into the concept of community competence (Iscoe 1974; Cottrell 1976), a notion which involves the provision and utilisation of resources in a geographical or psychological community, so that the community members can make reasoned decisions about the issues confronting them.

There are broad similarities in the way many academics define community capacity. Chaskin (2001: 295) describes it as: 'the interaction of human capital, organisational resources, and social capital existing within a given community that can be leveraged to solve collective problems and improve or maintain the well-being of a given community.' In a review of debates about community capacity in relation to public health, the Canadian researchers, Labonte and Laverack (2001a: 114) describe community capacity building in terms of: 'a more generic increase in community groups' abilities to define, assess, analyse and act on health (or any other) concerns of importance to their members.' A similar approach clearly underpins bushfire preparedness programs in Australia such as the Community Fireguard program in Victoria which claims it is based on 'theories of adult education, participation and empowerment' (Boura 1998: 60; cf. Fairbrother *et al.* 2010).

Community capacity building has been a particularly common approach in health programs in recent times, although different approaches to CCB are often evident. For example, Labonte and Laverack (2001a, 2001b) refer to a model of empowerment and discuss community capacity in terms of a 'parallel-track'. In this context, community capacity is viewed both as an aim and as a health-enhancing process alongside health promotion programs. In retaining an emphasis on community capacity building as an end in itself, Labonte and Laverack are incorporating the empowerment values attached to a broadly developmental approach to community capacity building that is also found in the work of Banks and Shenton (2001). Another such study, based in Australia, by Crisp and colleagues (2000), reviewed the existing literature about capacity building and health, and drew attention to some of the implications for funding bodies. The authors identify four distinct approaches to capacity building: bottom-up organisational, top-down organisational, partnerships and community organising (Crisp *et al.* 2000).

Approaches to community capacity building

A bottom-up organisational approach involves the development of skills that benefit the individual, the organisation and the wider community. The focus of this approach is on internal organisations or group development. Such approaches can be illustrated by the training of staff attached to a health-related organisation. Hall and Best (1997) propose that rather than sending

staff on external training courses, a more effective way of building capacity is for an organisation to adopt an ethos of continuous learning and improvement. In this context, it is assumed that members of staff will be motivated to become more reflective about their professional practice (individually and collectively), with the aim of making health programs more sensitive to the needs of the community.

A top-down organisational approach recognises the importance of organisational capacity and the primary concern, in this context, is the infrastructure of an organisation. Within this approach, capacity is built by restructuring the organisation. For example, according to Bainson (1994), the Ghana Leprosy Service devolved the function of planning and implementation of programs from a single central agency to a regional and district level. It was found that the Ghana Leprosy Service consequently became more responsive and effective to address local needs and health issues. This approach recognises the important role of institutions and that their effectiveness and efficiency can be improved by strengthening links with and listening to the communities they seek to serve.

A partnership approach to capacity building occurs through promoting an environment where knowledge and information can be exchanged. For example, Vicary and colleagues (1996) reported that 56 agencies in rural Pennsylvania formed a coalition in order to address the health needs of women and their families. Representatives from each agency met on a regular basis and an increase in the interactions with other agencies was reported by 83% of the members of the coalition. In addition, a majority of the representatives (87%) reported that their involvement with the coalition had resulted in new inter-agency collaborations (Vicary *et al.* 1996). In a sense this is making the most of the resources that are already available.

A final approach noted by Crisp and colleagues (2000), and one that would seem particularly relevant to bushfire preparedness, is community organising. This approach involves working with excluded members of a community to address particular issues. Capacity building, in this context, aims to transform individuals from passive recipients to active participants in a process of community change (Finn and Checkoway 1998). Goodman and colleagues (1993), however, suggest that community-organising approaches to capacity building tend to be more effective in communities that have good existing resources, such as health or welfare professionals who become involved with health promotion. It is important to understand that community organising, therefore, is not enough in and of itself. The state also has a role to play in terms of distributing resources. So again, this approach is not a cure-all but can be an important aspect of social inclusion and communication within communities.

Community capacity building and policy

The move to include notions of CCB in policy is often expressed as ‘empowering communities’, ‘strengthening communities’ or ‘increasing citizen participation’. As Gilchrist (2003b) notes, it is recognised, however, that for such initiatives to have a meaningful effect communities must have a significant role in identifying problems and suggesting solutions to address these concerns. To support these and other similar initiatives, resources have been allocated to fund community capacity building, particularly, in the Australian context, by the Australian Institute of Family

Studies (and its Stronger Families Learning Exchange) and various initiatives proposed by the Victorian Department of Planning and Community Development and its Office for the Community Sector (Govt of Victoria 2008).

Gilchrist (2003b), however, raises a number of issues concerning this community capacity building approach. First, although there has been an emphasis on training and supporting members of the community, the establishment of systems to facilitate not only individuals in leadership positions, but also to ensure that they are accountable to the wider community, have often been neglected. Second, there is an assumption that the procedures and organisational culture within local authorities are positive environments in which to manage partnership arrangements. Nonetheless other research has suggested that community representatives have felt estranged and hindered by the formal settings and protocols that they encountered at partnership meetings (Craig and Taylor 2002).

Citizen participation is another way in which CCB manifests in policy discourse and is an important idea that informs current British social policy. Citizen participation is understood as 'the engaging of individuals and groups in the renewal and strengthening of their own communities' (Bentley *et al.* 2003: 9). For example, according to the UK's National Neighbourhood Renewal Strategy (Neighbourhood Renewal Unit 2002) launched in 2001, the primary objective of participation is to ensure that local residents and community groups have a central role in improving their neighbourhoods.

In terms of assessing CCB-based policy, Stoker and Bottom (2003) argue that it is possible to distinguish between policies which are informed by an assumption that people are largely responsible for problems within their own community and those policies which view these problems as originating from the inequalities and power divisions within capitalist societies. In other words, problems in communities are explained either by the inadequacies of community members or by the structures in society. For those who construct the locus of the problem at an individual level, the solution is to instigate focussed development on 'problematic' individuals, partially to encourage compliance to the moral standards of the rest of society and to reverse their addiction to a dependency culture. Conversely, those with a structural perspective favour confrontation and community protest, and encourage the powerless to challenge those in power.

Stoker and Bottom (2003: 6) argue, however, that as the debate has developed the two positions outlined above have largely been avoided and instead a 'system level explanation and solution' has been offered. In this sense, CCB policies can be viewed as attempting to take a middle way so that blame is neither allocated to the individual nor to social structures. Instead, the emphasis is on systems of relationships and institutions that influence how communities function. Such policies are considered reformist in nature and any changes that do occur do so within the boundaries of a market economy with a commitment to liberal democracy. It is within this broader social context that concepts such as CCB must be located in order to perform a useful role in policy making and research.

Mowbray (2005), writing in an Australian context, is also critical of CCB approaches. After reviewing the Victorian Government's 'Community Capacity Building Initiative Program',

Mowbray argues that the policy objectives of communitarian initiatives need to be considered carefully. In addition, such programs rarely achieve notable social change and usually involve 'low-key and modest local activities and services that people pursue despite government' (Mowbray 2005: 263). Mowbray suggests a number of key points if governments are serious about empowering localities including, setting realistic and achievable objectives, committing substantial resources on a long-term basis, involving local government and ensuring that programs are fair and transparent through 'arms-length' mechanisms, thus avoiding micro-management approaches.

Another issue relating to the broader political and social context is an apparent lack of critical thinking regarding how terms and concepts are used in CCB discussions. For example, Cass and Brennan (2002) highlight that a climate where funding for community groups is cut and where community is portrayed as a neutral term has resulted in a context that is curiously 'non-reflexive'. Smyth (2009) notes that supporters of CCB often fail to engage with its shortcomings and failures. This means that this apparently consensual approach stifles and suppresses critical debate and thinking, and renders community engagement addressing concerns regarding social justice invisible. Furthermore, Ife (2003) argues that while CCB and related terms can appear technical, apolitical and value-free, community development actually poses difficult political questions, for example, by challenging self-interest and promoting collective action. Such an ethos, if successful, Ife (2003: 6) suggests, 'will threaten some very powerful interests' and may lead to a loss of support for such activities, much as occurred with many social work programs in the 1970s (Rivera and Erlich 1981).

Summary

Community has become an increasingly important concept in recent socio-political policy and debate. A sense of community is often seen as a fundamental part of human experience and academic literature has struggled for more than a century to define what this sense of community is. Thus the concept of community remains a contested one. In more recent times the notion of community has become a focus in a variety of policy discourses, covering everything from public health to political participation to disaster preparedness. Too often in policy, however, 'community' and the related concepts of social capital and community capacity building are simply taken as inherently good and left undefined. In terms of emergency management in Australia (and bushfire safety is no exception) an implicit understanding of community as a unified and geographically bounded entity has become common. Yet in order for bushfire safety research and policy to move forward, it is important to acknowledge the competing definitions of community, social capital and community capacity building, to be clear about the way in which these terms are used, and to be aware of their analytical and practical limitations. Scholars and policy makers must move beyond limited and static understandings of community as geographically bounded and of social capital and community capacity building as cure-all solutions to broader structural problems.

Implications

1. Agencies dealing with emergency management, including bushfire preparation and safety, need to recognise the variety of meanings associated with concepts of community.
2. Agencies need to consider the concept of 'community' beyond the bounds of locality and geography (although these are still important).
3. Agencies need to be aware of the variety of uses of the term 'community' and need to be clear and explicit about how they use the term in policy and practice.
4. Research dealing with concepts of 'community' in relation to emergency management, including bushfire preparation and safety, should use the concept carefully and cautiously needs to be clear and explicit about which meaning of the term is being invoked.

Directions for future research

1. An in-depth content analysis of policy documents could determine how often, in what ways, and for what purposes 'community' is used in policy documents relating to emergency management, including bushfire preparation and safety.
2. A critical analysis of the use (and misuse) of the term 'community' in emergency management policy could be employed to better understand how audiences make sense of messaging from agencies and if agencies' representations of 'community' fit with the existing understandings of residents.

References

- Adams, D. and Hess, M. 2001. Community in Public Policy: Fad or foundation? *Australian Journal of Public Administration*, 60(2): 13-23.
- Anderson, B. 1983. *Imagined Communities: Reflections on the origin and spread of nationalism*. Verso: London.
- Argyle, M. 1987. *The Psychology of Happiness*. Methuen: London.
- Bainson, K.A. 1994. Integrating Leprosy Control into Primary Health Care: The experience in Ghana. *Leprosy Review*, 65(4): 376-384.
- Banks, S. and Shenton, F. 2001. Regenerating Neighbourhoods: A critical look at the role of community capacity building. *Local Economy*, 26(4): 286-298.
- Baum, F. 1999. Social Capital: Is it good for your health? Issues for a public health agenda. *Journal of Epidemiology and Community Health*, 53(4): 195-196.
- Bayne, M., and Lazarus, M.E. 1940. *The Australian Community: A critical approach to citizenship*. Longmans: London.
- Beckingsale, D. 1994. Community Fireguard and the Rural-Urban Interface. *Fire Management Quarterly*, 10(1): 1-8.
- Bentley, T., McCartney, H. and Mean, M. 2003. *Inside Out: Rethinking inclusive communities*. Demos: London.
- Blackshaw, T. 2010. *Key Concepts in Community Studies*. Sage: Los Angeles.
- Boura, J. 1998. Community Fireguard: Creating partnerships with the community to minimise the impact of bushfire. *Australian Journal of Emergency Management*, 13(3): 59-64.
- Bourdieu, P. 1985. The Forms of Capital. In Richardson, J.G. (ed.) *Handbook of Theory and Research for the Sociology of Education*. Greenwood: New York.
- Bourdieu, P. and Passeron, J.C. 1977. *Reproduction in Education, Society and Culture*. Trans. R. Nice Sage: Beverley Hills.
- Brackertz, N. and Meredyth, D. 2009. Community Consultation in Victorian Local Government: A case of mixing metaphors??. *Australian Journal of Public Administration*, 68(2): 152-166.
- Brent, J. 2004. The Desire for Community: Illusion, confusion and paradox. *Community Development Journal*, 39 (3): 213-223.

- Brint, S. 2001. Gemeinschaft Revisited: A critique and reconstruction of the community concept. *Sociological Theory*, 19(1): 1-23.
- Bryson, L. and Mowbray, M. 1981. Community: The spray-on solution. *Australian Journal of Social Issues*, 16(4): 255-267.
- Campbell, C. 2000. Social Capital and Health: Contextualizing health promotion within local community networks. In Baron, S., Field, J., and Schuller, T. (eds) *Social Capital: Critical perspectives*. Oxford University Press: Oxford.
- Campbell, C., Wood, R. and Kelly, M. 1999. *Social Capital and Health*. Health Education Authority: London.
- Cass, B. and Brennan, D. 2002. Communities of Support or Communities of Surveillance and Enforcement in Welfare Reform Debates. *Australian Journal of Social Issues*, 37(3): 247-262.
- Castells, M. 2001. *The Internet Galaxy: Reflections on the internet, business and society*. Oxford University Press: Oxford.
- Cattell, V. 2001. Poor People, Poor Places, and Poor Health: The mediating role of social networks and social capital. *Social Science and Medicine*, 52(10): 1501-1516.
- Chase, R.A. 1993. Protecting People and Resources from Wildfire: Conflict in the interface. In Ewert, A.W., Chavez D.J. and Magill, A.W. (eds) *Culture, Conflict and Communication in the Wildland-urban Interface*. Westview Press: Boulder, CO.
- Chaskin, R.J. 2001. Building Community Capacity: A definitional framework and case studies from a comprehensive community initiative. *Urban Affairs Review*, 36(3): 291-323.
- Chia, J. 2010. Engaging Communities before an Emergency: Developing community capacity through social capital investment. *Australian Journal of Emergency Management*, 25(1): 18-22.
- Clay, S. 2008. *Here Comes Everybody: The power of organizing without organizations*. Penguin: New York.
- COAG. 2011. *National Strategy for Disaster Resilience: Building our nation's resilience to disasters*. COAG: Canberra.
- Coates, T. 2007. *Building the Plane as You Fly It: Community systems in New Orleans*. Unpublished Masters thesis, Harvard.
- Cohen, A. 1985. *The Symbolic Construction of Community*. Tavistock: London.
- Coleman, J. 1988. Social Capital in the Creation of Human Capital. *American Journal of Sociology*, 94 (Supplement): s95-s120.

- Cottrell, L. 1976. The Competent Community. In Kaplan, B., Wilson, B. and Leighton, A. (eds) *Further Explorations in Social Psychiatry*. Basic Books: New York.
- Cottrell, A. 2005. Communities and Bushfire Hazard in Australia: More questions than answers. *Environmental Hazards*, 6(2): 109-114.
- Cottrell, A., Bushnell, S., Spillman, M., Newton, J., Lowe, D. and Balcombe, L. 2008. Community Perceptions of Bushfire Risk. In Handmer, J. and Hayes, K. (eds) *Community Bushfire Safety*. CSIRO Publishing: Melbourne.
- Cox, H.M. and Holmes C.A. 2000. Loss, Healing, and the Power of Place. *Human Studies*, 23(1): 63-78.
- Craig, G. 2007. Community Capacity-building: Something old, something new...?. *Critical Social Policy*, 27(3): 335-359.
- Craig, G. and Taylor, M. 2002. Dangerous Liaisons. In Glendinning C., Powell, M. and Rummary, K. (eds) *Partnerships, New Labour and the Governance of Welfare*. Policy Press: Bristol.
- Crisp, B.R., Swerissen, H. and Duckett, S.J. 2000. Four Approaches to Capacity Building in Health: Consequences for measurement and accountability. *Health Promotion International*, 15(2): 99-107.
- DeFilippis, J. 2001. The Myth of Social Capital in Community Development. *Housing Policy Debate*, 12(4): 781-806.
- Delanty, G. 2003. *Community*. Routledge: Abingdon.
- Eng, E. and Parker, E. 1994. Measuring Community Competence in the Mississippi Delta: The interface between program evaluation and empowerment. *Health Education Quarterly*, 21(2): 199-220.
- Fairbrother, P., Hart, A., Stratford, J. and Prokopiv, V. 2010. *CFA Community Fireguard Review: Improving quality control and assurance*. RMIT University: Melbourne.
- Fairbrother, P., Tyler, M., Hart, A., Mees, B., Phillips, R., Stratford, J. and Toh, K. 2013. Creating 'Community'? Preparing for bushfire in rural Victoria. *Rural Sociology*, 78(2): 186-209.
- Finn, J.L. and Checkoway, B. 1998. Young People as Competent Community Builders: A challenge to social work. *Social Work*, 43(4): 335-345.
- FSC. 2010. *Bushfire Safety Policy Framework*. FSC: Melbourne.

- Gilchrist, A. 2000. The Well-connected Community: Networking to the 'edge of chaos'. *Community Development Journal*, 35(3): 264-275.
- Gilchrist, A. 2003a. Community Development and Networking for Health. In Powell, J., Taylor, P., Grey, M., and Orme, J. (eds) *Public Health for the 21st Century: New perspectives on policy, participation and practice*. Open University Press: Buckingham.
- Gilchrist, A. 2003b. Community Development in the UK – Possibilities and paradoxes. *Community Development Journal*, 38(1): 16-25.
- Gilchrist, A. 2009. *The Well-connected Community: A networking approach to community development*, 2nd edition. Policy Press: Bristol.
- Gillies, P. 1998. Effectiveness of Alliances and Partnerships for Health Promotion. *Health Promotion International*, 13(2): 99-120.
- Glen, A. 1993. Methods and Themes in Community Practice. In Butcher, H. (ed.) *Community and Public Policy*. Pluto Press: London.
- Goodman, H. and Gawen, J. 2008. Glimpses of 'Community' through the Lens of a Small Fire Event. *Australian Journal of Emergency Management*, 23(1): 30-36.
- Goodman, R., Steckler, A., Hoover, S. and Schwartz, R. 1993. A Critique of Contemporary Community Health Promotion Approaches based on a Qualitative Review of Six Programs in Maine. *American Journal of Health Promotion*, 7(3): 208-221.
- Goodwin, S. 2005. Community and Social Inclusion. In Smyth, P., Redell, T. and Jones, A. (eds) *Community and Local Governance in Australia*. University of NSW Press: Sydney.
- Government of Victoria. 2008. *Strengthening Community Organisations*. Government of Victoria: Melbourne.
- Greeley, A.M. 1966. After Secularity: The neo-Gemeinschaft society. *Sociological Analysis*, 27(3): 119-127.
- Hall, N. and Best, J. 1997. Health Promotion Practice and Public Health: Challenge for the 1990s. *Canadian Journal of Public Health*, 88: 409-415.
- Harpham, T. Grant, E. and Thomas, E. 2002. Measuring Social Capital within Health Surveys: Key issues. *Health Policy and Planning*, 17(1): 106-111.
- Hawe, P. 1994. Capturing the Meaning of 'Community' in Community Intervention Evaluation: Some contributions from community psychology. *Health Promotion International*, 9(3): 199-210.

- Hoggett, P. 1997. Contested Communities. In Hoggett, P. (ed.), *Contested Communities: Experiences, struggles, policies*. Polity Press, Bristol.
- Ife, J. 2003. Community Development and Human Rights. Keynote address delivered at the People, Place, Partnership: Strengthening Communities Conference, 28-29 April, Sydney.
- Iscoe, I. 1974. Community Psychology and the Competent Community. *American Psychologist*, 29(8): 607-613.
- Jirasinghe, R.C. 2007. *The Rhythm of the Sea*. Hambantota Chamber of Commerce: Hambantota, Sri Lanka.
- Jones, R. 1987. Community Involvement: The missing link. *Bush Fire Bulletin*, no. 9.
- Johnston, K.A. 2010. Community Engagement: Exploring a relational approach to consultation and collaborative practice in Australia. *Journal of Promotion Management*, 16(1-2): 217-234.
- Kawachi, I. 2001. Social Capital for Health and Human Development. *Development*, 44(1): 31-35.
- Kawachi, I., Kennedy, B.P., Lochner, K. and Prothrow-Stith, D. 1997. Social Capital, Income Inequality and Mortality. *American Journal of Public Health*, 87(9): 1491-1498.
- Kenny, S. 2011. *Developing Community for the Future*. 4th edition Cengage: Melbourne.
- Labonte, R. and Laverack, G. 2001a. Capacity Building in Health Promotion: Part 1: For whom? And for what purpose? *Critical Public Health*, 11(2): 111- 127.
- Labonte, R. and Laverack, G. 2001b. Capacity Building in Health Promotion: Part 2: Whose use? And with what measurement? *Critical Public Health*, 11(2): 129-138.
- Lyon, L. 1989. *The Community in Urban Society*. Lexington: Toronto.
- Magsino, S. 2009. *Applications of Social Network Analysis for Building Community Disaster Resilience*, National Academies Press: Washington, DC.
- Marsh, G. and Buckle, P. 2001. Community: The concept of community in the risk and emergency management context. *Australian Journal of Emergency Management* 16(1): 5-7.
- McClure, J. and Williams, S. 1996. Community Preparedness: Countering helplessness and optimism. In Paton, D. and Long, N. (eds) *Psychological Aspects of Disasters: Impact, coping, and intervention*. Dunmore Press: Palmerston North.
- McDonald, C. and Marston, G. 2002. Patterns of Governance: The curious case of non-profit community services in Australia. *Social Policy and Administration*, 36(4): 376-391.

- McGee, T.K. and Russell, S. 2003. 'It's Just a Natural Way of Life...': An investigation of wildfire preparedness in rural Australia. *Global Environmental Change, Part B: Environmental Hazards*, 5(1-2): 1-12.
- Mowbray, M. 2005. Community Capacity Building or State Opportunism? *Community Development Journal*, 40(3): 255-264.
- Murray, R. and White, K. 1995. *State of Fire: A history of volunteer fire fighting and the Country Fire Authority in Victoria*. Hargreen: Melbourne.
- Narayan, D. 1999. *Bonds and Bridges: Social capital and poverty*. World Bank: Washington DC.
- Neighbourhood Renewal Unit. 2002. *The National Strategy for Neighbourhood Renewal: Factsheet 2*. Neighbourhood Renewal Unit: Wetherby.
- Papacharissi, Z. 2010. *The Networked Self: Identity, community and culture on social networking sites*. Taylor & Francis: New York.
- Pearlin, L.I. 1985. Social Structure and Processes of Social Support. In Cohen, S. and Syme, S.L. (eds) *Social Support and Health*. Academic Press: New York.
- Phillips, R. 2007. Community Capacity Building, Community Development and Health: A case study of Health Issues in the Community. Doctoral dissertation, University of Edinburgh.
- Pope, J. and Zhang, W. 2010. *Indicators of Community Strength at the Local Government Level in Victoria 2008: Strategic policy, research and forecasting*. Government of Victoria, Department of Planning and Community Development (DPCD): Melbourne.
- Portes, A. 1998. Social Capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24: 1-24.
- Putnam, R.D. 1993. *Making Democracy Work*. Princeton University Press: Princeton.
- Putnam, R.D. 2000. *Bowling Alone: The collapse and revival of American community*, Simon & Schuster: New York.
- Putt, J. (ed.) 2010. *Community Policing in Australia*. AIC Reports, Research and Public Policy Series 111. Australian Institute of Criminology: Canberra.
- Radford, W.C. 1939. *The Educational Needs of a Rural Community*. Melbourne University Press: Melbourne.
- Ramphela, M. and Thornton, J. 1988. The Quest for Community. In Bouzaier, E. and Sharp, J. (eds) *The South African Keywords: The uses and abuses of political concepts*. David Philip: Cape Town.

- Raphael, B. 1986. *When Disaster Strikes: How communities and individuals cope with catastrophe*. Basic Books: New York.
- Reddel, T. 2002. Beyond Participation, Hierarchies, Management and Markets: 'New' governance and place policies. *Australian Journal of Public Administration*, 61(1): 50-63.
- Reddel, T. and Woolcock, G. 2004. From Consultation to Participatory Governance? A critical review of citizen engagement strategies in Queensland. *Australian Journal of Public Administration*, 63(3): 75-87.
- Rivera, F.G. and Erlich, J.L. 1981. Neo-Gemeinschaft Minority Communities: Implications for community organization in the United States. *Community Development Journal*, 16(3): 189-200.
- Rohrmann, B. 1999. Community-based Fire Preparedness Programs: An empirical evaluation. *Australasian Journal of Disaster and Trauma Studies*, 9(1): 1-21.
- Sassen, S. 2002. Toward a Sociology of Information Technology. *Current Sociology*, 50(3): 365-388.
- Scillio, M. 2001-2002. Working with the Community in Emergency Risk Management. *Australian Journal of Emergency Management*, 16(4): 59-61.
- Simpson, L. Wood, L. and Daws, L. 2003. Community Capacity Building: Starting with people not projects. *Community Development Journal*, 38(4): 277-286.
- Smith, M.K. 2001. Community. *The Encyclopaedia of Informal Education*.
<http://www.infed.org/community/community.htm>
- Smyth, J. 2009. Critically Engaged Community Capacity Building and the 'Community Organizing' Approach in Disadvantaged Contexts. *Critical Studies in Education*, 50(1): 9-22.
- Stacey, M. 1969. The Myth of Community Studies. *British Journal of Sociology*, 20(2): 134-147.
- Stoker, G. and Bottom, K.A. 2003. Community Capacity Building: Notes for a talk given to MAV conference. Lorne, 25-27 July.
- Taylor, M. 2003. *Public Policy in the Community*. Palgrave MacMillan: Basingstoke.
- Teague, B., McLeod, R., Pascoe, S. 2010. *2009 Victorian Bushfires Royal Commission: Final Report*. Government Printer: State of Victoria: Melbourne.
- Tönnies, F. 1887 [1957]. *Community and Society*. Trans. C.P. Loomis. Harper: New York.
- Turner, B. 2001. Outline of a General Theory of Cultural Citizenship. In Stevenson, N. (ed.) *Culture and Citizenship*. Sage: London.

Verity, F. 2007. *Community Capacity Building: A review of the literature*. South Australian Department of Health: Adelaide.

Vicary, J.R., Doebler, M.K., Bridger, J.C., Gurgevich, E.A. and Dieke, R.C. 1996. A Community Systems Approach to Substance Abuse Prevention in a Rural Setting. *Journal of Primary Prevention*, 16(3): 303-318.

Whiteley, P.F. 1999. The Origins of Social Capital. In Deth, J.W. van, Maraffi, M., Newton, K. and Whiteley, P.F. (eds) *Social Capital and European Democracy*. Routledge: London.

Willmott, P. 1987. *Friendship Networks and Social Support*. Policy Studies Institute: London.

Wiseman, J. 2006. Local Heroes? Learning from recent community strengthening initiatives in Victoria. *Australian Journal of Public Administration*, 65(2): 95-107.

Yen, I. and Syme, S. 1999. The Social Environment and Health: A discussion of the epidemiological literature'. *Annual Review of Public Health*, 20: 287-308.

Chapter 3: Managing Dissemination: Understanding Communication

Achieving preparedness for bushfires is a complex process. It involves the production and dissemination of information by fire and safety agencies and the success of such communication depends upon its reception by the public. Bushfire safety or preparedness advice has become a significant responsibility for the relevant agencies and entails various management and communication perspectives. A central feature of preparedness for bushfire events is the relationship between fire emergency agencies and the residents of threatened localities across the country. Agencies spend considerable time and resources on developing communication products and facilitating the ability of residents to take steps to anticipate and prepare for bushfire.

Bushfire communication products are developed for the specific purpose of sharing existing knowledge to remind residents of dangers and to encourage preparedness plans to be put into effect. Communication materials produced by fire agencies in Australia include, but are not limited to: information pamphlets and DVDs, refrigerator magnets, bumper stickers, school activity books and children's games. Modes of preparedness information include television, public signage, leaflet drops, newspaper advertisements and features, internet sites and mobile phone applications. Sophisticated communication packages have been developed, as well as more focused approaches such as community-based network groups and public roadshows. The practice of bushfire preparedness communication, however, often shows evidence of being constrained by the volunteer-based nature of the relevant state and territory rural fire services. The approach adopted in much Australian bushfire preparedness communication often appears *ad hoc* and piecemeal – applying and adapting whatever is at hand from the broader media panoply – rather than involving a more deliberative and comprehensively planned approach to community preparedness for bushfire.

Background: Communication and Knowledge

The term 'communication' has the same historical root as 'community' – that is it literally indicates something that people have in common. Contemporary communication theory, however, is informed by a diverse range of disciplinary contributions, from philosophy, linguistics, literary studies, political science, psychology, economics, organisational theory and even computer engineering (Craig 1999). Moreover, the most basic mode of communication is language, an essentially generative communicative form that develops from thought through interaction.

In Saussure's (1916) generative model of language, communication is a two-way process – communication is a system of reciprocal actions, thinking and responses. Much of modern communication theory, although informed by linguistics, is more obviously concerned with how to improve the effectiveness of communication, not merely how to analyse it. The

communication theory of figures such as McLuhan (1967), Postman (1985) and Castells (2009), however, mainly represents a critique of modern media culture rather than an obviously useful analytical framework suitable for bushfire communication.

In the 1950s, communication studies also first came under the influence of information processing and cybernetic theory. In keeping with the technologist view of communication pioneered by Wiener (1948), communication became increasingly seen in terms of technological metaphors such as ‘transmission’ and ‘feedback’ (Shannon and Weaver 1949, Schramm 1954). Many contemporary communications theorists still promote a transmission model of communication, which sees communication as a form of human-to-human information transmission, taking the model of a radio transmission as the underlying system of mass communication (Craig 1999).

Other important contributions to understanding communication include Ikujiro Nonaka’s (1991) notion of knowledge creation. Nonaka argued that some firms were better at managing their internal knowledge – principally by making tacit knowledge explicit; by codifying it, recording it and passing it on from employee to employee; hence making it more valuable. The resulting field of knowledge management seeks to establish efficiencies in communicating knowledge and represents another of the key practical areas which can impinge on the effective management of bushfire communications.

Perhaps the most notable framework for understanding public communication to have emerged since the 1960s, however, is the German sociologist Jürgen Habermas’s (1981) theory of communicative action. Habermas seeks to explain how communication works in a modern democratic state from the perspective of an individual’s ‘lifeworld’ and how individuals in a democratic society may relate to the broader communicative reality represented by politics, government and the mass media. Habermas’s separation of communications into public and private, system and individual, or macro- and micro-levels seems a particularly useful perspective from which to analyse the effectiveness of bushfire communication in Australia given the focus in much preparedness planning on notions of community and the similar advocacy of community participation that underpins much contemporary government policy in the area.

Habermas’s model also dovetails well with theories of social capital and understanding how communication occurs at the community level. Putnam’s (2000) separation of social capital into bridging and bonding aspects suggests that close and personal communication is a key determinant of establishing social capital – that is, in developing the highly context-specific conditions of trust, reciprocity and knowledge exchange, which are experienced by people in close social networks. It is communication at the face-to-face level that seems most natural, most genuine and most trustworthy from a social capital perspective on communication. Bridging capital and communication originating at the agency or government level would be expected to be less immediately acceptable to inhabitants of bushfire-prone communities from a Habermasian perspective on public communication. Habermas’s main focus is on how citizens can engage with the ‘system’ of politics, government and economics which exist in developed capitalist states without being ‘colonised’ by it. From a bushfire agency perspective, however, the main problem would seem to be inverted: that is, determining what is the best and most genuine

way in which government agencies can communicate effectively with members of communities that are most likely to be affected by bushfire events.

Inside the Agencies

In Australia, communication products for bushfire preparedness have been developed separately by public agencies in individual states with considerable collaboration and cross-pollination of ideas occurring between various state bodies. Agencies also develop and produce their own communication products and tailor delivery methods to local needs. A collection and analysis of bushfire communication products from a variety of agencies across all Australian states (Toh and Tyler 2013), however, has allowed a more considered analysis to be undertaken of the current approach to preparedness communication from the institutional level represented by the various state and territory fire services.

Very little research is available on bushfire communication in Australia which takes an agency perspective. Yet increasingly, the analysis of communications within and across public agencies internationally is being undertaken from the perspective of knowledge management – of how the adoption of internal communication strategies can be used to improve the quality of products and services, and to reduce costs and the use of time in producing and managing communication in organisations. The management of knowledge in the context of bushfire involves turning tacit or individual knowledge into knowledge that can be widely shared and appropriately applied to the development and deployment of bushfire communication products (For definitions and discussion, see Alavi and Leidner 2001; Hackett 2000; Schwartz 2006; and Bartholomew 2008).

The RMIT Bushfire Communication Grid

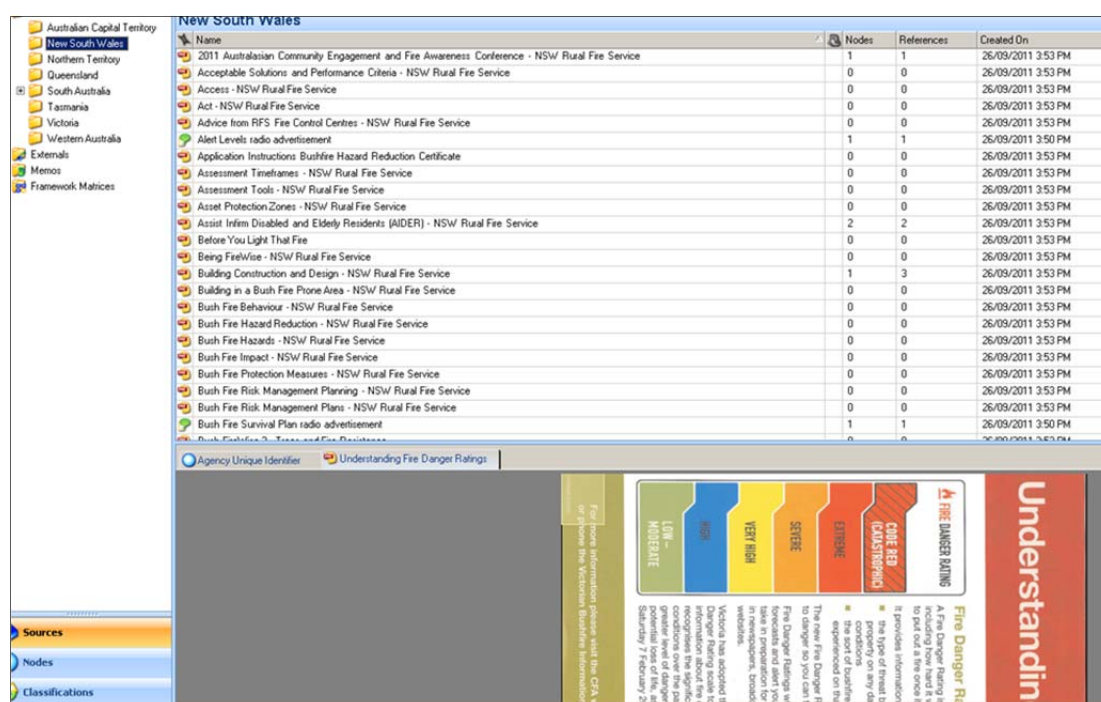
In order to assess the current standing of knowledge management practices in Australia in relation to bushfire the research team established the RMIT Bushfire Communications Grid. The Grid is an Australia- wide collection of bushfire safety communication products, the first attempt to amass such a collection across Australia. As more of these products were produced, more knowledge from their design and production was accumulated from late 2010 up until a close-off date of December 2012. This content represents an extensive accumulation of knowledge that has been produced at considerable cost by individual agencies. The development of the RMIT Grid, however, has also allowed several shortcomings in the varied and variable development of communication products by the agencies to be revealed.

In order to assess knowledge management and communication processes within, across and from Australian bushfire agencies, a range of communication products were assembled. In essence, the bushfire products can be considered artefacts that represent the outcome of the agencies' respective processes to convert tacit knowledge into explicit knowledge resources that can be shared with the general public as part of wider communication strategies for bushfire preparedness. Initially, the collection of products took place during the fieldwork in Victoria undertaken during 2010-11. During interview and field visits, local agencies provided samples of the material that was distributed to residents. Residents were also interviewed concerning the

bushfire preparedness material they had received from the local agencies and gave accounts of the sources of their knowledge.

A variety of agencies were also approached during the data collection process, both those explicitly and tangentially engaged in bushfire preparedness communication. These agencies included the Country Fire Authority (CFA) in Victoria, the Rural Fire Service (RFS) in New South Wales, the former Fire and Emergency Services Authority (FESA – now Department of Fire and Emergency Services) in Western Australia, among others, as well as state governments, local governments and government-run health services. When approached, fire agencies provided examples readily, many offering to send their communication products through the post. One agency referred the researchers to their website as the source of all their communication material, which could be downloaded. While the vast majority of agency personnel expressed positive responses to the project and willingly provided materials, there was some concern in terms of the time required to collect products because of the large volume. This may, in itself, indicate the need for a better or more formal knowledge management system within the agencies themselves.

Figure 2 – Analysis of the digitised communication products in NVivo



Material was collected via a combination of desktop searches, telephone conversations and the physical hand-over of material during interviews and fieldwork. Where necessary, printed material was digitised and electronically stored. The collection of products obtained was initially organised as an electronic spread sheet with embedded links to bushfire communication products on a network drive. As more material was collected this system it was clear that a more sophisticated tool to manage the materials was required. The repository was thus transferred to NVivo, a qualitative data analysis software application that enabled the researchers to classify

the bushfire products according a number of themes thereby enabling more sophisticated analysis. The provision of the collection in the spreadsheet and NVivo has made the collection readily available to agencies and to future researchers (see figure 2). The repository of communication products in the initial spreadsheet and in the NVivo research application became colloquially referred to as the RMIT Communication Grid or the ‘Grid’.

The communication products in the Grid were indexed and classified using the following categories (meta-headings):

Campaign: identifies products that are used in significant communication programs. The most common were the products branded ‘Prepare. Act. Survive.’, which since 2009 have been used in the wider media campaign with the same slogan.

Scheme: is used where products are deployed in sub-campaigns, under a parent or overarching campaign. This classification applies where communication products were packaged and distributed at a local level, such as a local schools initiative, or ‘Farm Firewise’.

Originating Agency: identifies the agencies associated with the products in terms of visible branding. Often this would be the lead fire agency in conjunction with the local state government. Other notable originating agencies were the Victorian Department of Human Services and NSW Health.

Target Audience: is used to identify instances where material was developed for specific demographic groups, e.g. women in the SA Fiery Women program, or older and disabled residents in the NSW AIDER and QLD Senior and Safer programs.

Form (Mode/Media): is used to identify the form or mode of delivery, which included printed text, radio, television, DVD, CD, telephone, agency websites, social media (e.g. Facebook and CFA Connect), community meetings, bumper stickers, game boards and even local puppet shows.

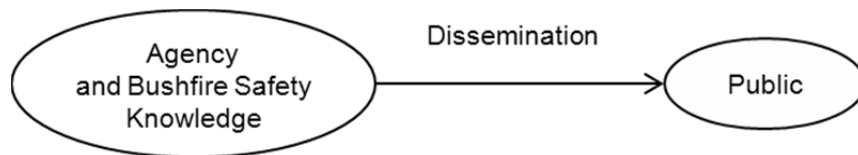
The analysis of how agencies communicate with the public has also drawn upon a number of other data sources including interviews with agency participants, residents in bushfire-prone localities and research notes drawn out from contacts with agencies in obtaining the communication products. In addition to the formal material that was distributed by agencies, there were also instances of informal modes and material including summarised material (photocopied handouts) produced and distributed by a local resident. These were also captured in the Grid.

Current Arrangements

Communication products are designed and manufactured at considerable cost and this basic communication function has traditionally been the domain of individual state jurisdictions. The result, historically, has been a diverse range of messages, formats and learning experiences for residents. The starting point taken by many bushfire agencies when developing communication

products also usually seems to have reflected a simple transmission model (Figure 3). Expertise is marshalled among fire agency specialists and disseminated to the public. This is a typical and traditional approach to public communication where expert knowledge is created and then communicated through various community safety campaigns.

Figure 3 – A transmission model of bushfire communication



Several initiatives have emerged recently which recognise that the process of knowledge creation and marshalling of bushfire communication products has often been too informal and not well governed. Most notably, the Victorian State Government revised its bushfire safety policy and adopted the national framework ‘Prepare. Act. Survive.’ following the interim recommendations of the Victoria Bushfires Royal Commission (Teague *et al.* 2009). The adoption of what has now become a national framework resulted in revised bushfire safety publications and educational materials.

Even prior to the Black Saturday bushfires, however, policy and programs were undergoing a process of change. From 2004 onwards, the CFA, the Department of Sustainability and the Environment (DSE) and the Metropolitan Fire Brigade (MFB), led by the Fire Ready Executive Group, were brought together through the Fire Ready Victoria Strategy to provide joint education and information programs, as well as contributing their own education and information activities. Recognising the importance of the need for cross-agency communication, the Victorian Fire Communication Taskforce was initiated, co-ordinated by the Strategic Communications Branch of the Department of Justice. One of the fire agency community safety personnel explained the purpose of the Fire Communications Taskforce as:

bring[ing] together all of the agencies across government’s communications people that were putting out messages to sort of say, let’s have a handle on what messages you’re putting out there.

CRCVICST 10

This development underlines the perception of a perceived lack of inter-agency conformity and the resultant danger of mixed messages being sent out to the broader community.

The process of policy learning across the states primarily occurs through sub-committees of the Australasian Fire and Emergency Services Authorities Council (AFAC). Here agency representatives from around the country meet and discuss best practice and formulate agreed positions. In February 2006, AFAC, in collaboration with the Australian state and territory fire

services, for example, released a position paper that is designed to ‘provide guidance to householders in relation to both their individual safety, and the protection of their homes in the event of a bushfire’ (AFAC 2013). Underpinning the bushfire preparedness messages is advice, for example, that on a Code Red day the safest place to be is away from high risk and that members of the public should only consider staying in their properties on Extreme or Severe days if at least two persons are fully prepared and can actively defend the property (AFAC, 2006). Different wordings may be adopted by different individual agencies, but key messages are now provided through media and public engagement campaigns under the ‘Prepare. Act. Survive’ slogan which has been adopted across Australia.

Some examples of more informal comparison and collaboration, across states and territories, were revealed during fire agency and state-level interviews undertaken in 2011. For instance, one participant explained how some of their agency’s communication products were developed:

So I did a bit of an environmental scan with all the other fire agencies around their publications and then we chose ours to be modelled around Tasmania’s. Then we looked at – okay well this is Tasmania. What are the gaps we know about, what’s the research telling us, what’s come out of the Royal Commission that people were asking for?

CRCWAST 03

To enable a more co-ordinated approach across other agencies, however, one participant describes the need for a Lead Agency to work more effectively with other key public-sector organisations:

We have multiple agencies wanting to engage communities about fire at different times, so we’ve got the integrative fire management planning process. We’ve got municipal planning, fire operations planning which is DSE’s burns program, we’ve got Township Protection Plans, we’ve got – I think that’s about all. But they – they’re often not coordinated ... Working with Red Cross as well, so Red Cross have their ready plan which is their plans for emergencies so they’ve got a planning process to work with communities to get ready for any disaster. So we’ve been working with Red Cross this year to make sure that all fire planning’s consistent with ready plan, not selling two different kinds of planning approaches.

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Despite the establishment of AFAC (and its associated internal committees and processes), a need to avoid fragmentation and to install a single management process and structure is still evident. Fire safety remains a state responsibility and the many difficulties in achieving inter-state agreement in such matters historically should not be overlooked. The recent move to federalise occupational, health and safety law, though, under the Safe Work Australia Act 2008 (Cth) suggests that better coordination and cooperation across state boundaries can be achieved given the right kind of policy leadership. A system of cooperative federalism has been a particularly

noted development of Australian public governance since the 1960s when the first moves to federalise corporations law occurred (Mees and Ramsay 2008; Fenna 2012). Occupational, health and safety federalisation reflects an extension of the federalisation of responsibility for corporations and industrial regulations powers, however, not emergency management.

It should also be acknowledged that strategic communications and the communication of information and education messages designed to enable long-term changes in community behaviour may be reflected in different approaches to inter-agency collaboration. While the cases of AFAC and Fire Ready Victoria show that multi-agency communication programs can be formed, considerable informal policy learning occurring between the states is also evident.

Feedback and Change

The main limitation to a transmission approach to communication stems from the often-false assumption that communication is essentially a one-way process. A lack of understanding of public reception and perception of information, and a lack of conceptualising the importance of feedback are typical flaws in a transmission-based approach. The transmission model of communication has therefore been criticised primarily on the basis of not fully accounting for the complexities of communication.

It is already clear, however, that some agencies are aware that a simple transmission approach to communication has considerable limitations. Most agencies are aware that an ability for public input into the communication process is necessary. This requirement for what is generally called a ‘feedback loop’ in the transmission literature. Yet the adoption of *formal* feedback processes was not obvious from a review of the literature recorded in the Grid. Instead a rather more ad hoc arrangement often seems to apply. The development process in one state was described by an agency interviewee as:

When we’re looking at developing a publication, obviously we use the research that has come out. We put together a bit of a draft and then that goes for internal consultation. So it goes to our media and public affairs area that obviously look at the language to make sure it’s congruent with emergency warning language and the right language that the organisation uses, as well as style. Then it will go to Operations or Bushfire Environmental Protection branch or Fire Investigation who are the subject matter experts in it and will make sure that we’re representing the call to action appropriately. Then we’ll commission a designer to do that process ... We’ll do consultation and we’ll run it through our Bushfire Ready groups who are localised community groups. We’ll seek input from them and then we’d obviously go through the design phase and then have to go into how we’re going to distribute it and what’s our marketing campaign around that.

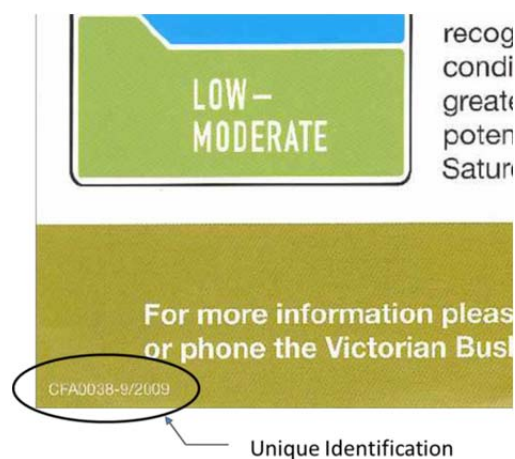
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The development process begins with knowledge creation and includes a form of informal feedback. A commitment to ‘double-loop learning’ in the manner advocated by Argyris and

Schön (1974) was not clear from the interviews, however. Instead of a ‘modification of an organisation’s underlying norms, policies and objectives’ (Argyris and Schön 1974: 3), community consultation appeared merely to have been added to an already existing system of publication development.

The collection of communication products during fieldwork also included the discovery of some out-dated material, a situation that may arise when local brigades store bundles of printed material rather than distribute or discard it. Even though new versions of the text may have been issued, it was seen by some volunteers as a waste to throw out the old out-dated material. The problems associated with the continued circulation of out-dated material was compounded by the development of products without a unique identification for traceability – many were issued, for example, without a date stamp (see Figure 4). It was therefore recognised that there was a lack of version identification and hence a fundamental problem with consistency of message.

Figure 4 – Agency specific unique identification



A further issue that became especially apparent during the development of the Grid was the general issue of housekeeping. During the course of gathering the communication material, some agencies were able to provide a list of their products immediately because they had previously been called upon to evidence their community engagement. In contrast, other agencies reported that they did not have ready access to the products contained in their inventory. The lack of version control in some of the communication products was further evidence that document and record management was sub-optimal in some of the agencies and, again, demonstrates the usefulness of adopting a more formal knowledge management approach. The failure to adopt formal information management protocols may reflect the volunteerist spirit of the agencies as well as a lack of capacity. It does suggest that in its written form much bushfire preparedness communication is disjointed and not fully managed in a considered and optimally effective manner.

Saturation and Waste

One of the key problems that emerges with bushfire preparedness communication is the widespread view that simply distributing information to a wide audience is not enough to increase people's preparedness for bushfire (Robinson 2003; Rhodes *et al.* 2011; Frandsen 2012). This fundamental problem of effectiveness is also evidenced by research more generally undertaken in the hazards field which shows that provision of information is not directly related to the adoption of hazards adjustment (Brenkert-Smith 2010). Many issues contribute to this problem. Alavi and Leidner (2001), for example, observe that creating new capacities for taking action is achieved when people are genuinely interested in participating in a continuous learning and knowledge sharing process. As Barnard (1938) observed, motivation to act upon communication is a basic consideration of effectiveness.

The limitations of saturation campaigns are a recurrent theme in both the academic literature and in interviews undertaken in 2010-11. Many elderly residents from the Yarra Ranges, for example, reported that they had found the paper-based information of preparedness 'excessive' (Yarra Ranges Council 2010) and that they often had difficulty in interpreting the information and how it might apply to their own situation. Similarly, residents interviewed in the Southern Otways, including staff from the CFA who provide services to those areas, admitted that the Fire Ready information packs delivered to residents often remain sealed in their plastic packs, unopened and unused (Akama and Ivanka 2010). The problem is often explained as one of distance – that the agencies are detached from the lived realities of residents:

Actually, we look at it from an academic point of view, really, to see what are they sending out this time, because our experience is certainly at the higher end. But we look at it and think, is this likely to engage, are people – we actually look at it from that perspective rather than from ourselves. My experience – like last year, when all those great big heavy fire survival kits were sent out, that cost millions of dollars, I found even – because I was working for CFA at the time. I'd ask people about them and they'd say, 'yeah, we've had five in our house. I hope somebody opens one, I put them on the kitchen table, I hope somebody opens one, but they're still in their plastic. Just tragic.' So what we've received is what comes out from centralised government.

CRCVICANG 15

The main problem seems to be one of engagement. One participant, for example, received the information booklet, and felt it was important, but stored the information away without reading it:

No, I don't think so. I mean I haven't – I'll be honest with you I haven't read that catalogue that came out – the brochure. I sort of thought yes, this is good material to have and I filed it away under a fire folder.

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Others respondents seem to have treated it as junk mail:

There were just piles and piles of bins were overflowing and piles of these brochures together with the normal junk mail that you get but they were just heaped in there and it was just waste of a – gets through to a few people and that was an attempt to address it but – yeah, a lot of people threw it away and it didn't even get to their kitchen table.

CRCWABRI 02

Another participant similarly expressed their opinion that the widespread distribution of the communication material had limited impact:

I think if we delivered a brochure to every house in Victoria, I think it would make very little difference. So I think, again, they have their place, and I think they can be helpful, but they're certainly not a tool in isolation. I think a mail dropout is a fairly useless endeavour and I think there's a lot – people probably rely too much on them. However, I would not like to see a world of education where we didn't have written materials.

CRCVICST 03

Perceiving communication principally as a kind of mass transmission can evidently lead not only to considerable waste, but also to poor engagement.

Information Channels and Public Trust

It is not just printed materials that are at risk of being ignored or perceived as being ineffective, however. Interviews with residents in Kilmore East, after the 2009 Black Saturday tragedy, indicated that there was confusion and lack of trust particularly in the ability of websites to trigger or lead to the implementation of a resident's fire plan (Elliott and McLennan 2011). Trust is a key issue in public policy studies and lack of trust in public agencies is a critical item in public communications.

In Elliot and McLennan's (2011) study, only 1% of those interviewed described fire agency websites as the information source they used to decide to trigger their bushfire plans. In fact, around half of the residents interviewed (51%) relied on environmental indications and phone calls from family and friends as cues for enacting their plans. Elliott and McLennan's study reveals that the slowness of information updates on websites, the ambiguity of information

provided and a perceived absence of threat warnings through the official channels of communication were some of the reasons for not relying on the internet for information. Taken together with the lack of trust, Barnard's (1938) observation concerning successful communication seemed lacking here.

The need for consistency was also emphasised by some participants and a concern that too many changes would diminish the value of the messages by others. A number of local agency personnel who had seen the bushfire safety messages change over the succession of safety programs suggested that too much information could cause the public to become detached and that it was important to ensure that the public do not disengage themselves from the communication process:

You need to be really mindful of what you're sending and it's a united message for you to hear. Not saying this is the message this year and then the following message next year – and we've sort of stuck on our guns for the last five years of the messages of what we're trying to send out there is the same. It might be just slightly modified but it's the same message. So you can be bombarded with too much information to the point where it gets thrown in the bin. We cannot ever let, as a community go down that path.

CRCWADUN 02

Convergence to the 'Prepare. Act. Survive.' national framework was thought to be a positive step but participants also spoke about the difficulties faced with conveying bushfire safety messages that keep changing:

The big emphasis that we're trying to get across now is the 'Prepare, Act and Survive' because it was always the stay and go type messages... With the media, with the material that I've been supplied with, it's assisting us greatly. There are changes, as I mentioned earlier, but the changes are a little bit frustrating because we've just put a package out and then you update it again, then you do something and then you update it again. That's getting a bit hard to get back to the public, that we've got the message out and trying to get all those people involved, and then you're going back again and changing it and changing it.

CRCWADUN 03

The transmission view of communication can diminish empowerment, participation and capacity-building for change by the community. A stronger belief in the fire agencies' ability to manage the threat of bushfire reduces levels of personal bushfire mitigation (Paton *et al.* 2006). Akama and Ivanka (2010) observed complacency for preparedness and dependency on the fire services to 'tell them what to do' in communities in Victoria (Southern Otways and St Arnaud) and Tasmania (Kingborough and Huon Valley). The changing demographic of these areas also compounds issues of dependency and false expectations. Urban dwellers who may be used to service delivery are moving into rural settings where self-reliance and locally based

initiatives become more important. As a result, the influx of newcomers is changing the networks and groups within communities like the Southern Otways (Akama and Ivanka 2010).

There is evidence where the power dynamics between the ‘expert’ fire authorities and ‘non-expert’ community compounds the issue of people still expecting to be told what to do. It was noted, for example, by some interviewees that some of the audience still expected decisions to be made for them by the agencies:

Then there was another group who was alarmingly waiting for someone to tell them what to do at a point when they should have been doing things already. So ... we’ve offered a suite of communications here, but to get people to actually accept them and understand them and engage with it is still tricky.

CRCVICST 01

There was also an aspect of organisational change where community engagement and communication was not the traditional focus of emergency organisations. One participant described:

[I]t’s always a challenge for us to keep the fire fighters engaged ... A lot of the fire officers, they join thinking their job is to go out and put wet stuff on the red stuff, it’s not. They spend 5 or 10 per cent of their time doing that. The other 95 per cent of their time, they’ve got to be out there in the community. To be talking up to prevent fires.

CRCVICST 08

There is a danger when this false perception, reinforced by the authority of communication products, replaces the critical human-to-human engagement needed for behavioural change to occur. Informal social processes are also important mechanisms for spreading information, yet the critical role of such processes often lacks recognition in bushfire communication. Brenkert-Smith’s (2010) research on bushfire mitigation among rural communities in Colorado indicates the benefits of bridging relationships between neighbours and the importance of social interactions that can lead to better fire preparation. Brenkert-Smith’s findings are echoed in the following statement:

Yes, and we’re a very close-knit community where we are so I’m pretty sure, even though we haven’t discussed it with neighbours, neighbours would be coming and saying there’s a fire up the road or there’s a fire over the back of us or it’s – apart from sort of seeing the smoke and smelling it I’m sure neighbours would be actively telling one another about it.

CRCTASHUV 19

Knowledgeable neighbours, who share the same risk, are often more trusted, relied upon and become sources of vital information, than the ‘official’ experts. Brenkert-Smith’s study reveals that many of these permanent residents become interpreters and consolidators of information, tailoring and detailing the information to enable it to become immediately applicable to the neighbouring property and local environment.

Engagement and Understanding

Beyond the communication between agencies and states, communication can be enhanced by building on existing communication products and using them as triggers for further engagement. One example of such an approach is placing a pre-condition to giving out a planning booklet. An agency interviewee, for example, described how the local volunteer brigade would distribute survival planning information:

The other thing that we do is that we only give people a bushfire survival plan if they commit to let us come back and talk to them about it. So annually the RFS has an open day, corporate, and go to your fire station and all this sort of stuff. Like many brigades we don’t hold it at a fire station because our fire stations are remote and we just don’t get people.

CRCNSWST 11

While this interactive method was made necessary because of the constraints of remoteness of the stations, the significant point was an acknowledgement of the commitment involved in preparing a survival plan.

There were other interviews that reflected the same idea, where the bushfire planning booklet was of such complexity that agency personnel felt that they had to be prepared to provide a level of support in the form of ‘hand-holding’ or prompting to assist some households prepare their survival plans:

I think just from handing this out and speaking with people, this is a document that needs to be explained. You need to go through it with someone rather than just hand it to them. You may ask them the question in the first instance, are you going to stay or are you going to go? Oh I’m staying, I’m staying, I’m staying. You go through this and you try to explain the different things that could happen. What you need. What you need to be prepared for. Some will change their mind by the end of the conversation. They haven’t really – because they haven’t experienced it they have no real concept of what could happen and what was expected of them. So it’s definitely an explanation document.

CRCNSWST 03

Other experiences in the use of the communication products also captured other communication pathways in addition to direct mail-outs. Local events such as community market days were also

mentioned as occasions where fire agencies could engage the public. The success of such events was determined in part by the proactive outreach of those attending and the participant explained:

My observation is that the success of those sessions, of having a stall at the market, depend very much on who's behind the desk ... if you have presenters there either from the brigade or from the region, paid presenters, who sit at the stall and wait for people to come to them, they won't be very busy. But if you stand there with a handful of brochures, some balloons on a string and while people are walking past, you say, would you like a balloon, hello little child, whatever, they stop, they talk and before you know it, you're having really meaningful conversations. We could engage in 200 in-depth conversations in a day and come home exhausted, or you can sit back on your chair and wait for people to come to you and have 20 conversations.

CRCVICANG 15

Partnership with the community was also identified as an important factor in tailoring messages. Learning how to engage a diverse population has also been part of the communication program, but this may only be at the level of an individual jurisdiction:

One of the gaps that was found, very much so in the rural areas, was the – engaging women, our rural women. So they've just launched a rural women's program up in the north-west because what happens in the small country towns – all the blokes go down to the shed and get on the trucks and the women just stay at home or get to face the fire alone or work out their own thing. So that there's different ways – they are different – very much a specific target audience, but we have a huge Diverse Populations Project happening at the moment where we're trying to access as many communities as we possibly can.

CRCVICST 04

Clearly many of the problems with engagement of local communities are currently being addressed via such programs, but often only at the moment in an *ad hoc* manner – not, for example, in the interactive ways advocated for social marketing initiatives by Smith (2006).

Social Capital and Communication

Putnam's twofold model of social capital suggests that communication at the level of the 'lifeworld' (Habermas 1981) principally occurs in terms of social bonding – that is within close social groups. The communication that takes place during conversations with neighbours, close personal acquaintances and family is of a fundamentally different nature than that which occurs between fire agencies and the public.

The value of social networks is particularly evident in bushfire preparedness. There is mounting evidence that during bushfires information is passed between people, such as family, friends and neighbours (Paton n.d.; Brenkert-Smith 2010; Stelling *et al.* 2011). Brenkert-Smith (2010) argues that such social interactions are important in creating opportunities for residents to exchange information on shared risks and can lead them to take collective action to address this risk. In other words, there is a mutually beneficial relationship between individual exchange and collective action. This exchange can become a vehicle for building adaptive capacity and recovery in communities, which have recently experienced fire in Victoria. Stelling and others (2011: 36) report that bushfire survivors in Victoria coped more effectively when they were part of 'good support networks' that included:

... friends and family, maybe people here at the time, but also a broader network ... people who maybe weren't involved with the fires but who were able to come in with some fresh energy and compassion and a sense of being able to help. People who had someone who could just drop in and say hello and how are you going, just have a chat.

The importance of personal contacts, of having conversations and close acquaintances, seems the key lesson that a social-capital perspective brings to the issue of communications. Rather than a bureaucratic response or one rooted in the technological metaphors of the transmission model of communication, a community and social capital-focused understanding, if well targeted, strategised and structured, seems to be an under-acknowledged approach to bushfire communication presently.

Summary

The approach to developing and disseminating bushfire communication products is under-developed, with evidence of ad hoc and piecemeal approaches. Clearly there are differences between agencies and states, although even when relatively sophisticated products have been developed their dissemination has been uneven.

To understand the potential for improvement it is necessary to remember that communication is always a two way process. This distinction has been developed with an understanding that an adequate understanding of communication requires a consideration of our 'lifeworld' how as individuals we live in social settings, which are complex, involve a range of dimensions (involving the public and private, system and individual, and macro- and micro-levels) and involve politics, governments and mass media. For communities, and the individuals who live in communities it becomes important to understand the ways in which our social lives are networked with each other and tied into complex institutional arrangements, for example agencies and related bodies.

In relation to bushfire and communication, two sets of relationships are noteworthy. First, communication is developed, produced and disseminated by agencies. Over time, these agencies have evolved and become central to the way bushfire preparedness is undertaken. Communication is central to these processes, but in a number of ways it is deficient; in monitoring and evaluating processes and products, the development of comprehensive and

grounded knowledge management systems and the commitment to a transmission approach to communications. Second, and complementing the first point, there is an inadequate understanding of the social complexity of communities, and the bases on which communication will be trusted, heard and acted upon.

Implications

1. Agencies should actively explore the development of the RMIT Grid as a mechanism for monitoring and evaluating the quality of generation, production, content, and dissemination of communication items.
2. Agencies should introduce formal and comprehensive feedback mechanisms to evaluate and then adapt communication procedures. Current arrangements are largely ad hoc and where formalised confined to adding to existing systems of publication development rather than relating to the proactive development and improvement of such processes.
3. Agencies need to review and update their material production and dissemination with a development of a formal knowledge management process. There is need to address the consistency and currency of material, with measures put in place to ensure that brigades are using the most recent material. At present, some brigades store out-dated material a situation that is compounded by the absence of version identification. Moreover, some agencies lack adequate systems of housekeeping, indexes of products and their uses, and so forth.
4. Agencies should develop targeted and organised ways of disseminating material. At present, agencies are governed by a transmission view of communication. The outcome is that the texture and complexity of localities is overlooked, with the consequences that communication strategies are deficient.

Directions for future research

1. Communication in relation to bushfire is based on a range of relatively informal procedures which over time have been developed into relatively well established procedures for basic production and dissemination of materials. Further research should be undertaken to understand knowledge management in this context.
2. To understand and develop procedures in relation to communication and bushfire research focused on the relations within communities. In this respect, research on social capital-focused understandings should be undertaken.

References

- AFAC 2006. The Stay and Defend Your Property or Go Early Policy. *Firenote*, no. 7.
- AFAC 2013. *The Stay and Defend Your Property or Go Early Policy*.
http://knowledgeweb.afac.com.au/research/community/plesd/The_Stay_and_Defend_Your_Property_or_Go_Early_Policy
- Akama, Y., and Ivanka, T. 2010. *What Community? Facilitating awareness of 'community' through Playful Triggers*. Proceedings of the Eleventh Conference on Participatory Design 2010, Sydney, Australia, ACM Digital Library.
- Alavi, M. and Leidner, D.E. 1999. Knowledge Management Systems: Issues, challenges, and benefits. *Communications of the Association for Information System*. 1(2): 1-37.
- Argyris, C. and Schön, D.A. 1978. *Organizational Learning*. Addison-Wesley: Reading, MA.
- Barnard, C.I. 1938. *The Functions of the Executive*. Harvard University Press: Cambridge, MA.
- Bartholomew, D. 2008. *Building on Knowledge: Developing expertise, creativity and intellectual capital in the construction professions*. Blackwell: Oxford.
- Brenkert-Smith, H. 2010. Building Bridges to Fight Fire: The role of informal social interactions in six Colorado wildland-urban interface communities. *International Journal of Wildland Fire*, 19: 689-697.
- Castells, Manuel. 2009. *Communication Power*. Oxford University Press: Oxford.
- Craig, R.T. 1999. Communication Theory as a Field. *Communication Theory*, 9(2): 119-161.
- Elliott, G. and McLennan, J. 2011. *Civilian Decision Making Under Stress: Use of fire agency web-sites on Black Saturday*. <http://www.bushfirecrc.com/resources/poster/civilian-decision-making-under-stress-use-fire-agency-web-sites-black-saturday>
- Fenna, A. 2012. Centralising Dynamics in Australian Federalism. *Australian Journal of Politics and History*, 58 (4): 580-590.
- Frandsen, M. 2012. Promoting Community Bushfire Preparedness: Bridging the theory –practice divide. Unpublished doctoral dissertation, University of Tasmania.
- Habermas, J. 1984-87. [1981]. *The Theory of Communicative Action*. Trans. T. McCarthy. Polity: Cambridge.

- Hackett, B. 2000. *Beyond Knowledge Management: New ways to work and learn*. Conference Board: New York.
- McLuhan, M. 1967. *The Medium is the Massage: An inventory of effects*. Penguin: New York.
- Mees, B., Fairbrother, P., Akama, Y., Phillips, R. and Tyler, M. 2013. *Communication and Bushfire Preparedness*. Unpublished discussion paper. Centre for Sustainable Organisations and Work, RMIT University: Melbourne.
- Mees, B., and I. Ramsay. 2008. Corporate Regulators in Australia (1961-2000): From Companies' Registrars to ASIC. *Australian Journal of Corporate Law*, 22: 212-254.
- Nonaka, I. 1991. Creating the Knowledge Company. *Harvard Business Review*, 69(6): 96-104.
- Paton, D. (n.d.). *Promoting Household and Community Preparedness for Bushfires: A review of issues that inform the development and delivery of risk communication strategies*. Bushfire CRC: Melbourne.
- Postmann, Neil. 1985. *Amusing Ourselves to Death: Public discourse in the age of show business*. Penguin: New York.
- Putnam, R.D. 2000. *Bowling Alone. The collapse and revival of American community*. Simon & Schuster: New York.
- Rhodes, A., Gilbert, J., Nelsson, C. and Preece, E. 2011. *Evaluation Report 2010-2011. C2.10B Evaluation and Effectiveness Project*. CFA: Melbourne.
- Robinson, L. 2003. Education for Resilience: Community safety communication for natural hazards http://www.enablingchange.com.au/Resilience_and_risk.pdf
- Saussure, F. de. 1959. [1916]. *Course in General Linguistics*. Ed. C. Bally and A. Sechehaye; trans. W. Baskin. Philosophical Library: New York.
- Schramm, W. 1954. How Communication Works. In Schramm, W. (ed.) *The Process and Effects of Communication*. University of Illinois Press: Urbana.
- Schwartz, D.G. 2006. Aristotelian View of Knowledge Management. In Schwartz, D.G. (ed.) *Encyclopedia of Knowledge Management*. Idea Group Reference: Hershey, PA.
- Shannon, C.E. and Weaver, W. 1949. *The Mathematical Theory of Communication*. University of Illinois Press: Urbana, IL.
- Smith, W.A. 2006. Social Marketing: An overview of approach and effects. *Injury Prevention* 12 (Suppl. 1): 38-43.

Stelling, A., Millar, J., Boon, H., Cottrell, A., King, D. and Stevenson, B. 2011. *Recovery from Natural Disasters: Community experiences of bushfires in North East Victoria from 2003-2009*. Institute for Land, Water and Society, report no. 65. Institute for Land, Water and Society, Charles Sturt University: Albury, NSW.

Teague, B., McLeod, R., Pascoe, S. 2009. *Victorian Bushfires Royal Commission: Interim Report*. Government Printer: State of Victoria, Melbourne.

Toh, K., and Tyler, M. 2013. Making Knowledge Visible: Collecting and collating bushfire communications products. *Firenote*, no.102. Bushfire CRC: Melbourne.

Wiener, N. 1948. *Cybernetics or Control and Communication in the Animal and the Machine*. Wiley: New York.

Yarra Ranges Council. 2010. *I Fought Two Wars, I Can Fight This: Bushfire awareness and preparedness of frail older and vulnerable residents in Yarra Ranges*. Project Report, Yarra Ranges Council: Melbourne.

Chapter 4: Acknowledging the Audience: Bushfire Safety Communication and Diversity

Communication about bushfire preparedness and bushfire safety is increasingly seen by many fire agencies in Australia as an important part of day-to-day operations. These communications roles are often shared between the main bushfire fighting service in any given state and other relevant government departments. In this chapter, we consider the changing nature of bushfire preparedness and safety communication, focusing in particular on the potential of a social marketing approach to communication and the importance of recognising and engaging a variety of audiences. Insights from research in social marketing and public communications campaigns are used to analyse data collected from interviews with communications professionals working in the area of bushfire safety, in both fire agencies and government departments, across four Australian states. This chapter demonstrates the significant variation in approaches to communications campaigns across different organisations and the differences in attitudes among professionals in this area and highlights a number of concerns, including messaging development and evaluation, audience engagement, and understandings of audience segmentation and diversity.

Background: Public Communication and Social Marketing

The concept of public communication has a mixed history. Initially conceived as a way for governments and the mainstream press to communicate with the general public, there has historically been considerable debate about the possible benefits and drawbacks of broad communication campaigns. Scholars such as Dewey (1927) and Bernays (1928) advocated the use of public communications strategies for social betterment. They believed that such strategies were a public good and that they could be utilised in progressive social change. Others, however, were less optimistic about the potential of public communications. Lippmann (1922), for example, viewed such top-down attempts at communication as coercive; essentially as a form of propaganda. This very negative view of public communication, supported by Marxist notions such as Antonio Gramsci's (1971) theory of cultural hegemony, literary cultural studies (e.g. Williams 1958) and the critical theory of the Frankfurt School (Horkheimer and Adorno 1944), has continued to see public communication as something to be critiqued as it occludes and serves the interests of socially dominant groups in society. These debates have continued, and the rise of the mass media in the twentieth century has been seen by some scholars as further distancing people. A situation where communication became something that governments 'did' to the public (Morley 2005) as a form of social control (Carey 1989).

In part, as a way to side-step such arguments, the concept of 'social marketing' is now much more common when describing public communications campaigns that are intended to be for the greater good, for instance, health promotion campaigns (e.g. safe sex campaigns to limit

sexually transmitted infections, anti-smoking campaigns to reduce the incidence of smoking-related disease and illness, and ‘Sunsmart’ campaigns to reduce the incidence of skin cancer). The term ‘social marketing’ is generally attributed to Kotler and Zaltman (1971) and implies an approach that draws on marketing and public relations rather than more traditional, technological communication theories. While traditional marketing approaches were originally more concerned with the study of getting products as efficiently as possible to consumers (i.e. bringing them to the market), the development of market research and the analysis of marketing channels has brought together much of the social science literature concerning communication in a practical manner.

The initial focus of marketing was to develop strategies to bring about change in buyer behaviour (Alderson 1957) and has increasingly involved sophisticated social demographic research (for example, by age, occupation and gender) to help target particular populations. This approach recognises that effective communication is grounded in understanding a target audience and appropriately tailoring the communication medium, as opposed to the technological metaphors of ‘transmission’ or ‘feedback’ (Shaw and Jones 2005). These basic concepts of marketing are now frequently applied in the context of public communications.

Underlying the basic premise of social marketing is Gerhart Wiebe’s (1951-52: 679) famous question: ‘Why can’t you sell brotherhood like you sell soap?’ Much of the research on social marketing has since set about trying to determine effective methods for the design and dissemination of communication campaigns for the public good as well as outlining a multitude of reasons that make selling soap very different from selling abstract notions of community togetherness or social betterment (Hornik 2013). Today, a social marketing approach is increasingly applied to social programs, particularly in areas like health promotion, community development and environmental education. Indeed, it has been suggested that disaster preparedness falls into this category and can be best viewed as a ‘health promoting behaviour’ (Eisenman *et al.* 2009). A social marketing approach may therefore present a useful way of understanding bushfire safety campaigns, particularly the social elements of bushfire safety campaigns, by going beyond the more psychologically based analyses often found in risk communication literature.

Acknowledging Audience(s)

One of the most important elements of a social marketing approach is acknowledging and understanding the target audience, or more likely, target *audiences*. Walsh and colleagues (1993: 109) outline three of the essential elements of social marketing that matter as a social marketing approach became more widespread in health promotion. These three elements are:

- i. The process is disciplined. Objectives are clearly stated. A variety of research and management techniques are applied to achieve identified goals, which often, but not always include the mass media. A systematic tracking process monitors progress and guides midcourse corrections.

- ii. The consumer is heard. Target audiences are segmented along several dimensions (demographics, ‘psychographics’ and ‘mediagraphics’). This formative research goes beyond using traditional ... data; it adds measures of values, images, aspirations and concerns of potential clients. Qualitative and quantitative data collection techniques are used to develop an in-depth profile of what reaches and motivates targeted sub- groups.
- iii. The product is responsive, based on iterative research into consumers’ wants and needs. Consumers’ responses are solicited repeatedly.

The second and third elements here clearly show the centrality of understanding and being responsive to the audience to social marketing approaches. Understanding the beliefs and world-views of target audiences is deemed critical to being able to produce effective messaging. This necessitates meeting the audience where they are; accepting their current behaviours and attitudes and designing messages that will be effective in either raising awareness or motivating behavioural change within that context.

The social marketing approach contrasts sharply with the older ‘transmission model’ of communication (Shannon and Weaver 1949), prevalent in early public communications literature and occasionally still found today (see Chapter 3). In this linear model of mass communication, information from an active participant is simply viewed as being transmitted to a receiver or receivers (the audience). The general assumption of the transmission model is that, unless there is some interference between the sender and receiver, the message will be understood in the way the sender intended (Eadie 2009). The starting point of many bushfire agencies in designing campaign materials does still seem to reflect elements of this model (see Chapter 3). This feature is perhaps most evident in the way that ‘expertise is marshalled among fire agency specialists and disseminated to the public’ (Mees *et al.* 2013: 9). The transmission model has been heavily criticised for a number of reasons, most prominently, for not taking into account the full complexities of human communication (Voltmer and Römmele 2002; Mees *et al.* 2013). Instead, attempts at reconceptualising communication as the ‘sharing of meaning’ rather than the ‘transmission of messages’ have resulted in approaches, like social marketing, which focus much more heavily on audience perceptions and communication as a two-way process (Voltmer and Römmele 2002).

As discussed in the later sections of this chapter, an audience-centred approach was often lacking in the narratives expressed by communications professionals in bushfire safety. While several participants mentioned evaluative processes to determine the effectiveness of campaigns once they were rolled out, there was little or no discussion of pre-design research on the target populations. Similarly, while a couple of participants recognised that target audiences are segmented, there was only very limited acknowledgement that demographics, geographical location, values or other factors may require the tailoring of campaign messages. This suggests that a traditional ‘transmission model’ of communication may still be the dominant paradigm among some communications professionals working in the area of bushfire safety and preparedness (see also: Mees *et al.* 2013).

Challenges of Diversity and Audience Segmentation

The recognition of audience segmentation in public communications and social marketing has led to an acceptance in new strains of communications theory that ‘there is no such thing as the general public’ (Maibach *et al.* 2008: 493). As a result, any communication campaign aimed at the mass of a ‘general public’ is seen as likely to be ineffective. This position reflects an increasingly common view among public communication and social marketing practitioners that successful campaigns need to identify specific sections of the broader population that are ‘at risk’ or are likely to find particular messaging especially relevant to them (Atkin and Rice 2013). Therefore, to reach audiences effectively, campaigns ‘must be targeted on the basis of audiences’ interests, values and current behavioural patterns’ (Maibach *et al.* 2008: 493).

Atkin and Rice (2013: 5) outline two main reasons why this approach is important and why understanding and addressing a variety of segmented audiences is more useful than attempting a ‘one size fits all’ message:

First, message efficiency can be improved if subsets of the audience are prioritised according to their centrality in attaining the campaigns objectives as well as receptivity to being influenced ... Second, effectiveness can be increased if message content, form, style and channels are tailored to the attributes and abilities of subgroups.

In this model, communications professionals need more than just multiple ways to distribute the message; they need to modify and adapt *the message itself* depending on the audience.

One of the great challenges now facing public communications campaigns is how to adapt messages for different demographic categories. So while the general aim may be to disseminate a message about say, disaster preparedness, to all citizens, there is increasing acknowledgement that the message will need to be adapted for different groups (Nepal *et al.* 2012). The variation in messaging may be organised by a variety of factors, including (among others) age, occupation, location, ethnicity and gender. In countries like the United States, Canada, the United Kingdom and Australia, with significant multicultural populations, the issues of cross-cultural communication are likely to be particularly pertinent (Banks 2000). Again, this means that public communication campaigns need to be understood and analysed as sense-making processes ‘where reality is negotiated and constructed in cultural contexts and situations, rather than distributed from a sender to a recipient’ (Falkeimer and Heide 2006: 180). That is, it cannot be expected that the message will be received by diverse populations in the way that the sender (usually public or government agencies, in this context) intends.

However, in public communication literature, and in crisis communication and disaster preparedness literature, there has been a notable lack of engagement with the issues surrounding cross-cultural communication (Banks 2000; Falkeimer and Heide 2006). As Eisenman and colleagues (2009: 513) explain, many marginalised groups have been overlooked in public communication campaigns for disaster preparedness:

Historically, the messengers and messages used for disaster preparedness have been best suited to mainstream and easy to target audiences. New immigrants, people who do not speak the dominant language, those who are transient or illiterate, and the poor who do not have internet access are often left out.

Nepal and others (2012: 266) come to a similar conclusion about the nature of mass campaigns for disaster preparedness, stating that:

[P]ast experiences have shown that these generic prescriptions for preparedness remain beyond the reach of many low-income residents, older residents, disable persons and others.

So there are a range of groups who are unlikely to receive the message in the first place, unlikely to comprehend the message, unlikely to interpret the message as intended by the sender, unlikely to believe the message is relevant to them, or unlikely to feel able to act on the message.

The diversity of groups within the larger target population therefore poses significant challenges to those engaging in public communications and social marketing. As Banks (2000) argues, one of the first hurdles in this area is to persuade communications professionals to recognise that diversity is actually an issue. He notes that in the early 2000s, it was still common to hear communications practitioners say things like: ‘Diversity isn’t a problem for us. We don’t have any diversity here’ and, as discussed further below, this is certainly a narrative that appeared in some of our interviews. This view is not uncommon, and there have been other public claims that demographic diversity is irrelevant in crisis communication in Australia. For example, in the Victorian State Emergency Service (SES) paper ‘Developing a Risk Communication Model to Encourage Community Safety from Natural Hazards’, it is claimed that:

Though often discussed, demographic variables do not appear to be used as primary criteria for segmenting audiences in risk communication marketing campaigns... While intuitively it may make sense to link specific variables such as income and education standards to the willingness to accept and act on safety messages, there is little hard evidence to support these ascertains (O’Neill 2004: 16-17).

As Banks (2000) points out, however, there is substantial evidence to show that understanding demographic variables helps to explain why messages from public communications campaigns may not carry well to specific groups. Why crisis communication, or communication related to disaster preparedness, would be exempt from this is unclear. Furthermore, O’Neill suggests that social marketing campaigns dealing with natural hazards lack a sophisticated approach to audience segmentation because there is no hard evidence to support the need for it. On the contrary, there is now mounting evidence of the need to diversify messages related to disaster preparedness across a variety of demographic groups (e.g. Falkheimer, and Heide 2006; Andrulis *et al.* 2007; Eisenman *et al.* 2009; Nepal *et al.* 2012).

Secondly, Banks (2000) argues that even when the importance of demographic diversity is recognised in a public communications context, this is often only at a very surface level. Usually,

the superficial acceptance of diversity manifests in a belief that the literal translation of messages from the dominant language (usually English) into other languages ‘solves’ the problem of cross-cultural communication. A reliance on translation, however, misses the complexities of both cultural difference and of communication itself. As Banks (2000: 32) explains further:

[C]ommunication is interpreted within the cultural contexts of recipients, not sources ... audiences cannot be expected automatically and always to take the cultural perspective of the practitioner.

Therefore, a much more in-depth understandings of cultural difference and the segmentation of audiences by demographics is required in order to reach minority groups, or simply groups who do not share the dominant culture of the message sender. These themes will be revisited in the analysis of the data from interviews with communications practitioners in the area of bushfire safety and preparedness.

The Data

The data analysed here is drawn from a series of interviews that formed part of the ‘Effective Communication: Communities and Bushfire’ Project. Communications practitioners from four states (New South Wales, Tasmania, Victoria and Western Australia) were interviewed. Initially these were practitioners from bushfire agencies (Rural Fire Service – NSW, Tasmanian Fire Service, Country Fire Authority – Victoria and Fire and Emergency Services Authority, now Department of Fire and Emergency Services – WA) but a snowballing technique was used and participants could recommend professionals in other agencies (usually government departments) to be interviewed as well.

Interviews were based around a standard set of open-ended and follow-up questions relating to community, communication and bushfire preparedness. In total, nine interviews were conducted with communications professionals across the four states. There were two interviews each in NSW, Tasmania and WA and three interviews in Victoria (total of nine interviews). Each interview was approximately an hour in length. The interviews with participants in Victoria were carried out face-to-face, and interviews with participants from other states were carried out by phone. Following the completion of the interview process, all recordings were transcribed by an external transcription company.

As the interviews conducted in each state were undertaken by different researchers, there is some level of disparity in the focus of the interviews, particularly regarding follow-up questions. Also, while the research team made an effort to contact as many communications professionals as possible to request and interview, the final set of interviews only represents a small slice of the communications professionals operating in the area of bushfire safety across the four states. In order to maintain the anonymity of participants, the names of departments and agencies have been removed and, in most cases, specific locations have also been removed from quotes and identifying information.

It should also be noted that the accounts analysed in this chapter are largely based on the perceptions of the participants (i.e. communications professionals operating within bushfire agencies and relevant government departments). The responses from participants therefore provide evidence of existing attitudes, perceptions and understandings of how communications campaigns around bushfire operate rather than an objective capturing of how processes actually operate or how they are supposed to operate as recorded in official guidelines or policy.

An inductive thematic approach (Braun and Clarke 2006) was undertaken for the data analysis in this chapter. That is, no previous theoretical framework had been determined for the analysis of the interview data. Each of the interview transcripts was read in its entirety by a researcher who did not conduct the original interviews. Patterns and themes that were dominant in each interview were noted by the researcher. After this had been completed for all interviews, commonalities across the interviews were considered and a coding framework was developed based on the following four themes: issues around the development of messaging and the evaluation of messaging and/or campaigns (all nine interviews); the changing nature of communication in bushfire safety (seven interviews); general understanding of diversity as related to communications (eight interviews); more specific understandings of gendered difference as related to communications (all nine interviews). The first three of these themes will be discussed in this chapter.

Assessment

Our research shows that communication practitioners working in bushfire safety approach their jobs in a range of ways, with different understandings of their roles, and different levels of support. Indeed, one of the most striking elements of the interviews analysed in this chapter is their marked variation. Some participants reported significant support for community engagement within their organisations while others noted on-going resistance. Some participants detailed formal processes of message development and evaluation within their organisations while others confided that they had neither the resources nor the ability to carry out such activities. However, there were also notable similarities among some of the accounts provided by participants. Three of the most common points of similarity found in these interviews were: the lack of an ‘audience-centred’ approach to communications, the lack of discussion around audience segmentation, and the equation of ‘community diversity’ with a limited understanding of cultural and linguistic diversity. Each of these themes will be analysed through the communications literature outlined above with a view to outlining the implications for bushfire safety campaigns in Australia.

Changing nature of bushfire safety communication

At the outset, it should be noted that several participants mentioned the changing nature of bushfire safety communication. The area was perceived, by a majority of participants, to be in a period of adjustment and re-evaluation. As one interviewee stated:

In terms of what's required in engagement, I think that's a question for the whole [bushfire agency] – and it's not just [my area] it's for everybody in the fire services. I think there's a recognition that a new approach is required.

CRCVICST 09

Four of the participants specifically mentioned that they perceived the remit of bushfire agencies to be changing, especially with regard to communications and that, with varying degrees of success, community engagement was becoming part of the normal operation of the fire services.

At the moment, all our brigades, or 98 per cent of our brigades, have a focus on fire-fighting. It's only a handful that also do community engagement work. Those that do, their success rates are very high. So an early challenge for us is to encourage other brigades to take that approach too

CRCTASST 01

I think there's been a lot of improvement just in the last couple of years by recognising the fact that communication about fires is every bit as important as the actual, on ground, fighting the fires...I think there's been a big step forward but there's still some work to be done. It's still sometimes a bit of an afterthought.

CRCTASST 06

We actually consider the media a part of the overall firefighting effort. Now while they're not jumping on trucks and rolling hoses and things like that, we consider them a part of the firefighting effort because part of the firefighting effort is ensuring that the community is informed.

CRCNSWST 07

I suppose you've got the traditional media approach of just pushing information out which we tend to do quite well, to what I'm trying to bring about is more of engaging with communities and giving them meaningful information and entering into a dialogue with them, which is a much more difficult prospect.

CRCNSWST 10

Some of the participants talked about what they saw as the successful integration of community engagement within bushfire agencies, while others spoke primarily of resistance to this change. There were significant differences in how well respondents felt that their own organisation was addressing and engaging with the intended audiences for their bushfire safety materials. The last participant, who mentions attempting to enter into a 'dialogue' with communities, specifically

mentioned the tension in trying to adopt open communication with residents as a strategy within a bushfire agency that has traditionally used a 'command and control' approach to communication:

I think the organisation is very responsive and tactically based anyway ... when you start talking about resilience and engaging communities and building capacity and things like that, that a lot of the staff within the organisations [bushfire agencies] don't actually get that stuff. So it's very much a – I think, as much a cultural challenge as it is an organisational challenge.

CRCNSWST 10

This is a critical point to take into account. Many of the fire agencies involved in promoting bushfire safety do not come from traditions of public communications. Rather, they are often based on military-like structures where communication is traditionally seen as very much embedded in the transmission model: a message is sent from the top of the hierarchy, received as intended by others and acted upon (generally without question). As discussed above, this is not a useful model on which to base effective public communications and social marketing campaigns. Taking into account the intended audience (or better still, audiences) and attempting active engagement with audiences, is crucial. However, it is important to recognise that many of the agencies now involved in bushfire safety campaigns do not have a long history of this form of engagement and may face significant challenges in trying to adopt new and varied methods. Indeed, this process of transition may help to explain, in part, the variety of responses we received from some participants regarding the methods of message development and evaluation as well as the integration of methods (or lack thereof) for understanding and addressing audience segmentation and diversity.

Message development and evaluation

One of the most dominant themes across all the interviews, in terms of public communication strategies, was the issue of message development and evaluation. The responses from participants were often triggered after the interviewer asked questions regarding the development of key messages, evidence that the messaging was effective, or whether or not there were any formal procedures of evaluation for the relevant communications.

In terms of both message development and evaluation procedures, there were significant differences in responses across organisations and across states. Some participants mentioned that a variety of people were involved in developing the relevant messaging for a particular campaign, while others noted a lack of any support for this element of the campaign process. The most extreme example of a lack of consultation in development came from one participant who, when asked if there was a process for message development within their organisation, responded by saying: 'No, the message development is me' (CRCWAST 04). Obviously, such an approach is extremely problematic from both a traditional communications approach and a social marketing perspective. Without any prior understanding of how intended audiences respond to existing messages, or are likely to respond to proposed messages, the communications practitioner is, at

best, playing a guessing game. The messages may work and they may not. In such a scenario, it is almost impossible to know. Without feedback mechanisms, collaboration between colleagues or across agencies, or research into target audiences, campaign messaging is likely to be ineffective.

In contrast, there were also accounts of greater collaborative development of messaging. One participant described collaboration between agencies and government departments, as well as collaboration with a major newspaper, as part of the message development for a particular campaign:

The key messaging that drove a lot of messaging for this year was generated in the [bushfire agency] ... it was written by someone in the [government department] and there was a table of people from every agency that was sitting around the table at the [state-based newspaper office] going through every page.

CRCVICST 09

While collaboration between organisations can certainly be very useful in messaging design, it is important that this kind of expert knowledge does not displace attempts to engage target audiences. As Atkin and Freimuth (2013: 53) explain, specialists and experts ‘aren’t always conscious of the fact that they differ substantially from their audiences in topical knowledge, values, priorities, and level of involvement, so they lack the perspective of the ‘average’ person.’ Therefore, engagement with the intended audience during message development is still required.

Two other respondents noted the importance of taking into account ‘the community’ as the audience for the intended messages:

So we got the [market research] to do key message research with groups from high risk areas and the general...population to that we could get a lot more direction on what the key messages should be and which were resonating with the community.

CRCVICST 06

[M]edia and public affairs and community engagement would come up with some concepts that we would then sit down and say to the guys who are out on the ground, the volunteers, the operational services and largely the community engagement area who know how the messages are then interpreted or actioned by the community.

CRCWAST 04

These two accounts do at least mention ‘the community’, so there is some recognition of the importance of the audience. In the first account, for example, the participant describes using market research to determine which of the key messages will resonate best with ‘the community’; although it must be pointed out that the concept of ‘the community’ in this context seems to

preclude any understanding of significant audience segmentation. That is, there may be some groups within ‘the community’ with different reactions to the key messaging tested. The second account, however, assumes that volunteers from within the bushfire agency know how the key messages are ‘interpreted or actioned by the community’. Again there is the homogenous sense of ‘the community’, but here it is coupled with an assumption that the volunteers within the agency do actually know how the messaging is interpreted by residents. Such a system relies on the perception of volunteers rather than actual responses from groups within the target audience. It also overlooks the fact that volunteers themselves are unlikely to represent a full cross-section of residents in their locality, nor are they likely to come into contact with a full cross-section of residents in their locality. As specialist operators in the area of bushfire, they are not likely to be, in Akin and Freimuth’s (2013: 53) words, ‘the ‘average’ person’.

Clearly, there is substantial variation in the way that communications professionals describe the message development process within their agencies and departments. The research team found a similar breadth of variation in the descriptions provided of evaluative processes. Participants were asked whether or not there were formal systems in place to determine if messaging was reaching its intended audiences and having the desired effect. Again, there were a range of accounts from formal embedded processes, to a complete absence of formal evaluation procedures.

We invest between 10-20 per cent of our campaign budget each year in pre- and post-campaign research to measure the impact that they are having.

CRC TASST 01

[S]o we do pre- and post-campaign research on all our annual advertising just by way of benchmarking and making sure that we are actually getting the cut through.

CRC NSWST 07

[W]e don’t actually do any survey work or monitoring or research on before and after behavioural change type stuff...

CRC NSWST 10

Look, we don’t do any sort of quantitative analysis ... generally we find we’re too busy getting the stuff out to be monitoring it in that way ... That would be nice to be able to do it...

CRC WAST 08

The first two participants viewed research on the effectiveness of the campaigns as a central part of the campaign itself and the first respondent mentions that the money required for this is specifically set aside in the initial budget. According to our interviewees, however, this was not a

process replicated by all other organisations. At least two participants recounted no support for evaluation programs, despite the final respondent noting that it would be 'nice' to have the resources available to determine effectiveness. Much like a lack of consultation and collaboration in the message development stage, a lack of evaluative processes deprives the communications professional of important feedback about the efficacy of their campaign. It is extremely difficult to design and implement campaigns that are more effective in future, if there is no institutional support for formal evaluation procedures (Valente and Kwan 2013).

These accounts raise several issues. Firstly, they highlight the lack of consistency across organisations involved in bushfire safety campaigns. Some agencies and departments appeared to have well-resourced communications teams, while others were apparently left working practically on their own with little support. It is not surprising then, that there was also significant variation in attempts at audience engagement and campaign evaluation. This highlights the second important point, which is that some professionals reported that they were running campaigns with no formal evaluation procedures whatsoever. Such a situation should be of serious concern to bushfire agencies and other professionals working in the area of bushfire safety. Without proper evaluation procedures, public communications campaigns can simply be a waste of resources (Valente and Kwan 2013). Finally, when participants did speak of evaluation processes, these were generally taken to be testing before and after campaigns to determine whether or not residents in bushfire prone areas had encountered particular messages and if they could recall them. There was much less sense of genuine consultation with a variety of groups or the need to understand the context in which different demographic groups may make sense of key messages.

Understandings about diversity

When asked about the target audience for bushfire safety campaigns, several participants responded that the audience was essentially everyone living in bushfire prone areas. Unless prompted by the researcher, participants generally did not talk about segmentation or diversity within this broad target audience. As a result, the following responses around the theme of diversity generally arose after the researcher asked if the participant knew of any strategies to deal with diverse audiences, or if there were any elements of their campaigns designed to address diverse audiences or 'community diversity'.

There were three main ways that participants responded to these questions about audience diversity. The first was to deny that diversity was relevant (two participants). The second was to interpret diversity as referring to culturally and linguistically diverse (CALD) populations (eight participants). The third was to interpret diversity as dealing with 'vulnerable groups', usually identified as older residents or people living with disability (two participants). The first two of these themes will be considered in this chapter.

After the researcher raised the issue of diversity within the target audience, two participants suggested it was not an issue that required addressing, as the localities they were responsible for were not diverse:

I have to say ... that around [this locality] it's pretty Anglo still. There are not large numbers of non-English people, non-English speaking background, for example.

CRCVICST 01

We haven't put much emphasis on it [community diversity] because I mean Tasmania is pretty – it's not all that diverse. It really isn't. It's a very decentralised ... very small, small towns. Most of them aren't towns; you'd call them more villages. They're very – they're very much – they're not diverse communities.

CRCTASST 06

Both of these interviewees interpreted 'diversity' as relating only to cultural and linguistic diversity and then subsequently dismissed it. The example of Tasmania as not culturally or linguistically diverse is particularly interesting since so much of Tasmania is considered to be bushfire prone and hence that the target audience is often considered to be most of the state. Indeed, one of the other participants described 'the whole of Tassie' as bushfire prone with the exception of the inner metropolitan areas. He estimated that this means about '95 per cent of the land' and '85 per cent of the population' of Tasmania are living in bushfire prone areas and could therefore be deemed the target audience for bushfire safety communications (CRCTASST 01). The 2011 Census data from the Australian Bureau of Statistics (ABS), however, shows that almost 20 per cent of residents in Tasmania were born overseas and almost 10 per cent of residents had a language other than English spoken at home (ABS 2013). Therefore, there are clearly differences on the basis of cultural and linguistic diversity to take into account.

Indeed, the primary way in which the term 'community diversity' was interpreted by participants was as an issue of cultural or linguistic diversity. This point is raised in eight of the nine interviews. When asked how their relevant agencies and departments were dealing with this kind of diversity, the most common response from participants was that bushfire safety communications materials are translated into multiple languages.

We do advertising in different languages ... we've had some core material translated into 18 different languages. The [bushfire agency] do 32 different languages. We also run – we have the press and radio translate it into about 10 different languages.

CRCVICST 06

So we have a culturally and linguistically diverse program which largely focuses on making sure all materials are translated into 22 different languages across the state. We also have community spokespeople, translators that can be called to come in...

CRCVICST 10

Well everything's broadcast in English. On our website you've got the capacity to translate into one of a zillion other languages. I've never tried it. It's something I should probably do.

CRCWAST 08

For several participants, the only strategy for addressing diverse audiences was the translation of pre-existing materials. As mentioned earlier, this is an inadequate and relatively superficial way of attempting cross-cultural communication (Banks 2000). Direct translations from the original language may not be appropriate or accurately convey the intended meaning. This is especially a concern with automatic or machine translation, as is implied by the third respondent, where translations can be significantly different to the intended meaning and may even be misleading (Aiken and Balan 2011).

Three participants did mention taking further steps in attempting to use different *channels* for disseminating the translated messages to CALD groups and developing different messaging for CALD groups:

The cultural and linguistically diverse group, they have got connections with most not-for-profits, most advocacy groups, the advocacy networks, and they give them all the literature.

CRCVICST 10

[W]e particularly focus on culturally and linguistically diverse communities. We've done a lot of work with multicultural radio agencies here, the SBS, and we look at developing key messages and information that targets those groups.

CRCWAST 04

We've produced or we've assisted in the running of, I think it's two sort of broad-based community events where it's targeted at multicultural communities. That's a little different. That's about actually overcoming some fears that multicultural communities have about people in uniform.

CRCVICST 01

The first respondent mentions using specific channels to disseminate the original or translated material to CALD groups while the second and third respondents actually mention the development of specific messaging targeting CALD groups. While the second excerpt does not explain how the key messages are modified to be more appropriate for non-dominant cultural groups, the final quote does provide a concrete example of a more insightful understanding of potential cultural difference.

The third respondent mentions that his agency has been involved in running programs to help introduce uniformed personnel to recent migrants who may have come from radically different backgrounds. This was the only indication given in our interviews of an example where the messaging, content *and* channel chosen were adapted specifically to a non-dominant group. In this instance, with the recognition that basic understandings of the role and symbolism of government agencies may differ cross-culturally and that this needs to be taken into account in order to establish trust between residents and formal organisations promoting bushfire safety. This example is undoubtedly a step in the right direction from a social marketing perspective, but it was unfortunately an example that stood out as an exception to the standard practice described by the other participants, which suggests there is still a long way to go before understanding cultural and linguistic diversity is seen as more fundamental to effective messaging.

Summary

Communications professionals working in the area of bushfire safety face a difficult task. Like any attempt at social marketing, or communications for the public good, there are significant challenges in attaining attitudinal or behavioural change among target populations. Indeed, international research shows that the effectiveness of public communications campaigns is generally ‘modest at best’ (Devin and Foreman-Werne 2013). The effectiveness of campaigns can be limited by a variety of factors, from a lack of resources, to an absence of theoretical frameworks and modelling, or poorly conceived strategy (Atkin and Rice 2013). The task for communications practitioners working *within* bushfire agencies may be even more difficult given the quasi-military history and ‘command and control’ style operations of many bushfire-fighting organisations in Australia. Certainly, some of our participants noted that this history and organisational set-up could, at times, impede current attempts at community engagement. However, this research has identified several areas of concern where improvements could be made in terms of existing practice and increasing the effectiveness of campaign messaging.

The research detailed in this chapter has demonstrated that there is substantial variation in the ways in which communications professionals approach bushfire preparedness and safety campaigns. Accounts from our participants suggest that different organisations sometimes have drastically different processes and procedures for message development and evaluation. In some instances, in fact, there were no formal processes in place for either message development or evaluation, leaving communications practitioners with little guidance as to what would constitute effective messaging. It must be acknowledged by organisations working in this area, that without processes in place for these critical elements of public communication, campaigns may simply be a waste of resources (Atkin and Freimuth 2013; Valente and Kwan 2013). This research also shows that there are wide-ranging attitudes to incorporating audience diversity into bushfire safety campaigns. While almost all of the interviewees for this project interpreted ‘diversity’ in the same way – as differences in culture and language – very few could explain how this diversity might have an impact upon their campaign strategy. At this stage, it appears as though the translation of existing bushfire preparedness and safety materials is the most common strategy for addressing CALD groups, but this is a relatively superficial strategy and is unlikely to engage non-dominant cultural groups effectively (Banks 2000). While there were isolated examples of more thorough engagement with CALD groups, overall, the data suggests that there is still a lot

more that could be done to integrate approaches to audience segmentation and diversity in the area of bushfire safety and preparedness.

Implications

1. The lack of evaluation processes reported by some participants should be a serious concern for organisations involved in producing bushfire preparedness and safety messages, as without proper evaluation, campaigns may be a waste of resources.
2. Many communications professionals working in the area of bushfire safety require greater support from their organisations in order to produce effective and efficient campaigns.
3. An audience-centred approach to developing campaign messaging may help to increase the effectiveness of campaigns.
4. It is imperative that all communications practitioners in the area of bushfire safety are aware of the varieties of audience segmentation and understand that diversity needs to be taken into account with message design and dissemination.
5. The lack of uniformity in approach to bushfire preparedness and safety campaigns across fire agencies and government departments may lead to fragmented and inconsistent messaging.
6. Greater collaboration between agencies and across states would be useful in designing future campaigns.

Directions for future research

1. Research is urgently needed into audience segmentation among populations living in bushfire-prone areas of Australia. This could help to inform more targeted campaigns in future and may improve the effectiveness of bushfire preparedness and safety messages.
2. More independent research is needed into the current development and effectiveness of bushfire safety campaigns and how communications professionals in this area can be better supported by their organisations.
3. Further investigation into the changing remit of bushfire agencies and their approaches to communication may be valuable in understanding organisational and cultural hurdles to developing better community engagement programs.
4. Insights from research into public health programs (which are currently the dominant focus in social marketing literature) should be of use in bushfire preparedness and safety campaigns. Further research on this comparison could help to integrate international best practice into the area of bushfire safety.

References

- Aiken, M. and Balan, S. 2011. An Analysis of Google Translate Accuracy. *Translation Journal*, 16(2): n.p. <http://translationjournal.net/journal/56google.htm>
- Alderson, W. 1957. *Marketing Behavior and Executive Action: A functionalist approach to marketing theory*. Irwin: Homewood, IL.
- Andrulis, D., Siddiqui, N. and Ganter, J. 2007. Preparing Racially and Ethnically Diverse Communities for Public Health Emergencies. *Health Affairs*, 26(5): 1269-1279.
- Atkin, C. and Freimuth, N. 2013. Guidelines for Formative Evaluation Research in Campaign design. In Rice, R. and Atkin, C. *Public Communications Campaigns*. 4th edition. Sage: Thousand Oaks, CA.
- Atkin, C. and Rice, R. 2013. Theory and Principles of Public Communications Campaigns. In Rice, R. and Atkin, C. *Public Communications Campaigns*. 4th edition. Sage: Thousand Oaks, CA.
- Banks, S. 2000. *Multicultural Public Relations: A social interpretive approach*. 2nd edition. Iowa State University Press: Ames, IA.
- Bernays, E. 1928. [2005]. *Propaganda*. Ig Publishing: New York.
- Braun, V. and Clarke, V. 2006. Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2): 77-101.
- Carey, J. 1989. *Communication As Culture: Essays on media and society*. Routledge: London.
- Devin, B. and Foreman-Wernet, L. 2013. Sense-making Methodology as an Approach to Understanding and Designing for Campaign Audiences. In Rice, R. and Atkin, C. *Public Communications Campaigns*. 4th edition. Sage: Thousand Oaks, CA.
- Dewey, J. 1927. *The Public and its Problems*. Holt and Company: New York.
- Eadie, W. 2009. *21st Century Communication: A reference handbook*. Sage: London.
- Eisenman, D., Gilk, D., Gonzalez, L., Maranon, R., Zhou, Q., Tseng, C. and Asch, S. 2009. Improving Latino Disaster Preparedness Using Social Networks. *American Journal of Preventative Medicine*, 37(6): 512-517.
- Falkheimer, J. and Heide, M. 2006. Multicultural Crisis Communication: Towards a social constructivist perspective. *Journal of Contingencies and Crisis Management*, 14(4): 180-189.

- Gramsci, A. 1971. *Selections from the Prison Notebooks*. Ed. and trans. Q. Hoare and G.N. Smith. Lawrence & Wishart: London.
- Horkheimer, Max, and Theodor Adorno. 1944. *Philosophische Fragmente*. Social Studies Association: New York.
- Hornik, R. 2013. 'Why Can't We Sell Human Rights Like We Sell Soap?' In Rice, R. and Atkin, C. (eds) *Public Communications Campaigns*. 4th edition. Sage: Thousand Oaks, CA.
- Kotler, P. and Zaltman, G. 1971. Social Marketing: An approach to planned social change. *Journal of Marketing*, 36(2): 3-12.
- Lippman, W. 1922. *Public Opinion*. Harcourt, Brace: New York.
- Maibach, E., Roser-Renouf, C. and Leiserowitz, A. 2008. Communication and Marketing as Climate Change-Intervention Assets. *American Journal of Preventative Medicine*, 35(5): 488-500.
- Mees, B., Fairbrother, P., Akama, Y., Phillips, R. and Tyler, M. 2013. *Communication and Bushfire Preparedness*. Unpublished discussion paper. Centre for Sustainable Organisations and Work, RMIT University: Melbourne.
- Morley, D. 2005. Communication. In Bennett, T., Grossberg, L. and Morris, M. (eds) *New Keywords: A revised vocabulary of culture and society*. Blackwell: Oxford.
- Nepal, V., Banerjee, D., Perry, M. and Scott, D. 2012. Disaster Preparedness of Linguistically Isolated Populations: Practical issues for planners. *Health Promotion Practice*, 13(1): 265-271.
- O'Neill, P. 2004. *Developing a Risk Communication Model to Encourage Community Safety from Natural Hazards*. SES: Sydney.
http://www.ses.nsw.gov.au/content/documents/pdf/research-papers/42904/Developing_a_risk_communication_model.pdf
- Shannon, C. E., and Weaver, W. 1949. *The Mathematical Theory of Communication*. University of Illinois Press: Urbana, IL.
- Shaw, E. and Jones, D. 2005. A History of Schools of Marketing Thought. *Marketing Theory*, 5(3): 239-81.
- Valente, T. and Kwan, P. 2013. Evaluating Communication Campaigns. In Rice, R. and Atkin, C. *Public Communications Campaigns*. 4th edition. Sage: Thousand Oaks, CA.
- Voltmer, K. and Römmele, A. 2002. Information and Communication Campaigns: Linking theory to practice'. In Klingemann, H. and Römmele, A. (eds) *Public Information Campaigns and Opinion Research*. Sage: London.

Walsh, D., Rudd, R., Moeykens, B. and Moloney, T. 1993. Social Marketing for Public Health. *Health Affairs*, 12(2): 104-119.

Wiebe, G.D. 1951-52. Merchandising Commodities and Citizenship on Television. *Public Opinion Quarterly* 15(4): 679-691.

Williams, R. 1958. *Culture and Society, 1780-1950*. Chatto & Windus: London.

Chapter 5: The State and Bushfire

Climate change is increasing the likelihood of extreme weather events such as flooding and drought (van Aalst 2006). In Australia it is predicted that there will be more average number of days when the Forest Fire Danger Index is very high or extreme (Hennesy *et al.* 2006; Climate Council 2013).

Recent bushfires have caused losses of life, property, livestock as well as causing environmental damage to large areas of land. For example, in 2013 wildfires in New South Wales burnt over 1.4 million hectares (RFS 2013). Just over 200 homes were destroyed in Dunally, Tasmania, January 2013. More significantly the February 2009 Victorian bushfires killed 173 people and destroyed 2029 homes (AEMI n.d.). The subsequent Victorian Bushfires Royal Commission (Teague *et al.* 2010) drew attention, in part, to how state agencies communicate information and warnings about bushfires to the public.

In studying communication, it is necessary to explore the communication processes between agencies and the public in bushfire prone areas across Australia. The question asked by this chapter is how can we understand what state agencies do in response to bushfires? Using a framework developed in the course of the research based on 'Resilience', 'Responsibility', 'Authority' and 'Expectations' (RARE), helps to conceptualize the state's responses to natural disasters, and particularly bushfire.

Governments and Natural Disasters

Governments and their state agencies play varying roles in natural disasters. Strategies and policies are developed internationally, nationally and locally (see for example, UNISDR 2007; Forest Fire Management Group 2012; and FSC 2013 respectively). Governments act in response to natural disasters for different reasons. In their research on three natural disasters in the US, Trebilcock and Daniels (2006) refer to a range of perspectives/values with which to understand why and how governments intervene. For example, a corrective justice perspective relates to when a government provides legal redress in the case of negligence. Others have focussed on disasters and critical infrastructure and the role governments have in its maintenance. Here it is argued that growing interdependence and complexity of different systems such as utilities, telecommunications and food transport has increased their vulnerability to disruption from events including natural disasters (Boin and McConnell 2007; Edwards 2009). From the academic literature and other official sources evidence shows governments and their agencies attempt to alleviate the impacts of natural disasters and attempt to encourage the public to prepare more effectively. It is also clear that there are different and at times competing reasons informing these interventions.

The State and Bushfire

In Australia responsibility for bushfire prevention and management lies with the states and territories rather than with federal government. A way to set out the state's response to bushfire is legalistically. Bennett (2012) provides an overview of the provision of firefighting services in rural Australia from such a perspective. Bennett argues that while each State government have distinctive emergency management arrangements there are similarities. For example, statutory authorities responsible for rural fires are established by legislation. Volunteer brigades are constituted under a statutory authority and are organised by both group and regional structures. In addition, Acts detail landholders' responsibilities for fire prevention and suppression, which can be summed up as individuals should take 'reasonable care'. Setting agency's responsibilities in legal terms provides a basis to understand how particular state agencies function.

Other approaches provide different theoretical insights. For example, Pierides and Woodman (2012) focus on the 2009 Victorian bushfires to develop their object-orientated sociological theory and argue that focussing on organisational structures and processes tends to overlook actual objects and their place in a disaster and so produces a sociologically weakened account of events. Others have written about emergency management arrangements and levels of readiness among residents and officials as well as the response and recovery from a major bushfire (see Wettenhall's 1975 critical account of the Hobart, Tasmania 1967 fires). A natural and social history of Steels Creek, Victoria, which was an area burnt in the February 2009 bushfires describes accounts from residents affected by the fires and includes a robust critique of the so called 'stay or go' policy (Hansen and Griffiths 2012). The authors argue that encouraging people to stay and defend their properties was based in part on a skewed reading of data relating to deaths in previous large bushfires (in Hobart, 1967 and Ash Wednesday, 1983).

The work of Paul 't Hart and colleagues incorporates the role of the state and develops conceptual framework to understand the response to a range of different disasters crisis including bushfire. More specifically the authors interest is in leadership and the politics of crisis (see 't Hart 1993; Boin, McConnell and 't Hart 2008; Boin and 't Hart 2010). The following sections set out the development of a framework with which to evaluate and understand emergency management at a State level.

Methods and Approach

The data analysed here is drawn from a targeted series of interviews that formed part of the 'Effective Communication: Community and Bushfire Project'. In total 46 semi-structured qualitative interviews were conducted with agency personnel from 2010-2012. Participants were employed by fire services or land management agencies with fire management responsibilities. Participants were identified by a key respondent within agencies in New South Wales, Tasmania, Victoria and Western Australia. Most participants had previous fire fighting experience and their professional roles included: operations management, communications, and community engagement. This targeted data is complemented by data from participants living in bushfire

prone localities. These respondents comprised regional agency staff, volunteer fire fighters and those with no experience of fire fighting.

The interview data from the 46 agency participants were thematically analysed (Braun and Clarke 2006). Themes were developed from repeated reading of the interview transcripts with reference to a range of academic literatures including: sociology, political science, geography and emergency management. The next sections provide a summary of the research findings with example quotes followed by a discussion of the literature. The sequence reveals the analytic frame deployed in this research.

Resilience

There is a great deal of published academic material about resilience relating to a wide range of issues and across disciplines. Commentators have identified the early development of resilience theories in psychology (Garmezy 1971) and ecology (Holling 1973). In recent years resilience has been applied across a wider range of academic disciplines and policy problems such as health, sustainable development and natural disasters. Partly this widespread application of resilience has meant that scholars have struggled to formulate an agreed definition of resilience. For example, resilience has been understood as ‘a process of linking adaptive capacities to a favourable trajectory of functioning and adaption after a disturbance’ (Norris *et al.* 2008: 130). In contrast, others have suggested that the term refers to people’s capacity to access resources that reduce their vulnerability (Green *et al.* 2007). Our concern here is with bushfires.

As noted resilience is a term used by agencies and governments in policies and theories about natural hazards emergency management. Australia, for example, has a national disaster resilience strategy (COAG 2011) and states provide grants to promote disaster resilience (see Natural Disaster Resilience Grant Scheme, Victoria). Some scholars have argued that this usage in policy can be situated within a broader shift in emergency management thinking. According to McEvoy and colleagues (2013: 284) emergency planning approaches are currently characterised by ‘anticipating and planning for future change’ rather than a response oriented focus. Despite this change in emphasis, the authors concluded that the usage of resilience remains at a policy development level rather than at a practice level.

There is also evidence of more critical views of resilience. Nadasdy (2007: 216), for example, concerning resource management states that attention should be given to power relations within a social-ecological system as:

The more one has invested (ecologically, socially, or economically) in existing social-ecological relations and institutions the more one is likely to view ‘resilience’ as good.

Others have expressed concerns over the implications for citizens when they are called upon to be resilient. Reid (2012: 76), writing about development for example, argues that ultimately ‘[t]o be resilient is to forego the very power of resistance.’ The discourse of resilience, according to Reid, with its emphasis on adaptability and the accompanying acceptance of the inevitability of the ‘conditions of suffering’, renders subjects politically degraded in that they are no longer

expected to challenge or resist, rather the name of the game is adaption. Reid's complex argument also links sustainable development with neo-liberal economic arrangements. Here the promotion of ideas of self-reliance and community-based solutions mean that citizens are encouraged to look to themselves rather than to state-led solutions. For some this has negative consequences, as it turns public issues into private troubles (Shaw and Martin 2000: 407).

These approaches to resilience point to the complexity of the term, and draw attention to the ways in which we as practitioners need to be precise in the way that we develop the concept and apply it. Many participants from the study portrayed resilience as something that communities and people lack. Resilience was also often linked with self-reliance:

There are farming communities that have been dealing with fire. Generations have lived on the land there; that have been dealing with fire for generations. They're well informed, well equipped and in my view quite resilient. There are other communities that are populated by people that have only moved there in the last 12 months or two years, because the government's decided to set up a bit of a commuter type town on the fringes of an existing rural community. They are very vulnerable. Not used to living in the bush, they don't have any sort of social networks established in all possibility. They don't know the area, so they don't know where fire's likely to come from, how it's likely to behave, where they could flee too.

CRCTASST 01

This respondent cites both 'resilient' and 'vulnerability'. This juxtaposition is useful to consider in relation to Cannon and Müller-Mahn's (2010) contribution to the debate concerning climate change debates and development practices. The authors discuss some of the implications of the shift from vulnerability to resilience. They argue that 'vulnerability' explicitly points to socio-economic factors that hinder effective adaption to climate change. Conversely, a 'resilience' discourse tends to hide these material issues by overlooking power relations. Applying this to bushfires, it may be more helpful for agencies and policy makers to keep vulnerability and resilience together rather than accelerating the shift towards more adaptive approaches that may do little to address the underlying causes of disaster vulnerability.

Some participants implied that the public were too dependent on fire agencies because they needed to be told what to do during a bushfire often expressed as 'people are just waiting to be told to leave'. This creates a view that the public are passive recipients of agency information and interventions. Consequently, resilience needed to be 'done' to communities and this was officially recognised:

Well our charter is to build community resilience before, during and after a fire event. So we're meant to be developing all of the tools and processes to assist our volunteers to engage in their communities. So that they could prepare for a bushfire, then know how to respond, during a bushfire. That will help bring on the most, quickest recovery.

CRCNSWST 06

While there's an eclectic mix of business areas, the overall theme for our business areas is working with the regions and the community to enhance safety and improve resilience to natural disasters and other emergencies.

CRCWAST 01

While promoting resilience may appear to be a social good, participants also reported some disquiet:

I reckon that what we appear to be doing is telling more and instructing more and giving the community more. Our idea is to make them more self-reliant, but in fact that we're making them more reliant ... by giving them more stuff to say, well, yes, well this time you can expect a warning and this time we still say don't expect a fire truck. But it plays around with the regular folks' heads – what they can really expect. So I think that probably – push comes to shove – people will expect that they'll be looked after by fire agencies during fires, despite the fact that they're told they won't. That's my personal opinion.

CRCVICST 04

The role of agencies in promoting or hindering resilience is an area that requires more investigation. Some work has been done that indicates that a communities lack trust in relation to agencies, which in turn throws them back on to their experience and resources (see Chapter 3). Additionally, the way in which emergency management arrangements and agencies develop may also impact of levels of resilience. As Leonard and Howitt (2010) note, historically fire-fighting in remote areas was, until fairly recently, decentralised. Community members were dependent on their own skills and experience or lack of and because of communication and technological limitations, sharing or receiving additional firefighting capacity was difficult. Therefore the question raised here is do centralised arrangements hinder or promote resilience at a local level? This brings us to the question of authority.

Authority

Recently, with reference to the history of authority, Furedi (2013) argues that there is a modern dilemma around authority. On the one hand people want authoritative answers to problems (inquiries into bushfires for example) and they want to know who is in authority. Yet on the other, there is a steady stream of exposés of police, military, politicians, religious leaders and

others for abusing their positions of authority. Given this tension, it is necessary to disentangle the ways in which the idea is used both in relation to conceptual development as well as in relation to practice.

A number of narratives concerning authority manifested as descriptions of emergency management arrangements are set out in policy and legislation. One such example is provided by four agencies each of which have overlapping responsibilities to deal with bushfires.

NSW Rural Fire Service:

Bush fires are a natural part of the Australian environment and occur regularly, but many people fail to prepare for them.

When threatened by bush fires, people will often leave it too late to make critical decisions and often have few safe options left.

That's why you need to **PREPARE. ACT. SURVIVE.** (NSW Rural Fire Service. 2014)

Fire and Rescue, NSW:

Our purpose is to enhance community safety, quality of life and confidence by minimising the impact of hazards and emergency incidents on the people, environment and economy of NSW.

This is achieved through delivering the following services to the community:

- Our highly skilled firefighters use their expertise and experience to educate others in preventing or preparing for emergencies
- Our firefighters, community fire unit members and support staff provide rapid, reliable help in emergencies – 24 hours a day, 7 days a week
- Our firefighters protect 90% of the State's population from emergencies involving fire, motor vehicle accidents and other dangerous situations
- We protect 100% of the State's 6,803,00 people from hazardous material emergencies and building collapse
- We provide counter-terrorism consequence management for 100% of the State
- We save lives and reduce the number of injuries caused by these emergencies
- We minimise damage to the environment by treating chemical, biological or radiological releases on land and inland waters
- We minimise damage to property and the State's economy and protect community infrastructure valued at over \$1,400 billion
- In partnership with the community and the other emergency services, we plan and train for the emergencies we all hope will never happen (NSW Fire and Rescue 2014).

NSW National Parks and Wildlife Service:

During periods of fire and flood, full and partial park closures are put in place in NSW national parks and reserves to protect you, our parks and neighbouring properties.

Before visiting, be sure to have the most up-to-date information on fires, floods and park closures. And for your safety and those in your care, check the local weather so that you have the appropriate clothing and equipment for a safe and comfortable journey in NSW national parks (NSW National Parks 2014).

And on 'Safety':

It's important to remember that our parks are natural environments and can be unpredictable. You'll always be welcome to contact individual park offices for information on park safety and weather conditions – but, generally, a bit of planning and foresight makes all the difference (NSW National Parks 2014).

Forestry Corporation, NSW:

Forestry Corporation of NSW is acutely aware of the potential dangers of working in and around forests and is firmly committed to a zero harm safety record. This applies to all our Forestry Corporation of NSW employees, contractors, customers, volunteers, stakeholders and the general public who use the forests for recreation.

Forestry Corporation of NSW and WorkCover NSW have developed a joint safety tool that provides guidelines to minimise incidents. People using the forests can be assured that all is being done to reduce any potential risks to you and your family (NSW State Forests 2014).

While there are common features to these public pronouncements, it is also the case that there are specific sets of guidance, reflecting the specific remit and history of each authority. To illustrate, the NSW Rural Fire Service has a history going back to 1900 and an approach that rests on volunteers. Likewise the other bodies apart from the Forestry Corporation have volunteer groups incorporated into their defensive hazard arrangements.

These overlapping relations and the implicit tensions they project are evident in the ways that participants experience attempts to implement ways of managing fires:

There are four recognised fire authorities in NSW. They are National Parks and Wildlife, State Forests, Fire and Rescue NSW – which is the urban service – and the Rural Fire Service. They're all recognised as firefighting authorities under the Rural Fires Act. So everybody does their own thing until such time as we start to get significant fires. What happens then is that when a fire gets to a stage where either in the opinion of the Commissioner, or the opinion of the locals managing it outside of their – they can't control it from their internal resources anymore – the Commissioner basically takes charge of that fire, irrespective of whether it's with a National Parks or an urban fire service or

whatever, the Commissioner of the Rural Fire Service takes charge. What happens is the Commissioner then appoints someone to discharge his responsibilities of managing that fire.

CRCNSWST 01

There is in effect a cacophony of responsibility that is left to those who live and work in localities that can often involve more than one agency or where agency responsibilities can be blurred (as in the peri-urban spaces now common to all major Australian cities). Then there are more complications when agencies begin implementing new practices or changing communication campaigns to reflect changes, such as after the 2009 Victorian bushfires. Such developments can be uneven and non-consistent, in relation to who is responsible for what and how.

These accounts echo elements of Weber's ([1918] 1972: 78-79) observation that authority in modern societies was increasingly exercised on the basis of legal authority. As Bulkeley (2012) notes, authority has been described as a capacity derived from the coupling of power and legitimacy. Even so, it is necessary to address the boundary questions of coverage and responsibility as well as the capacity to deal with events in a consistent and comprehensible way, at least for those who live and work in localities in relation to bushfire and like hazards.

A further dimension complicates these relations when it is noted that fire agencies have a militaristic background and so developed particular approaches to the question of authority, as distinct from control. As one agency interviewee observed:

I'm trying to bring about some organisational change and cultural change ourselves. Because the traditional environment is it's a quasi-military structure, very strong authority gradient, very much about command and control in information going up and down the line and being approved.

CRCNSWST 10

But this focus can become one dimensional in the modern era. Contemporary scholars have identified other types of authority, which provide further insight into the state's response to bushfire. Dean (2007: 37), for example, suggests 'authority of expertise'.

The idea of expertise is applicable to bushfire and natural hazard management, particularly in relation to agency personnel who draw on their knowledge and experience of fire management. Expertise is important to consider as a feature of authority. Some participants reported working with communities using different approaches that questioned previously held assumptions about authority and expert knowledge:

[W]e're trying to get away from this whole idea of us being the experts and the authority and telling people what we're doing. We want to have a dialogue. We might not –

obviously we're bound by certain policies, we have to carry out certain procedures, but there's a hell of a lot that can be negotiated. In the past, that doesn't seem to have been explored ... so what we're trying to do is... change the organisation rather than changing the people, because we believe that one comes before the other.

CRCVICST 05

Building on from this observation, the principal rural fire fighting agency in Victoria, the CFA, is a volunteer-based emergency organisation although the organisational form of the CFA is a military one (Murray and White 1995; Hamilton and Toh 2010). It comprises over 1,500 professional staff and more than 59,000 volunteers, based in towns and rural localities across the State (CFA 2011). The volunteer force is integrated into the overall structure via a military form of organisation, which theoretically raises a tension between command and discretion. In the main, discretion is subordinated to command and control (Hamilton and Toh, 2010).

Questions relating to authority are complex. They draw attention to the way fire agencies organise, the formal responsibilities and the way they are exercised, the overlapping arrangements between different emergency services and the processes of organisation and operational activity by these agencies. Overall, these practices rest on assumptions about the relationships that characterise agencies and the localities in which they operate. Although some agency personnel are promoting a different way of working with the public, agencies have certain legal responsibilities that may constrain their ability to consider other approaches.

Responsibility

The question of responsibility in the event of a disaster has long been a matter of concern for governments, agencies and citizens. In relation to bushfire two dimensions are evident. First, there is an assumption that agencies concerned with bushfire have responsibilities to prepare for and respond to emergencies. Second, there is an implication that citizens and those exposed to bushfire risk also have responsibilities, although until the 1990s this tended to be as relatively passive participants who would receive support in the event of an emergency. Increasingly these two aspects have been brought together under the idea of shared responsibility, clearly articulated by the 2009 Victorian Bushfires Royal Commission (Teague *et al.* 2010; for a history of these developments, see McLennan and Handmer 2014).

An analysis of the Commission's findings about responsibility argued that it represented a shift from the previous onus on self-reliance towards an increased responsibility for government and fire agencies (McLennan and Handmer 2012). Others have argued that shared responsibility was recognised at least since 2004 (Eburn 2012) as expressed in the national review of bushfire prevention and management (Ellis 2004). However, shared responsibility is not a recent idea.

According to the inquiry into the 1939 fires in Victoria it was the widespread irresponsible use of fire by groups and individuals that led to the destruction and loss of life (Stretton 1939). In addition, newspaper articles from the 1940s state that the *whole* community should be involved in

fire prevention not just the fire fighting forces (*Kilmore Free Press* 29 Nov. 1945: 4) and called for increased levels of carefulness around the use of fire (*Advocate* 5 Dec. 1945: 2).

Against this background, and in relation to the question of Authority, the focus here is on agency personnel, as key articulators of the notion of shared responsibility. When asked about shared responsibility, a number of participants provided descriptions of bushfire management arrangements. The following quote is typical:

The responsibility for fire suppression throughout the State actually rests with the TFS. Both the Parks and Wildlife Service and Forestry Tasmania are essentially considered to be land owners for the purposes of the Fire Service Act, but because neither PWS or FT pay a fire service levy ... we are not entitled to fire protection services from TFS volunteer brigades. As prudent land owners, land managers we have a fire suppression capability to guard our property, our resource ... Under our protocol ... we have an agreement with the PWS and TFS that the nearest and best able respondent will respond to a fire report irrespective of land tenure and commence initial fire suppression work. We have a resource sharing agreement with those two agencies and so although Forestry Tasmania is a government business enterprise and essentially being run as a government owned for-profit corporation; we still undertake quite a large amount of what we call community service obligation.

CRCTASST 02

It was unsurprising that participants' accounts reflected the sentiments from the Victorian Bushfires Royal Commission findings about 'shared responsibility' and participants readily stated that the public had a responsibility to be prepared for bushfire:

To mitigate bushfire threat it has to be a joint community, fighting agency, even broader community commitment strategy. It can't be just reliant on one or the other. That's the key to it, you know. There is reliance on the fire agencies to make sure we do a lot of the mitigation work. We do the community engagement program so they're the relying on the community to actually prepare their homes, to prepare a bushfire survival plan.

CRCNSWST 05

We have different responsibilities for different things. We have responsibility – I think the government has a responsibility to manage public land and we have a responsibility to communicate with the people and prepare, and we have responsibility to deliver as best service as we can and commit and provide as much service as we can. I think communities have responsibility to do what they can. I think we all have a responsibility to do our best, but there's no, how much? There's not 50, 40, 30, and there's no – it's not equal. But there is absolutely no way that CFA can manage – or any fire service in any capacity with any resources – can manage a bushfire if people don't also look after themselves. We cannot

save everyone and we never will. It is just not possible. So it's not necessarily as much – you can look at it as a philosophical question of responsibility, but in the end it's a survival question. If you want to survive, you have to take responsibility for yourself to some degree, because you will be on your own, most likely.

CRCVICST 03

However, some participants raised some conceptual difficulties regarding what was meant by shared responsibility:

The whole issue of shared responsibility is a difficult one because what's never been articulated is what does it actually mean? That's been a gap in the communication with the broader community. We go out and talk about this as a shared responsibility, we don't actually explain what that means.

CRCVICST 01

Rather than a shift in responsibility, it would appear that the findings from the Royal Commission relate to a specificity of responsibility. It is not surprising that agencies have particular responsibilities given their resources. However, responsibilities are discharged by individual's actions and this is reflected in some of the interviews:

You always ask yourself am I going to be good enough for this? Will I be able to respond in time? Will I keep people safe? It's a big thing ... people have to put their hand up to help in this role; it's two-way. People have to prepare ... That's that shared responsibility that we need- people like me with that other experience need to step up, but it's fragile. If a lot of people get matted [criticized], people will just go away.

CRCWAST 10

Thus, the idea of responsibility is both a subjective attribute as well as a sentiment that is promoted via the agencies.

The dilemmas revealed here underwrite the ways in which agency personnel are caught in a tension between defining shared responsibility, breaking with past views of the role and place of citizens and others based in localities in relation to preparation and response, and developing a process of implementing a comprehensive and mutually shared understanding of shared responsibility (on the relational limits to such processes, see McLennan and Handmer 2014). The critical and unresolved feature of shared responsibility is that it is articulated in the context of complex and unresolved power relations, between agency personnel and citizens, between agency personnel and the volunteer firefighting staff in localities, all volunteers, and between agency personnel and governments. The outcome is a situation where the promotion of shared responsibility comes up against the expectations held by those who live in localities that may be threatened by bushfire.

Expectations

The expectations that those in localities have of emergency services are largely unknown and often assumed in practice. According to Tingle (2012: 27) writing broadly about citizen's views of government: 'A strong expectation that governments would ultimately look after us and provide us with work had firmly taken root...' Citizens do not know what they expect of government or politicians, and this may be extended to services more generally. But, equally those in providing services also have views about what is expected of them.

Most participants reported that the public had high expectations of fire management agencies. Expectations were portrayed as problematic and participants reported that it was particularly difficult for agencies to meet public expectations. Examples of high expectations were that people assumed that fire fighters would attend to their property during a wildfire (expressed as 'they expect a fire truck') and that people wanted warnings to include precise information about the location of the fire. Research conducted in the UK about expectations of public services suggests that 'the provision of information about excellent performance raises positive expectations of what performance will be and information about poor performance lowers these expectations provided by public services' (James 2011: 1431).

Three narratives accounted for public expectations. First, external change, in that something was different about modern society that meant people were too reliant on the state:

'There's now an expectation that the state will look after me which wasn't there, certainly when I was a younger person. I wasn't expecting the state to provide for me.

CRCVICST 01

However, according to Tingle's (2012) essay concerning expectations in Australia, an assumption that governments would provide had actually been ingrained from the time of European settlement. But, with the advent of social media these expectations have taken on a new force. As noted:

I think that the news cycle and the change in expectations around new media and social media and just the increased accessibility of your smart phones and stuff like that, is people's expectations have just completely changed.

CRCNSWST 10

And, these expectations are changing with the social demographics of sea/tree-change localities:

I think we really do have significant challenges in meeting community expectations in terms of the provision of emergency services. I think with the way that the demographics are, people are moving out of more urban areas through sea change and tree change and all that. Coming with a lot of different ideas about how the world works. We have significant challenges in understanding where people are coming from but where they understand their own local environment, what their expectations are when emergencies occur and us meeting

those. Because that ranges from you should have had a fire truck at every house basically to why wasn't I told everything that's going on as well. So there's a whole range of different areas where people's expectations are. We talk about the community's expectation but that seems to be the sum of about a million different [laughs] expectations. It's really difficult for an organisation to meet that. We're constantly – we're pouring resources into all this work that we're doing. I'm not saying we're unsuccessful with it but it is a massive challenge I reckon.

CRCNSWST 08

Second, internal change, where participants argued that the practices of the agency needed to change or have changed:

So, I think the amount of communication that we do and the timing of that is becoming more critical and the expectations that we deliver are becoming more critical. If we don't, the vulnerability of us being exposed to liability if we don't communicate things well.

CRCWAST 06

What I think has changed though is incident controllers are also more aware about the need for public information, so that's impacted on the demand for us ... the incident controller has said 'I want information out to the community, and I want them to know what they need to do'.

CRCWAST 04

Finally, high expectations were explained as being a comparative feature of urban living in that people in rural areas were less likely to share these expectations:

Look, I think it's a city thing, predominately a city thing but certainly as people move from the city and you've got the tree changes or the sea changes they tend to expect the same amount of service they get in the city in the country.

CRCVICST 02

I think people in the more rural areas are probably more accustomed to it and might not have as high an expectation that there would be a truck. But I suppose we do see it more so in the urban interface areas.

CRCNSWST 07

Nonetheless governments and agencies are sensitive to public expectations:

Australians expect their governments at all levels to do their best to ensure that their communities are as well protected from emergencies as is reasonably possible, and that ... communities are well served by effective response, relief and recovery arrangements' (Commonwealth of Australia 2009: 4).

Despite the above claims, there is limited evidence that public expectations of Australian fire agencies are being met. A general sense of what the public think about government and the public sector is provided by Bean and Denemark (2007) who argued that overall the public's less positive view of the public services can be characterised as moderate. To understand the non-mutuality of responsibility in relation to bushfire, it is thus necessary to understand the expectations of emergency services help by the populace more generally.

Summary

The focus has been to conceptualise how the state responds to bushfire through prevention and suppression efforts. Some existing work in this area has been from a legalistic perspective that is less likely to account for socially negotiated aspects such as expectations. Other attempts related to large fires when the State's response was less evolved compared to contemporary emergency management arrangements. It is argued here that using the ideas of Resilience, Authority, Responsibility and Expectations provides an integrated framework to understand the state's response to natural disasters. Each theme highlights a complex set of debates that inform our understanding of how agencies promote bushfire safety. Governments and their agencies should not decouple vulnerability from resilience as promoting the latter without addressing the former may have negative consequences as illustrated by the intractable problems of shared responsibility and the difficulty of meeting expectations.

Implications

1. Consideration should be given to how agency personnel understand their roles and organisations. Without such reflections it is difficult to see how such personnel can move forward to address the complexity of shared responsibility or take steps to shape expectations in realistic ways
2. The RARE framework provides a way of beginning to understand perceptions and understandings of emergency services and related activity. This approach enables an assessment of the extent to which the concerns of agency personnel are reflected by those living in bushfire-prone communities across Australia.

Directions for further research

1. In view of the complex relations defining emergency bushfire services, it is necessary to develop a theory of authority that fits with current brigade practices both at a state and regional level including volunteer brigades.
2. There should be an exploration of the idea of the resilient citizen and what implications this might have for disaster preparation and response.
3. There is an urgent need for research on the public's expectations of fire and related agencies and to what extent this might influence what agencies do? And why?

References

Aalst, M.K. van. 2006. The Impacts of Climate Change on the Risk of Natural Disasters. *Disasters*, 30(1): 5-18.

Advocate 1945. Public Co-operation in Fire Prevention. 5 Dec.: 2.

AEMI (n.d.) Knowledge Hub. <http://www.emknowledge.gov.au/disaster-information/>

Bean, C. and Denemark, D. 2007. Citizenship, Participation, Efficacy and Trust in Australia. In Denemark, D., Meagher, G., Wilson, S. Western, M. and Phillips, T. (eds) *Australian Social Attitudes 2: Citizenship, work and aspirations*. UNSW Press: Sydney.

Bennett, J. 2012. Private and Public Provision of Firefighting Services in Rural Australia. In Lueck, D. and Bradshaw, K. (eds) *Wildfire Policy: Law and economics perspectives*. RFF Press: Hoboken, NJ.

Boin, A. and 't Hart, P. 2010. Organising for Effective Emergency Management: Lessons from research. *Australian Journal of Public Administration*, 69(4): 357-371.

Boin, A. and McConnell, A. 2007. Preparing for Critical Infrastructure Breakdowns: The limits of crisis management and the need for resilience. *Journal of Contingencies and Crisis Management*, 15(1): 50-59.

Boin, R.A., McConnell, A. and 't Hart, P. (eds) 2008. *Governing After Crisis: The politics of investigation, accountability and learning*. Cambridge University Press: Cambridge.

Braun, V. and Clarke, V. 2006. Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2): 77-101.

Bulkeley, H. 2012. Governance and the Geography of Authority: Modalities of authorisation and the transnational governing of climate change. *Environment and Planning A*, 44: 2428-2444.

Cannon, T. and Müller-Mahn, D. 2010. Vulnerability, Resilience and Development Discourses in Context of Climate Change. *Natural Hazards* 55(3): 621-635.

Climate Council. 2013. Angry Summer 2013/2014. <http://www.climatecouncil.org.au/angry-summer>

COAG 2011. *National Strategy for Disaster Resilience: Building our nation's resilience to disasters*. COAG: Canberra.

Commonwealth of Australia. 2009. *Australian Emergency Management Arrangements*. Attorney-General's Department: Canberra.

CFA 2011. About CFA. <http://www.cfa.vic.gov.au/about/index.htm>

Dean, M. 2007. *Governing Societies: Political perspectives on domestic and international rule*. Open University Press: Berkshire.

Eburn, M. 2012. Sharing Responsibility and Community Resilience: The role of the law in converting policy to action. In Clarke, M. and Griffin, G. (eds) *Next Generation Disaster and Security Management*. Collaborative Publications: Sydney.

Edwards, C. 2009. *Resilient Nation*. Demos: London.

Ellis, S., Kanowski, P. and Whelan, R. 2004. *National Inquiry on Bushfire Mitigation and Management*. Commonwealth of Australia: Canberra.

Forest Fire Management Group 2012. *National Bushfire Management Policy Statement for Forests and Rangelands*. COAG: Canberra.

Furedi, F. 2013. *Authority: A sociological history*. Cambridge University Press: Cambridge.

FSC. 2013. *Bushfire Safety Policy Framework: September 2013*. FSC: Melbourne. <http://fire-com-live-wp.s3.amazonaws.com/wp-content/uploads/2013-Bushfire-Safety-Policy-Framework.pdf>.

Garmezy, N. 1971. Vulnerability Research and the Issue of Primary Prevention. *American Journal of Orthopsychiatry*, 41: 101-116.

Green, J., Kleiner, A. and Montgomery, J. 2007. The Texture of Local Disaster Response: Service providers' views following Hurricane Katrina. *Southern Rural Sociology*, 22(2): 28-44.

Hamilton, A. and K. Toh. 2010. A Review of Emergency Organisations: The need for a theoretical framework. *International Journal of Emergency Management*, 7(2): 111-123.

Hansen, C. and Griffiths, T. 2012. *Living With Fire: People, nature and history in Steels Creek*. CSIRO Publishing: Melbourne.

Hart, P. 't. 1993. Symbols, Rituals and Power: The Lost Dimension in Crisis. *Journal of Contingencies and Crisis Management*, 1(1): 36-50.

Hennessy, K., Lucas, C., Nicholls, N., Bathols, J., Suppiah, R., and Ricketts, J. 2006. *Climate Change Impacts on Fire-weather in South-east Australia*. CSIRO: Melbourne.

Holling, C.S. 1973. Resilience and Stability of Ecological Systems. *Annual Review of Ecological Systems*, 4: 1-23.

Kilmore Free Press 1945. Bushfire Prevention Week. 29 Nov.: 4.

- James, O. 2011. Managing Citizens' Expectations of Public Service Performance: Evidence from observation and experimentation in local government. *Public Administration*, 89(4): 1419-1435.
- Leonard, H.B. and Howitt, A.M. 2010. Organising Response to Extreme Emergencies: The Victorian Bushfires of 2009. *Australian Journal of Public Administration*, 69(4): 372-386.
- McEvoy, D., Hartmut, F. and Bosomworth, K. 2013. Resilience and Climate Change Adaption: The importance of framing. *Planning Practice and Research*, 28(3): 280-293.
- McLennan, B. J. and Handmer, J. 2012. Reframing Responsibility-sharing for Bushfire Risk Management in Australia after Black Saturday. *Environmental Hazards*, 11(1): 1-15.
- McLennan, B. and Handmer, J. 2014. *Sharing Responsibility in Australian Disaster Management: Final report for the Sharing Responsibility Project*. Bushfire CRC: Melbourne.
- Murray, R. and K. White. 1995. *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*. Hargreen Publishing: Melbourne.
- Nadasz, P. 2007. Adaptive Co-Management and the Gospel of Resilience. In Armitage, D., Berkes, F. and Doubleday, N. (ed.) *Adaptive Co-Management: Collaboration, Learning and Multilevel Governance*. University of British Columbia Press: Vancouver.
- NSW Fire and Rescue 2014. Our Purpose.
<https://www.fire.nsw.gov.au/page.php?id=139>
- NSW State Forests 2014. About Us. <http://www.forestrycorporation.com.au/about#safe-forests>
- NSW National Parks and Wildlife Service. 2014. Safety.
<http://www.nationalparks.nsw.gov.au/safety>
- Norris, F.H., Stevens, S.P., Pfefferbaum, B., Wyche, K.F., and Pfefferbaum, R.L. 2008. Community Resilience as a Metaphor, Theory, Set of Capacities and Strategy for Disaster Readiness. *American Journal of Community Psychology*, 41(1-2): 127-150.
- Pierides, D. and Woodman, D. 2012. Object-oriented Sociology and Organizing in the Face of Emergency: Bruno Latour, Graham Harman and the material turn. *British Journal of Sociology*, 63(4): 662-679.
- Reid, J. 2012. The Disastrous and Politically Debased Subject of Resilience. *Development Dialogue*, 58: 67-79.
- RFS. 2013. End to One of the Worst Fire Seasons in Recent Times.
http://www.rfs.nsw.gov.au/file_system/attachments/State08/Attachment_20130403_04D06D06.pdf

RFS. 2014. Prepare. Act. Survive. For bushfire season. http://www.rfs.nsw.gov.au/dsp_content.cfm?cat_id=2709

Rutter, M. 1987. Psychosocial Resilience and Protective Mechanisms. *American Journal of Orthopsychiatry*, 57(3): 316-331.

Shaw, M. and Martin, I. 2000. Community Work, Citizenship and Democracy: Re- making the connections. *Community Development Journal*, 35(4): 401-413.

Stretton, L.E.B. 1939. *Report of the Royal Commission to Inquire into the Causes of and Measures Taken to Prevent the Bushfires of January, 1939, and to Protect Life and Property and the Measures to be Taken to Prevent Bushfires in Victoria and to Protect Life and Property in the Event of Future Bushfires*. Government Printer: Melbourne.

Teague, B., McLeod, R., Pascoe, S. 2010. *2009 Victorian Bushfires Royal Commission: Final Report*. Government Printer: State of Victoria: Melbourne.

Tingle, L. 2012. Great Expectations: Government, entitlement and an angry nation. *Quarterly Essay* 46: 1-65.

UNISDR 2007. *Hyogo Framework for Action 2005–2015: Building the resilience of nations and communities to disasters. Extract from the final report of the World Conference on Disaster Reduction*. United Nations: Geneva.

Weber, M. 1972. [1918] Politics as a Vocation. In Gerth, H.H. and Mills, C.W. (eds) *From Max Weber*. Routledge: London.

Wettenhall, R.L. 1975. *Bushfire Disaster: An Australian community in crisis*. Angus & Robertson: Sydney.

Chapter 6: The Importance of ‘Community’

This chapter is concerned with how participants articulate their understandings of community. (For a discussion of the theoretical debates, see Chapter 2). Usually academic discussions on community highlight the contested nature of defining the concept. Commentators often then proceed with a description of community in terms of three aspects: place; interest; and identity. However, the contested nature of community has been questioned. To illustrate, Taksa (2000) argues that there is a commonality in debates concerning the loss of community in that many argue that ‘community’s recovery’ should be based on unity and harmony. In taking a more critical view about community, we argue that this view obscures the differences and divisions that often mark communities and so perpetuates social inequalities.

The argument here is that an understanding of bushfire preparedness and disaster recovery requires a consideration of community, as complex social arrangements involving inequality and diversity as well as cohesiveness and unity. Evidence points to the ways in which populations live in fragmented communities, at least socially. These features may involve a range of characteristics such as age, gender, occupation, and place of residence. Indeed, such features of community life have implications for the ways in which agencies and others address questions about bushfire. These are the themes explored here.

Community

Communities are dynamic; a characteristic that is often missing in conceptualisations of community in disaster management literature (Mulligan 2013: 281). In this chapter, the starting point for considering the concept of community is from Calhoun (1980: 107) who argues that community is both ‘a complex of social relationships’ and an ‘a complex of ideas and sentiments’.

Ideas about community based on uniformity are common. Nonetheless, some scholars criticise the conceptualisation of community and philosophical underpinnings for its tendency to privilege unity, agreement and communion and in so doing marginalise and hide difference (Secomb 2000; Diprose 2003). Others critique the idealised conceptualisation of community which favours face-to-face relations based on small decentralised groups of people (Young 1986/2001). As Brent (2004: 217) notes ‘face-to-face can mean eye-ball to eye-ball’ and as other research has indicated, Australians are living in increasingly fragmented communities based on interest rather than locality (Hughes *et al.* 2007).

These aspects are relevant to bushfire communications and are also reflected in agencies’ practices. Following the Royal Commission into the February 2009 Victorian bushfires there were recommendations for fire agencies to produce more tailored information (Teague *et al.* 2010). In addition, fire agencies produce communication materials aimed at different communities of interest, such as farmers and horse owners, but also encourage small groups to

organise themselves in programs, such as Community Fireguard (CFG) in Victoria. Yet such approaches involve greater costs and more sophisticated approaches in relation to subject and audience. In short, agencies need to know more about the residents in bushfire prone areas. This raises questions about the nature of the information required and the capacities of fire agencies facing budget restraints to collate and analyse such data. In this context, government agencies often view communities as ‘things’ that can be measured and ‘treated’ in some way to achieve a certain goal such as increasing bushfire readiness. Such practices should be scrutinised.

Scholars interested in analysing power and politics have examined the rise of community programs aimed at a range of social issues. Rose (1999: 176) argues that ‘government through community’ occurs when:

in the institution of community, a sector is brought into existence whose vectors and forces can be mobilized, enrolled, deployed in novel programs and techniques and identity construction, of personal ethics and collective allegiances.

In this context, communities are subjected to a range of measurements with which ‘community professionals’ can explain and interpret a community. Rose argues that ‘community’ became subject to this form of governing partly through a reconceptualization of the remaining ‘space’ left by the state and the markets. As Rose notes, this way of governing should not be viewed as naturally occurring, but rather was constructed through particular forms of economic, political and social policies, and ideologies.

One way to understand the idea of ‘government through community’ is to examine what groups of people do. For Calhoun (1980: 110) actions are the distinctive characteristic of a community as:

People may feel that they belong in a wide variety of social contexts, but these self-identifications do not always modify their action, let alone produce collective action.

Moreover, this observation points to the two way relationship that underpins agencies and communities. The question then becomes how do communities address bushfire risk and what is the place of agencies in this process.

Community and Bushfire Readiness

The view of ‘community’ as unified and cohesive informs policy. This focus is illustrated in a recent *Sydney Morning Herald* editorial entitled ‘Bushfire Disaster Reminds Us We Are One Community’ where bushfires are claimed to ‘remind us that we are a community, with a need to help each other, and that our communities do rally when natural disaster threatens’ (*Sydney Morning Herald* 2013). This surge in collective cooperation during times of crisis has been termed ‘communitas’ by Turner (1985), although as other scholars have highlighted this collective

activity is usually short-lived (Moore *et al.* 2004). Other examples of appropriating 'community' in this way include official and academic publications.

The idea of 'community' is central to bushfire preparedness and disaster recovery (Jakes *et al.* 2007). In Australia, the Victorian Bushfires Royal Commission stressed that responsibility for bushfire safety should be shared (but not equally) between the 'State, local government, individuals, household members and the broader community' (Teague *et al.* 2010: 6). Webber and Jones (2012) describe how community development approaches have been used in the recovery from the Victorian 2009 bushfires. According to Elsworth and colleagues (2009), invoking 'community' in the emergency management literature was influenced partly by community safety approaches which assume that communities can be engaged and empowered to examine their risk of bushfire and to devise solutions to manage this risk. Consequently fire agencies have been trying to work more effectively through education, awareness and engagement programs to promote network and capacity building within communities (Fairbrother *et al.* 2013).

Several points can be made about the existing literature about community in relation to emergency management, natural hazards and bushfires in Australia. First, community is not confined to political or administrative boundaries (Buckle, 1999). Further, there have been various attempts to define community beyond 'a merely local place' (Goodsell *et al.* 2011) as well as cautions about assuming community and place synonymously (Clark 1973; Brent 2004). Place does appear, however, to be a salient factor when thinking about bushfire management and processes of recovery (Cox and Holmes 2000). Other observations about the role of place in the context of bushfires can be made. Cottrell (2005), for example, suggests that a broad understanding of 'community' is relevant and argues that geographical location is a relevant factor as it influenced the types of hazards to which people are exposed. The conclusion offered is for an acknowledgement that each 'community' is different and that service providers should understand this feature. Research concerning the relation between social capital and disaster preparation also suggests a positive association with the sense of belonging to a place (Jakes *et al.* 2007). Finally, volunteer brigades are located and named after specific places and most volunteer fire fighters reside in close proximity to the local brigade headquarters in order to respond to any emergency. So, their physical connection to a place is a feature of being part of a brigade.

Individuals may belong to different communities that may or may not be related to one another and Buckle (1999: 23) suggests that mapping communities effectively could reveal the 'complex relationships, networks, hierarchies and nested groups' inherent in communities. A further dimension is the recognition of multiple co-existing communities, rather than a single 'community', within locality defined communities there may be groups competing for scarce resources (Marsh and Buckle 2001). We argue that current analyses should be extended to reflect this diversity when devising engagement strategies for communities. One way of addressing this aspect is to consider the manners in which groups of people often interact 'within and between a number of sub-communities' (Sullivan 2003: 20). Previous research concerning community and bushfire highlights the ways people associate with multiple sub-communities and indeed communities. These interactions are not confined to a specific

geographic location. Unfortunately, we know little about how ideas of community and social divisions influence levels of bushfire preparedness.

The Data

The data analysed here is drawn from interviews with residents in bush-fire prone localities. These interviews were conducted by members of the research team in 2011 and 2012 in three high-risk bushfire localities: one rural, one urban-rural interface, and one ‘tree change’/‘sea change’ or tourist destination. In Victoria, these locations were St Arnaud, Selby- Belgrave and Anglesea; in Tasmania, Scottsdale, St Helens and Kingston; in New South Wales, Deniliquin, Ku-Ring-Gai and Shoalhaven; and in Western Australia, Bridgetown, Bedfordale and Dunsborough.

The range of participants recruited was limited. In some localities the participants’ opinions about other groups of people such as newer residents were not verified as the research team were unable to recruit a wide enough range of participants within the timescales allowed. In addition, people from different ethnic backgrounds and indigenous peoples were underrepresented.

A theoretical thematic analysis of the interviews was carried out (see Braun and Clarke 2006). Themes were identified by repeated re-reading of the entire transcripts by several researchers from the team. In addition, analysis was informed through specific re-reading and analysis of the responses to interview questions focused specifically on a ‘sense of community’.

Communities: Unity and Division

Many participants across the different types of localities reported that they generally felt there was a sense of community where they lived. When asked to elaborate about what this meant, participants would refer to examples of collective activity including: festivals and voluntary groups or report a perception of a communal response to drought conditions. In areas recently effected by bushfires, participants spoke about people helping one another in different ways, such as providing food, shelter or transport. But, as Calhoun (1980) asserts this feeling does not account for how these communities are constituted and sustained by other political, economic and social influences. Calhoun’s work points towards aspects of division within and between communities, which we suggest are important for fire and other agencies to consider when working with people in bushfire-prone areas.

Many examples of contrast and difference were reported. For example, newcomers and established residents; holiday home owners and local people; those who maintain their land (keep grass and vegetation trimmed) and those who do not; urban and rural people; and environmentalists and anti-environmentalists. These categories provided a way for people to talk about their communities by making distinctions. The purpose was to explore how such perceived or real differences impact on capacities to prepare for bushfire, rather than assess the validity of these claims that people made about others.

Unities

Many have a strong sense of community, as illustrated by the residents in an old and established rural community based on an agricultural service town in New South Wales. This region in particular had been severely impacted by drought conditions for a number of years. Some participants suggested that people pulled together to cope with the adverse conditions. Others felt that people in the area were friendly and willing to help one another. Another example of community collaboration cited by a few participants was the annual Ute Muster Festival, which was organised by volunteers and attracts around 18,000 visitors. One participant suggested that the region was typical of rural areas in that those with a sufficient population would have strong communities born out of the processes to sustain a livelihood.

Community

A sense of community may be confirmed via references to collective responses in relation to a perceived crisis, as evidenced in a Tasmanian locality. A number of respondents stated a belief that people would help each other in the event of an emergency (CRCTASSCT 04, 05 and 08 and a focus group). However, other respondents stated that a sense of community can be limited. More specifically, some participants (CRCTASSCT 08 and 09) identified that for some there was a sense of community via organisations, such as sport-related clubs. A number of participants noted a sense of community through membership of charitable organisations and involvement in collective events. One observed that ‘community spirit’ is a characteristic of rural areas in general and went on to state that a sense of community was manifested around organised economic activity in terms of raising money for charity or for local people who needed support (CRCTASSCT 06).

Various signifiers of community diversity and division were expressed. There was a notable division recognised between those who prepare their properties and those who do not. Some participants characterised the relationship between council officials and community members as ‘them’ and ‘us’. It was also noted that for new arrivals it can be difficult to feel part of a ‘community’:

Amongst certain groups there is, and amongst other groups- well theirs is probably a division, but you probably have that anywhere. There are certain groups of people that do get on. The thing in [place name removed], to be blunt, is if you’re a newcomer you’re not accepted as a local.

CRCTASSCT 09

Another local, for example, doubted if the community could be organised to prepare effectively for a bushfire. Participants in the focus group implied that they felt a loss of community primarily caused by bureaucratic processes and legal concerns impacting on local activities.

A more qualified assessment was evident in a seaside Victorian town. Here there was some evidence of tensions within the locality where the relationship between neighbours appeared

strained when one household did not maintain the vegetation on their property. A number of residents also drew attention to permanent and non-permanent residents (such as tourists). Some participants argued that tourists represent a major problem in the event of a bushfire, since the high numbers of tourists is assumed to mean that the routes out of Anglesea would be too congested to be viable.

Others expressed a more collaborative ethos in the same locality. Participants who belonged to Community Fireguard Groups reported that a range of residents cooperated to watch over one another's homes during threatening conditions:

In [one resort] there's a number of Community Fireguard Groups [educational and awareness groups promoted by the CFA], and they range from being all local residents to a mix of residents and absentee land owners, to other groups that are all absentee land owners. It's interesting how they look after their immediate group of people, where there's a court or a close within the development of the settlement, or it's a broader street, or some neighbours over the back fence, and just keeping a watch on their neighbours on bad days

CRCVICANG 04

Other participants reported more general positive aspects of belonging to the community and also particular strategies to feel part of the community. One semi-retired resident described the need to be active in the community in order to become accepted, while, in a joint interview, a couple described the importance of social contract, or understanding, between neighbours.

All residents interviewed in a rural Western Australia area stated that it generally was a close community that was friendly, with most usually supportive of each other. Community-mindedness was displayed, in particular, according to some participants, in response to recent bushfires in the area. They were also able to identify some of the key changes to their communities. These included an increase in retirees relocating to the area; an increase in the number of small holdings (a lot of subdivision) and other residential developments. Some participants (agency personnel and some brigade volunteers) identified negative consequences of these changes. It was suggested that some newcomers did not have the knowledge or experience to adequately prepare for bushfire. Nonetheless, others spoke more positively about how the newer residents had contributed to the local economy and community. A few suggested that there were distinct groups within the community, such as older established families or distinctions based on residential location: urban/rural fringe, town and rural. While participants did not report any examples of conflict between these groups, one participant, who had been in the area four years, suggested that she would not be considered a 'true local' even if she lived in the area for a further 20 years.

In terms of community diversity, from observations and participant's responses, the area was not significantly diverse. It was characterised by one participant as being a 'WASP' – White, Anglo-Saxon, Protestant – community. However, a few participants did refer to small numbers of people from other ethnic backgrounds living in the area. The area was also noted as being

popular with tourists. A participant who was involved in providing information service to visitors stated that most tourists were Australian rather than from overseas.

It is against this background that the themes are brought together in one high-risk area in Tasmania. This is due to three main factors:

- The numbers of households living in the Environmental Management Zone on five acre blocks.
- Poor levels of bushfire risk awareness due to the lack of a significant bushfire in the area since the 1967 bushfires in which 67 people died.
- The presence of bushland areas within housing estates.

New residents are now moving on to blocks, which are located in gullies and on steep hillsides. As these blocks often have poor access, they pose many difficulties for bushfire management for homeowners and volunteer fire brigades. When these accessibility issues are combined with a lack of bushfire awareness, the build-up in fuel load (due to the recent winter being one of the wettest on record), and the close proximity of many of the more recent suburban estates to bushland reserves, the result is a very high level of risk.

The emergency services infrastructure in this area is comprised of the Fire Brigade (established in 1942) which is a retained volunteer brigade with a crew of around 30 that provides service to the municipality, along with other volunteer fire brigades at another six sites. There is a police station in the main town but there are no ambulance services. The Sports Centre has been designated as a 'fire refuge centre' or evacuation centre and the local ABC radio station is the designated emergency broadcaster. The Tasmania Fire Service is currently in the process of developing Community Protection Plans to mitigate the impact of bushfire on Tasmanian communities and enhance resilience. At this time, the only one developed for the area is for a small locality. Also, the council works closely with a neighbouring council because the border area between the two council boundaries is highly bushfire prone.

The main town and the larger council area has many of the characteristics expected of rural-urban interface areas. A resident of a smaller community provided an example of the diversity in this population when she described who lived on their road. Residents included farmers, couples from England, France, Western Australia and Queensland, along with themselves (originally from NSW) and local Tasmanians

(CRCTASKIN 22).

In these circumstances, residents provided contrasting assessments of the locality. For one participant, the local fire brigade was seen as embodying the community because it is:

[Q]uite a hub of the community, so we're very connected with a lot of people. I joined that in order to get a better understanding of bushfire, being a resident there, and also wanting to sort of put back into the community.

CRCTASKIN 02

For another person it is:

The community organisations down there are very vibrant and very active. When a local community issue comes up, everyone is willing to put their hand up and say their piece and present options.

CRCTASKIN 11

And, for another person:

In contrast, the observed lack of community in elsewhere in the area has been linked to the lack of a community centre and hence a focal point for activities. It was burnt down during the 1967 bushfires and never replaced.

CRCTASKIN 13

Overall many people felt that the community was actually comprised of many different communities, based on location, length of residence in a particular area, and socio-economic status. But rapid population growth means that the area is changing. With an influx of commuters and 'weekenders' many residents now speak of taking advantage of the area's amenities rather than being involved in local community activities. Thus, according to some of our participants, the area is beginning to assume the characteristics of a dormitory suburb of Hobart rather than a separate community (CRCTASKIN 12).

Building community

It is in these contexts that the different fire agencies promote various learning programs that focus on 'the community'. One of these programs is Community Fireguard in Victoria, which encourages residents in a neighbourhood to organise and operate together to promote an awareness of fire and to prepare for the possibility of dealing with bushfire (Fairbrother *et al.* 2010). Trained facilitators lead these groups. The activities are primarily framed as educative but there is some recognition that the success of the education is tied up with 'community building', although, perhaps more accurately, building local social networks. (For a full report on this related project, see Fairbrother *et al.*, 2010.)

One specific intention of the program is to encourage a 'sense of community' and promote self-reliance in relation to bushfire preparedness, usually in rural locations, or settings at the rural urban interface. Via facilitated group sessions, the program encourages the development of household bushfire survival plans. Fireguard groups generally consist of six to ten households

(10 to 20 members) but occasionally become larger. The CFG groups are usually limited to one street or small locality. Each group is allocated a trained CFA facilitator, usually by the Community Education Coordinators. These facilitators then take groups through the four core sessions of the Fireguard program. Such sessions involve a number of meetings (usually four to seven), normally held in the home of one of the group members. The ideal outcome is that each household represented in the group will produce written, practised and effective, fire survival plans with backup plans for different contingencies. In most cases, group members support each other in making their properties 'fire ready' and, in the event of a fire, protecting property or helping more vulnerable members of the group.

An inaugural CFG meeting is typically held in a resident's home with neighbours invited to attend. They are expected to meet regularly while they undergo the CFG core program, over four to seven weeks with a facilitator. As Fairbrother *et al.* (2010: 18) report, CFA staff described CFG as:

[T]he ultimate, at the top: highly motivated people, shared decision-making, self-reliant communities. That's the overall objective of what Community Fireguard is.

Such hyperbole is part of the process of legitimating the locally-based groups but similar sentiments were often repeated by CFG participants themselves. Many specifically mentioned that the CFG program helped to foster feelings of connectedness or 'community spirit' (Fairbrother *et al.* 2010):

I would have thought – I mean – they're called Community Fireguard groups, so if you can't get that community feeling and everyone wanting to meet up and go through it, then I would say you weren't successful

(CFG participant, Hume).

[The] community aspect, I think, is of definite importance...I mean awareness, of course, is the prime – of fire behaviour and what you've got to do. But without the community side of it, it's going to fall apart

(CFG participant, Hume).

Maybe that's part of the role of the fire groups that actually, you can engender this sort of community spirit and go through that to actually encourage people

(CFG participant, The Grampians).

Indeed, several participants expressed the belief that fostering a sense of connectedness or community was the *primary* positive outcome or strength of the CFG program, above the importance of acquiring knowledge about bushfire safety and preparedness. For example:

Fire is part of that but it is also... it's a sort of community thing to foster, but rather than look at just fire, that is just one part of it. Because we could be involved in something equally as bad but not necessarily fire and what do we do about it? So you can actually use community networking and those sorts of things

(CFG participant, The Grampians).

One of the massive strengths, from my perspective, is community connection

(CFG participant, Eastern Metro).

The strengths are binding the community so, not that I'm sure we're going to necessarily go and defend each other's property, but just that strength in numbers in a way, you know that other people around you are thinking about it as well and are aware, so the fact that we formed the group, I think that it is a very valuable function in itself

(CFG participant, Loddon Mallee).

For sure, it's been the community building, like everyone sort of knew everyone but it's really strengthened that sense of we're all in it together

(CFG participant, Eastern Metro).

On this level, the participants spoke of a sense of connectedness rather like Anderson's (1983) imagined communities. It was a feeling or belief, group members felt 'together' and 'connected', that there were other people around them, moving towards common or shared goals. Yet, as will be explained in the next section, there were also tensions in communities.

Divisions

These communities are also undergoing change, even the well-established and relatively stable areas. The New South Wales area mentioned above had changed for some but not for others. For example, farming practices had changed, as farms were getting bigger through amalgamation. This has seen an increase in corporate farms and an increase in farm managers. Consequently, smaller family farms run by one or two people are slowly decreasing in number. One resident felt that the community had changed because of the recent ongoing drought conditions (CRCNWSDEN 9). He argued that many people the same age had left and

probably would not return. It was also suggested by two others that the skill base of the area had probably declined with some people leaving to find employment in the mining sector. These residents observed that local businesses could not offer the same conditions of employment compared to some other sectors and states and so some skills had been lost to the area. The local economy had declined as the drought affected farmers' incomes and so a lot of people were short of money. This obviously impacted on the local retail trade with shops struggling and a number had shut. Other changes had seen the rice mill, abattoirs shut or gone and a number of Government Department offices had relocated to larger population centres.

Most residents did not report issues of division or conflict within the community. However, another implied that there was conflict between farmers and the environmental agency over water usage for irrigation (CRCNSWDEN 7). Interestingly, a local government officer suggested that there was a growing tendency for residents to complain to the local council about a neighbour's poorly maintained block. It was argued that previously people had known the person with the untidy land and would speak to them directly, but now the council was used as 'go between' to avoid upsetting the neighbour.

The Question of the Environment

More generally, a source of conflict was evident around attitudes and values regarding the environment. For example, in many areas some people:

[S]ee the trees as a threat and others who see them as habitat for wildlife and part of the amenity of the area ... Then there's other people who are just wanting to realise the commercial value of their properties and don't care about the bush at all'.

CRCNSWKUR 06

Others across these localities also commented on this division over environmental values:

We get very cross with people who move in and then decide they're going to do everything they can to get rid of the bushland because it's a threat. It's wrong.

CRCNSWKUR 15

The view that untended bushland represented a threat in the context of bushfires was expressed by one volunteer fire fighter in Tasmania:

The attitude of we want to live in a green environment needs to change. It's all very well for them to live in a green environment, but their [uncleared] property just provides a stepping stone for the fire to jump between two properties that are well cleared and so on.

CRCTASKIN 11

However, others in this same locality viewed the process of *clearing* vegetation as a threat. For example, two participants who had moved from the mainland and felt that the whole issue of people burning off on their own blocks had to be better regulated because of the risk such burns pose and the air pollution generated.

CRCTASKIN 22 and 29

Class

The issue of community change was viewed negatively by some participants. For example, this participant spoke about the increasing number of people from lower socio-economic background living in the locality:

No, it's changing the way [the locality] – the dynamics of ... is changing because of the influx of...Dole bludgers, people who are out of work. ...They're very lazy, as a group and sometimes the children in those families are at a loose end and they are looking for mischief.

CRCVICSTARN 05

Economic and social status was also linked to levels of bushfire readiness as one focus group participant in Victoria noted:

It's only the riff raff we get in town that don't look after their place.

CRCVICSTARN 01

Participants from other States gave empathetic accounts towards others who had particular educational needs and or financial difficulties:

I think there's a lot of people that are not getting their voice out because of the illiteracy, but because it just seems like in Tasmania there's this divide because of the illiteracy. Like, there's 70/30, so there's 30 per cent of people and they're just strutting around like, you know, we do in Melbourne, or the 70 per cent which are a lot of people on welfare, a lot of people with illnesses, disabled, and they're just pushed aside. So this is the thing about the communication with fires as well. You wouldn't know if they knew stuff. I mean, yeah, I think it's a worry. I've been very disappointed finding that out living here for six years. It's sort of out in the country it seems to be a lot worse than it is in towns, like with Penguin up north, and when we lived in Hobart you sort of didn't get that, but living out here in the country you really feel that divide.

CRCTASKIN 29

And:

Some families don't even have a car. I was thinking of one family that I was supporting. She would buy an old bomb, like under \$1500 because she could sort of scratch up some of that money. Then she would buy a dodgy car and that would go for so many weeks and then that would go so she'd buy another one. You know, borrow some money. She had a couple of cars outside but you could never drive them. That wasn't even the working poor and she had about four children. So yeah, some of the families don't even have transport. So if they wanted to leave, they couldn't.

CRCWABED 03

The above examples demonstrate how some people struggle to comply with official advice concerning bushfire preparation or are potentially not be in a position to activate a fire plan.

Economic status played out in other ways in relation to its impact on bushfire preparedness at a community level. For example, owners of second homes were often perceived as not adequately maintaining their properties in terms of keeping vegetation trimmed. As a local government officer noted in one rural locality in NSW they were more likely to issue abatement notices enforcing the clearing of vegetation to absent home owners. Similarly in Victoria:

I think that all the local community, the people that live here all the time are basically ready, whether they've got it [fire plan] written down or not, they're basically ready and they've basically cleaned up. There's a lot of holiday homes that are never cleaned up. That's a risk to permanent residents.

CRCVICANG 6

While the above perception was noted in other states, participants actually gave examples of home owners maintaining their properties:

I can understand why Weekend Warriors perhaps wouldn't be on top of it, because they're only down here for two days. With the ones next door to us, they seem to keep their places really well maintained. They're all very wealthy and their properties just look like something out of *House and Garden* [magazine]. But I can understand why perhaps sometimes people might be negative about it and why it is probably the case with a lot of Weekend Warriors.

CRCWABRI 04

Another participant from the same West Australia locality who was also a volunteer brigade member suggested that there was a risk of people not maintaining fire breaks because they were trying to sell their investment property and so were reluctant to spend further money on a house that was for sale. However, this participant added:

I mean, I haven't personally seen much evidence of it. We're pretty good in our little area.

CRCWABRI 10

Another way in which socio-economic status influenced preparedness was provided by a participant from a tree-change area in West Australia. Here it was suggested that educational attainment among volunteer firefighters was connected with higher expectations regarding brigade equipment:

We get basic supplies from the local shire and training from FESA, but, probably because of the sea-change – tree-change component and the higher education level amongst our fire brigade, we're much more conscious about safety. The masks that the Shire provides us with, we don't consider good enough, so we fundraise to buy better ones

CRCWADUN 05

Thus, communities as localities often are becoming more diverse, and when reflected in terms of socio-economic difference can also become a source of unease, if not in some cases tension.

The Peri-urban Question

In many of the peri-urban localities, there was a recognised urban/rural division. Specifically, this related to newer residents who had moved from an urban environment to a more rural location. These 'newcomers' were characterised as not understanding the country way of life and lacked certain skills and knowledge that would enable them to be accepted. This argument was particularly related to bushfire preparation and awareness. The implication being that people with an urban background would be more vulnerable and less able to cope if faced with a bushfire. However, such views were challenged by other perspectives. For example, a participant who moved from Sydney to Tasmania asserted that simply being from a rural area did not equip people with an appropriate knowledge about the environment:

That's what it comes down to, and there are a lot of people in rural areas that don't really have much respect or regard for the natural environment. The fire brigade is one of those organisations generally, in rural areas. Generally, I mean in one way I've got a lot of respect for them, because when there is a fire it's obviously important that people actually are prepared to go out there and deal with them, but politically, and their value system, the majority of people in fire brigades aren't interested in the environment. They don't actually care about it that much. So there's a fair bit of tension there.

CRCTASSTH 10

There were a number of examples of people coming from an urban background with no previous experience of bushfires and who reported high levels of bushfire readiness.

Another newcomer, this time in West Australia, provided another view regarding what they expected:

Newcomers like myself and my family – I think the perception is that the newcomers want to come in and in one respect they want things to change, and the people that have been a long don't want it to change. Then, the flipside to that coin is that new people want to come to work because they like what it is, and they don't want anything to change, but yet some of the families who have been here for a long time, have seen a change over time and want it to continue to grow and develop. So really, the issue in the people is really too hard to generalise that one. But I'd say most people are pretty tolerant and just want to see the best for the town and the community

CRCWABRI 11

The issue of new residents was also a feature in a NSW locality, which attracted large numbers of retirees. Some gave accounts of being involved in various voluntary groups such as a golf club (entirely run by volunteers) as well as informal arrangements designed to offer support for neighbours with mobility issues. Overall, this locality was characterised as having high levels of voluntary activity. In the following account, a participant reflected on the changes that had occurred and gave a particular view linking these circumstances:

There used to be quite a good sense of community. It was a lot smaller. Most people knew each other. There's been quite an influx of people coming into the town. So there is newcomers, but there are more community activities ... I feel that there is a bit of exclusion by the older or original people, if you like, towards the newcomers. There is a sense that they are going to be excluded, so they do start their new things. I think a lot of the older ones, and I include myself, feel a bit threatened by these new ideas.

CRCNSWSHO 18

Conversely, from the same locality, a different view was expressed concerning newcomers:

There's an older population here and they tend to not really want to get involved. They've come down here because they want a nice peaceful, quiet life.

CRCNSWSHO 11

Another broad difference reported was between those who regularly cut the grass and vegetation on their land and those who did not. Nonetheless, even the issue of clearance prompted conflicting views. For example, one person from a New South Wales peri-urban area noted that:

[I]f you're in a bush fire prone area you should have the right to cut down whatever tree you think could be a danger to your house. I mean there's going to be guidelines, that you follow the guidelines

CRCNSWKUR 18

An alternative view from the same locality was that:

I don't want to live here if you end up having 50 metre fire breaks, there's no point in living here then you won't have any bush left ... The reason I like living here is because of the vegetation around here

CRCNSWKUR 10

These varied ways of viewing preparedness informed some of the complex ways in which communities as particular types of localities, in this case peri-urban communities, viewed bushfires.

Assessment

These varied localities all displayed to different degrees lines of division, focused on the environment, the peri-urban setting and class relations. While the tensions often associated with these divisions were relatively muted, they nevertheless pointed to the ways in which a view that communities are by definition cohesive and thus susceptible to uniform and standard messages is misconstrued, as will be addressed in the next section.

Many participants expressed negative views of their local council, speaking of 'them' and 'us' relationships. A commonly expressed view was that the council seemed to be a hindrance rather than helping local people. For example, participants from a focus group in Tasmania argued that bureaucratic processes and legal concerns prevented certain types of communal activities and consequently contributed to eroding a sense of community. Another issue raised involved the role of local government and regulations concerning preventing the removal of trees and other vegetation. According to a focus group participant in Tasmania:

I would say that the biggest issue for me is the contradiction between what I know should happen and what is the reality of where I live. So for example, I live on a road that's terribly dangerous and the council will do nothing to remove those dangerous trees and part of the reason is because we have at least one close neighbour who believes in having untouched trees or on roadsides and he has more influence with the council than other neighbours who have tried for years to get that changed. I can't touch the trees. But we are not even allowed to cut trees down over the road. Yet there are dead wattle trees all along there and you would think it was our fault.

CRCTASSTH 01

And, an example from a Victorian participant expressed similar sentiments:

It's widely known that council is completely dominated by greenies, completely and as a result the rules up until that overriding rule set in place by the State Government, the rule was that you couldn't remove any vegetation from your property, your property, the property you own, you couldn't remove it without permission from the shire.

CRCVICSEB 12

The sense of animosity was felt by those working for local government. A Tasmanian local council employee was asked how the local residents viewed the Council. The response was:

They think we are arseholes. They put their plans in and we shatter their dreams. We take their money. They think we waste their money. You show me where there's a good relationship between a community and their council. But in saying that, if we do something right, well then they'll say thank you.

CRCTASSTH 11

Another example of conflict between residents and agencies concerned water usage. In one account from New South Wales it was suggested that the poor management of the process of water usage had led to a possible reduction in the capacity of brigades, (made up of farmers) to respond to fires through targeted action:

[Some] people at Brigade level [threatened not] to go into the parks because they've now pinched water. You've got to remember a lot of the farmers have got a resentment of what's happened. If you go back over the last 15 years, a lot of the water has been taken off farmers or efficiencies and has been given to the Environment [agency] but what the Environment has done which is really the main thing, they haven't used the water for the environment because the Environment at times haven't needed it. They've then sold the water, which has then provided them with money to then lobby the Government against the famers who they pinched the water from.

CRCNSWDEN 07

These findings suggest that councils and other agencies can inadvertently create or worsen divisions within communities.

This study reaffirms the view that 'community' is defined in a range of ways, often for specific purposes. In some cases, 'community' is defined in relation to length of residence, whereas in other cases the population was long- standing and relatively stable, and in yet others there had been a significant incomer feature to the locality. Of course, it is hard to draw conclusions from such factors often with older more long term residents experienced with bushfire events while

in other cases, particularly in Tasmania incomers were sometimes more likely to be bushfire aware. This sense of preparation also often was associated with prior experience. In this respect, the importance of experience should never be underestimated, although it also must be acknowledged that experience can also be associated with poor or inadequate practice.

The evidence about belonging to different communities is both conceptually and empirically confused. If the argument is accepted that communities in part must be defined in relation to localities (Fairbrother *et al.* 2013), then the opportunity is there to begin to discuss how a sense of identity (gender, ethnicity, class and so forth) becomes salient in relation to the relationship with agencies and the dimensions of association and involvement within the ‘community’. Here it then becomes possible to discuss multiple and ‘nested’ communities, provided the sense of the local is retained, at least for the purposes of analysis here (*cf.* Marsh and Buckle 2001; see also Cottrell 2005).

Empirically, the study raises a number of questions about the ways in which the different localities deal with bushfire events, either in relation to preparation or response. First, there was considerable evidence of the ways in which many residents in the different types of localities covered by the study built a sense of ‘community’ not just for the purpose of bushfire events, by collective actions (festivals), local assistance and help, and the social life of the area (see Calhoun, 1980). But, in the same observations, residents drew attention to differences: those who do not maintain their land in safe ways; those who do not live in the area all the time; and those who have ideas about the environment that counter the views of those who make their living from the area. It is in this sense that analysis needs to take into account the underlying tensions that can define a locality.

The community vignettes displayed the range of understanding and variation across the localities studied, irrespective of State. Attention was drawn to the importance of network building (addressed specifically in Chapter 10) in promoting and encouraging a sense of identification with particular localities. Others drew attention to the complex relations that can emerge where old established ‘communities’ are presented with newcomers, or indeed in the case of resorts, a sudden seasonal influx of people, often from distant urban settings. These complex social settings provide the context for the ways in which people may understand, prepare or indeed respond to disaster events, such as bushfire.

One way of beginning to address such ranges of experience, is via the informational, awareness and educational activities promoted by agencies. The dilemma in relation to policy development is to recognise such variation of understanding and experience, in the context of limited resources. One of the obvious ways of enabling such a proactive development is via the embedded local state representatives and agencies, local councils, brigades and so forth. But as illustrated above these relations are complex and can be both integrated in outcome and divisive, not because of ill-intent, but because of the understandings, sense of identity and the associated complexities connected with the exercise of power, control and inclusiveness in social settings, defined as ‘community’.

Summary

This chapter demonstrated that residents have conflicting views of others within a locality. Sources of conflict and difference were along a range of concerns including length of residency and perceptions of urban and rural identity. The tendency to understand community in terms of commonalities has been criticised for overlooking difference and inequalities. Using examples of difference within localities and conflict between residents and agencies, a more nuanced view of communities is presented. The challenge for agencies and their volunteers is twofold. First, to avoid deepening social divisions. Second, to work within the current social context that may be characterised by conflict rather than developing strategies that depend on cohesive communities. These are the themes that will now be addressed.

Implications

1. Consideration should be given by agencies from all states to the ways in which a sense of 'community' may be generated and promoted by formal awareness workshops.
2. In preparing awareness materials agencies, and self-organised groups in localities, should map divisions that often characterise community populations and then develop strategies which take divisions into account in positive ways.
3. Where tensions are evident within localities, for example between newcomers and long term residents over environmental policies, then it is incumbent on those concerned with awareness development in relation to bushfires to explore ways that populations can be encouraged to deliberate on these questions in positive ways. This may open up challenging questions for network building and education and communication (dealt with below).
4. Volunteer brigade members have a particular role and status in some communities. This can place them in positions of influence and authority. Agencies and their volunteers should consider how they influence social divisions.

Ideas for Further Research

1. Review and consider the ways of working with groups with different and conflicting interests can be brought together to address contentious issues. These measures may involve and exploration of strategic conversations and forms of deliberative democracy.
2. Explore whether in conflict situations relating disaster preparation and response whether the processes of mediation and conflict resolution have a part to play in the development of positive 'community' sentiments and understandings.

References

- Anderson, B. 1983. *Imagined Communities: Reflections on the origin and spread of nationalism*. Verso: London.
- Buckle, P. 1998/99. Re-defining Community and Vulnerability in the context of Emergency Management. *Australian Journal of Emergency Management*, 13(4): 21-26.
- Braun, V. and Clarke, V. 2006. Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2): 77-101.
- Brent, J. 2004. The Desire for Community: Illusion, confusion and paradox. *Community Development Journal*, 39(3): 213-223.
- Calhoun, C. 1980. Community: Toward a variable conceptualization for comparative research. *Social History*, 5(1): 105-129.
- Clark, D. B. 1973. The Concept of Community: A re-examination. *The Sociological Review*, 21(3): 397-416.
- Cottrell, A. 2005. Communities and Bushfire Hazard in Australia: More questions than answers. *Environmental Hazards*, 6(2): 109-114.
- Cox, H.M. and Holmes, C.A. 2000. Loss, Healing, and the Power of Place. *Human Studies*, 23(1): 63-78.
- Diprose, R. 2003. The Hand that Writes Community in Blood. *Cultural Studies Review*, 9(1): 35-50.
- Elsworth, G., Gilbert, J., Rhodes, A. and Goodman, H. 2009. Community Safety Programs for Bushfire: What do they achieve and how? *Australian Journal of Emergency Management*, 24(2): 17-25.
- Fairbrother, P., Hart, A., Stratford, J. and Prokopiv, V. 2010. *CFA Community Fireguard Review: Improving quality control and assurance*. RMIT University: Melbourne.
- Fairbrother, P., Tyler, M., Hart, A., Mees, B., Phillips, R., Stratford, J. and Toh, K. 2013. Creating 'Community'? Preparing for bushfire in rural Victoria. *Rural Sociology*, 78(2): 186-209.
- Goodsell, T. L., Colling, M., Brown, R. B. and England, J. L. 2011. On Past and Future of Community: A pragmatic analysis. *American Sociology*, 42: 277-287.
- Hughes, P., Black, A. Kaldor, P., Bellamy, J. and Castle, K. 2007. *Building Stronger Communities*. UNSW Press: Sydney.

- Jakes, P., Kruger, L., Monroe, M., Nelson, K., and Sturtevant, V. 2007. Improving Wildfire Preparedness: Lessons from communities across the US. *Human Ecology Review*, 13(2): 188-197.
- Marsh, G. and Buckle, P. 2001. Community: The concept of community in the risk and emergency management context. *Australian Journal of Emergency Management*, 16(1): 5-7.
- Moore, S., Daniel, M., Linnan, L. Campbell, M., Benedict, S. and Meier, A. 2004. After Hurricane Floyd Passed: Investigating the social determinants of disaster preparedness and recovery. *Family & Community Health*, 27(3): 204-217.
- Mulligan, M. 2013. Rebuilding Communities after Disasters: Lessons from the Tsunami Disaster in Sri Lanka. *Global Policy*, 4(3) 278-287.
- Rose, N. 1999. *Powers of Freedom: Reframing political thought*. Cambridge University Press: Cambridge.
- Secomb, L. 2000. Fractured Community. *Hypatia*, 15(2): 133-150.
- Sydney Morning Herald*. 2013. Bushfire Disaster Reminds Us We Are One Community. Oct. 18. <http://www.smh.com.au/comment/smh-editorial/bushfire-disaster-reminds-us-we-are-one-community-20131018-2vrs3.html>
- Sullivan, M. 2003. Communities and their Experience of Emergencies. *Australian Journal of Emergency Management*, 18(1): 19-26.
- Taksa, L. 2000. Like a Bicycle, Forever Teetering between Individualism and Collectivism: Considering Community in Relation to Labour History. *Labour History*, 78: 7-32
- Teague, B., McLeod, R., Pascoe, S. 2010. *2009 Victorian Bushfires Royal Commission: Final Report*. Government Printer: State of Victoria: Melbourne.
- Turner, V. 1985. *On the Edge of the Bush*. University of Arizona Press: Tucson, AZ.
- Webber, R. and Jones, K. 2013. Implementing 'Community Development' in a Post-disaster Situation. *Community Development Journal*, 48(2): 248-263.
- Young, I. M. 1986. The Ideal of Community and the Politics of Difference. *Social Theory and Practice*, 12(1): 1-26.
- Young, I. M. 2001. *Inclusion and Democracy*. Oxford University Press: Oxford.

Chapter 7: Community Engagement

Governments, through their state agencies, encourage individuals and communities to be prepared for, and show resilience to, the threat of natural disasters. To this end state agencies produce and communicate emergency warnings and advice about wildfire preparation. Particular attention was given to developing appropriate communication strategies following the ‘Black Saturday’ fires in Victoria, in February 2009, where 173 people died. Considering how staff and volunteers from fire and land management agencies interact with the public about bushfire safety is a fundamental aspect of the ‘Effective Communication: Communities and Bushfire’ research project. Community engagement is one approach that agencies use to facilitate interaction with local residents.

This chapter considers community engagement by examining the communication practices undertaken by fire and other agencies across Australia. In doing so, the chapter presents a range of understandings about community engagement. The distinctive contribution that this chapter makes is that it examines the views of volunteer firefighters and agency personnel, whereas much of the other research considering bushfires and engagement has focused on evaluating specific programs. The intention here is to understand the importance of (local) context – initiatives that work in one locality may not be appropriate another (McCaffrey *et al.* 2011).

What is Community Engagement?

The concept of community engagement is premised upon particular understandings of community and of participation. Beginning with an understanding of community as locality, the analysis centres on an exploration of the conditions for and circumstances of people in bushfire prone areas addressing the prospect and actuality of bushfire events. The emphasis here is on the community as the subject in this process, rather than agencies and others. The question is how do those who comprise communities experience disaster events. This focus complements that of ‘shared responsibility’ where the focus is on governance, the ‘balance of rights and responsibilities between the State and its citizens (e.g. government and communities)’ (on rights and benefits, see McLennan and Handmer 2014: 6).

Community engagement has been defined by Williams (2009:214) as:

[N]ot-for-profit motivated help provided for and by friends, neighbours or other members of one’s community either on an individual basis or through more organized collective groups and associations’.

For the United Nations (2005), however:

Community engagement is a two way process by which: the aspirations, concerns, needs and values of citizens and communities are incorporated at all levels and in all sectors in policy development, planning, decision making, service delivery and assessment; and

governments and other businesses and civil society organisations involve citizens, clients, communities and other stakeholders in these processes.

These definitions are informative because the voluntary activities of local brigades often reflect the sentiments of Williams, while the United Nations version mirrors how some emergency organisations would like community engagement to work. This discrepancy highlights the tensions around varied understandings of what community engagement entails and what role it can play. As with the more general concepts of ‘community’ and ‘participation’ there is no single, unified understanding of community engagement in academic literature or in policy. As the above quotes show, community engagement can be support provided at a local level by those in that locality and can also be a way to ensure that different perspectives and needs are included in planning and decision-making processes.

Another conceptual difficulty around community engagement is that it is sometimes used interchangeably with other terms such as ‘public participation’, ‘user engagement’ and ‘active citizenship’. Given that community engagement is applied in different arenas including public health, counter terrorism, climate change and emergency management this is perhaps not surprising. Arriving at one agreed definition of community engagement is probably futile and possibly even undesirable, particularly as a key feature of dominant understandings of community engagement is that it incorporates local contexts and is situated within particular political and social arrangements. Rather, it is more helpful to understand the ways in which the idea of community engagement is used. This requires a consideration of community and participation within communities.

Community

As noted in Chapter 2, while there are divergent understandings of community in the academic literature, three main themes emerge: community as locality, community as a shared sense of belonging and community as social networks (see also: Taylor 2003; Blackshaw 2010).

Community is often seen as linked to place or as being defined in some way by geography. But, simply inhabiting the same space does not automatically foster a sense of community, so locality and community should not be conflated. Community is also often understood as based around a shared sense of belonging. This moves discussion beyond geography to shared senses of history, meaning and togetherness. Lastly, community is increasingly understood as being based around interests or social networks. In this conception, community is a complex web of social connections that can be mapped or measured.

Nonetheless, as Fairbrother and colleagues (2013) argue, the dominant understanding of community found in bushfire research and policy, comes from a ‘community as locality’ perspective. Hence, the analysis begins from the perspective of community as locality and then is developed to consider shared senses of belonging and the expression of these logics as social networks.

Participation

The question of power is central to a consideration of community. First, it is necessary to determine who is the subject and the subject's relation to the community and external agencies. Second, how are understandings generated, and by whom? Third, who has voice and under what conditions. This focus draws attention to the processes of participation and hence introduces the idea that there may be multiple publics for external agencies (for an inspirational way of looking at such themes more generically, see Fraser, 1992 and 2009; for an application of these ideas see, Rios, 2004). Obviously, this also raises the question of how can participation be achieved, so as to involve all, even those who are marginal to current arrangements, because of race, language, class, gender, citizenship, age, ability, education, to ensure mutually defined community preparation and responses to disaster events (on participation by marginal groups, see Grewal, 2007). And, modes of communication matter - websites are only useful if you can read (often the prevailing language) or are sighted, have a computer and know how to use it to get information; communicating with the elderly may be very different from youth; wealth provides resource and capability; and so forth. Moreover, when consultation takes place, particularly face to face, it draws attention to child care resources; transit arrangements; time of day; day of week; at public or private places, such as community centres; and in some situations are there translators or sign language resources? Thus participation may not be straightforward, particularly for the marginal and for those unfamiliar with processes and arrangements in community settings.

For us this raises the question of the conditions for and processes of participation. There are divergent understandings of this notion and commentators have identified different forms of participation. Arnstein's (1969) 'ladder of participation' is one of the most influential examples. This analysis (Arnstein 1969: 216) begins by stating that citizen participation 'is a categorical term for citizen power'. For Arnstein, meaningful participation involves a redistribution of power. On this basis, Arnstein identifies eight types of participation corresponding to 'the extent of citizens' power in determining the end product.' (Arnstein 1969: 217). According to Arnstein's typology, 'informing' and 'consultation', for example, are forms of tokenism, whereas 'citizen control' and 'partnership' are different forms of citizen power. A more recent iteration is the 'IAP2 Spectrum of Public Participation' (IAPP 2014). Here the forms of participation 'inform', 'consult', 'involve', 'collaborate' and 'empower' are elaborated with corresponding public participation goals and techniques. 'Informing', for example, could be done using web sites or fact sheets with the aim of providing the public with information to help them understand a problem.

This layered approach reflects the power relations that define agencies and communities, 'experts' and 'citizens'. Such designation has implications for what strategies of communication practice should be used, when, and for what purposes. As indicated there is a range of engagement from the linear process of providing information to empowered decision-making that involves citizens in policy development and implementation. As Cornwall (2008) notes, various forms of participation may occur within the same project or initiative. In addition, such typologies may draw attention away from who actually participates and who is excluded. This is important in the context of promoting bushfire safety as research suggests that traditional community engagement initiatives may only have limited reach. For instance, the Community

Fireguard initiatives in Victoria are likely to only appeal to those already concerned about the risk of bushfire (Rhodes *et al.* 2011) rather than initiating new interest from a more diverse range of residents. Nonetheless, these practices enable emergency agency staff to engage directly with households in particular localities over a period of time and to thus develop strategies of preparation for bushfire events.

While participation is commonly viewed as promoting community empowerment, participation within a particular project or program may, according to Eversole, actually perpetuate a top-down approach. Her work (Eversole, 2012) with rural communities, in South Australia, uses a critical perspective of participation and identifies some of the implications for community development practitioners. Eversole suggests that calling for members of a community to participate in greater numbers is misplaced because usually this appeal is made within the context of a program or project; the 'shape' of participation is already predetermined by an external organisation. Nevertheless, Eversole also warns against an alternative approach that leaves people to cope alone as this ignores the necessity for groups to access external resources. She argues for a middle way, where the key difference is that the organisation is able to change as it works alongside a community. Eversole's key point is that an organisation, calling for participation and working with a community, should also see itself as adapting and changing as part of the community engagement process.

In view of these considerations, the focus in this chapter is on the ways in which agency practitioners, professional and volunteer staff address the question of community engagement. The outcome is a partial view of the complex relations signified by the practice of community engagement. Such staff interact with and respond to the residents and others in communities as localities; equally they also attempt to reach out to the marginalized in these localities. A consideration of the conditions for and experience of such involvement by the different and diverse social groups that make up these bushfire prone localities is the subject of the following three chapters.

An Approach

This discussion, therefore, suggests that moves by agencies to encourage participation are welcome but that there are still substantial challenges in constructing effective community engagement. The approach adopted in this analysis is to draw a distinction between two broad ways in which agencies focus on community engagement, a top-down approach, in which the task of the agency is to inform and promote understandings, and a two-way form of engagement where there is mutual involvement in the process, to varying degrees. While in practice there are complex relationships, worked out over time and a range of contexts, this distinction serves the purpose of focusing the analysis and thereby enabling policy implications to be identified. This chapter addresses this topic with data from community engagement specialists as well as brigade members and explores the challenges of community engagement from the perspective of practitioners.

The Data

The data analysed here is drawn from a series of interviews that were conducted by members of the research team in 2011 and 2012. They were carried out in three different localities across four States (Victoria, Tasmania, New South Wales and Western Australia). In each state, three high- risk bushfire localities were chosen; one rural, one urban-rural interface, and one ‘tree change’/‘sea change’ or tourist destination. In Victoria these locations were St Arnaud, Selby-Belgrave and Anglesea; in Tasmania, Scottsdale, St Helens and Kingston; in New South Wales, Deniliquin, Ku-Ring-Gai and Shoalhaven; and in Western Australia, Bridgetown, Bedfordale and Dunsborough. Additional interviews were conducted with 46 staff from agencies responsible for bushfire prevention and preparation.

Method of Analysis

Participants were asked to report and reflect on their experiences and understandings regarding how bushfire safety information is communicated to the public. A theoretical thematic analysis (Braun and Clarke 2006) of the interviews was carried out. Themes were identified by repeated re-reading of the entire transcripts by one researcher and through specific re-reading and analysis of the responses to interview questions focused specifically on community engagement.

These accounts focus on the communication of bushfire safety information to the public. They are not meant to be a definitive guide to all of the activities that agencies and brigades carry out. The nature of this research means that the findings only indicate a sense of participants’ experiences and views. In light of the previous observation, we recognise that fire agencies and related organisations and other key stakeholders are dynamic entities that change how they operate and are organised. At the time of conducting our research the leading hazard management organisation in Western Australia was the Fire and Emergency Services Authority. But, following the recommendations from the Inquiry into the Perth Hills fires (Keelty 2011), on November 1 2012, a new organisation was created, the Department of Fire and Emergency Services.

Bushfire Community Engagement in Practice

‘Community engagement’ is a key focus of agency relations with communities as localities. Agency staff (professional and volunteer) value such engagement in different ways and draw on experience to assess the opportunities for and the barriers to effective community engagement.

What is meant by community engagement?

There are a variety of interpretations of the term ‘community engagement’, also expressed by the participants in this study. Some mentioned that community engagement should be contingent upon those people with whom an agency is trying to engage, while some were aware of the tension between different kinds of engagement; those that incorporate participation from local

residents, in a more two- way model, and those that continue to promote a more top-down flow of information.

To illustrate this complexity four selected examples are presented.

1. Some defined community engagement in scalar terms:

Community engagement comes at a range of different levels. I mean the community engagement in our organisation can range from simple, providing information to the public, to the level of consultation. Where we're seeking feedback on actions that we're proposing, say for example at public meetings, through to actually having stakeholders contribute to our policy development.

CRCTAST 04

This agency person described a complex two way process operating at a number of different levels, providing information, meetings with locality residents, and the active involvement of 'stakeholders' in the development of policy.

2. Others focus on the community as locality.

It's actually about community engagement using all of the community engagement toolkit if you like but at quite a local and a personal level and using diverse range of tools something like Community Fireguard doesn't necessarily work with every community, so you need to find different treatments.

CRCVICST 01

The focus here is on community as a locality. There is also recognition that different measures should be persuaded to ensure that local populations are engaged.

3. Another view considers the way there may be tensions in relation to responsibilities, between fire activity and prevention *and* 'community engagement'.

We're still going into communities and we have a particular agenda, which is around community connectedness and resilience and those kinds of relational and capability issues that are necessary before you can have a community that's active on disaster preparation. But, our focus, obviously, is on fire because we're the fire service. That means that we're not right up that far end of the engagement spectrum because we're going in with our own agenda. However our approach is very much around consultation, following the community lead, partnership, an eventual view towards community sustainability, a recognition of communities being able to identify their own solutions and strategies and the need to resource and support those rather than trying to impose strategies on communities.

CRCTAST 07

In this instance, the informant recognized the different purposes of agencies, to promote community engagement and to deal with actual and prospective fire events. In this context, the agency seeks to consult with the ‘community’ in order to promote ‘community initiative, although it is not clear how ‘community’ is defined.

4. And, there is recognition of an emergent broader understanding of engagement, from top-down to learning from the local people.

When I first started, actually I thought it was about going and teaching people how to do things the right way. That’s only one part of it. The really big part of it is learning your community’s concerns and dealing with those.

CRCNSWSHO 10

Even so, such engagement is not necessarily two-way. The agency learns from community, but this may be in partial and limited ways.

Of note, there is also recognition by some that the process of fostering community engagement requires a clear understanding of the character of engagement. To illustrate, one participant expressed frustration with traditional models that conflated public relations with community engagement:

We [the agency] do measure how many community engagement activities happen each year. But even that’s an extremely flawed model because, things like our open days or a school visit, they will capture as community engagement. When they’re not really that – they’re a public relations activity. So there’s a very low awareness in the organisation of the difference between public relations and community engagements. We have members of our executive saying frequently that when you’re on the back of a truck and you wave to the community, you’re engaging.

CRCNSWST 06

Like several of the other respondents, this agency staff noted the limited understandings held by some staff as to the constitution of community engagement. They also hinted at tensions within the organisation around these differences and even around the concept of community engagement itself.

The challenge of trying to develop comprehensive views about community engagement within an agency was reported by a number of participants. The following quote describes community engagement in one organisation as now being:

Evidence-based in our decision-making localised strategies, localised issues and being targeted in where we run our program as opposed to turning up at a fete or turning up to a Christmas carols night and trying to promote bushfire safety information. That's what we used to do and it was about how many stickers can we give out and colouring in pencils. I still get told off now 'cause I'm not producing colouring-in pencils to go with colouring-in books and I said I'm not going to. How is that colouring-in pencil going to lead to a safer community? That's why we're trying to educate them. When you're sticking that sticker on the child's chest, how is that going to lead to an outcome? So how are you going to use that sticker as a hook to engage the parent to talk to them about risk and what they can do?

CRCWAST 03

The interviewee explains that there are often differing views about the best way forward for community engagement, even within a single organisation. Hence, the move away from conventional strategies can be difficult and contested. While community engagement is generally seen in a positive light, variation and even tensions were evident.

Some of the more commonly expressed examples of community engagement were open days at the fire station and the brigade attending events such as festivals and school visits. Indeed, one participant spoke of their very 'active' brigade as being in demand for local and community events. One participant spoke of a:

[N]ever-ending stream of requests to the brigade from organisations like Cubs and Scouts and Guides, local shopping centres, local schools for the brigade to come to present information on bushfires and bushfire risks.

CRCNSWKUR 28

Hence, as is the case in most bushfire prone areas covered by the study, there is evidence of the brigade being a vehicle for providing information to those in the locality. In addition, a range of outlets are used, the 'community' hubs where adults and children in the area could be found. While for some participants the brigade's attendance at such hubs were viewed positively, others were more critical regarding the lack of impact that some activities seemed to carry:

The majority of the time spent at those places is putting children in and out of the truck. Parents want to take photos of their kids in the truck. We try and talk to people about survival plans, but then the majority aren't near the bush, [and] don't think it's ever going to happen to them, so they're not that interested

CRCNSWKUR 25

The emphasis is on the provision of information rather than mutual interaction and engagement. In view of this focus, some participants elaborated that effective engagement needed to be

tailored and relevant to the needs of the people concerned. One brigade volunteer, for example, reported that having a face-to-face conversation about bushfire risk was more beneficial than distributing information brochures. One way of achieving such interaction by these brigade members was to see if a fire truck could access particular properties. Such activity enabled brigade members to initiate a conversation with property owners and households, and in some cases neighbours. Another example demonstrating bushfire preparation involved a brigade member reporting that they showed residents how to conduct a hazard reduction burn around a property. In this context, some participants also viewed the brigade carrying out mitigation measures as a community engagement activity. More specifically, a majority of participants felt that it was important that local people could see the brigade being active in the locality.

Hence, what is meant by community engagement is highly textured. There are layers of engagement ranging from the provision of information to the involvement of community members in policy refinement, if not formulation. In all cases covered by the study, information was provided, and in a range of ways, as indicated in previous chapters. The challenge is to extend such a one-dimensional form of engagement to a multi-partnered practice where mutual and reciprocal practices inform the relationships between agencies and communities (*cf.*, McLennan and Handmer, 2014).

Valuing community engagement

Community engagement is viewed by agency staff in a variety of ways, reflecting the uncertainty about meaning. Many of the participants responded to questions about community engagement positively and explained that they believed community engagement was important to their organisations. Several respondents gave accounts of how community engagement was used at a strategic level, as one of many considerations in the operation on bushfire safety programs, for example:

Education, engagement and communication is one element. You need to make sure that you've got other solutions in place like engineering solutions, environmental modification, and also enforcement [and] economic incentives.

CRCVICST 10

In this case, there is recognition that agencies often address two contrasting elements, one focused on the social, and by implication the ways in which citizens understand bushfire events, and the other on the technical, and in this instance the economic implications of addressing such events.

Often agencies take the initiative in promoting community engagement, and this can be quite formal.

Each area has to develop an engagement strategy. So developing those strategies, you know we're able to see what's being done and how that – so each area has a risk plan and

that defines the risks in the area. Then strategies are developed – you know hazard reduction or whatever it may be, including engagement programs to mitigate those risks. So then people develop a community education strategy. Then they outline what they're doing in their area to address risks particular to them.

CRCNSWST 01

The suggestion here is that a community engagement strategy involves setting and meeting a series of milestones on the way to implementing such an approach. It is a multi-faceted approach, reflecting some of the confusion about the content and scale of community engagement. Here, the agency promotes a form of citizen self-empowerment around bushfire events.

Another participant suggested that community engagement was useful because it served as a 'safety valve' where people could give their views.

Probably the primary way we use [community engagement] is by going through that process and allowing people to get all of this stuff on the table, and even in some cases be able to give some information that overcomes those issues but, in other cases, just listening to it. It then clears the way for them to take in information. One of the things it does for a start it allows – rather than us just, which has been the traditional approach, go out there and say, well, these are the key things we must tell them and da, da, da, da, da and getting into all that, if we don't let them get it off their chest, all they want to do is tell us about their issues some of which we wouldn't have seen.

CRCWAST 01

It was also suggested that this process presented an opportunity for the agency to then provide further information to residents. This example exhibits the kind of two-way process of participation outlined by Eversole (2012), which encourages all parties to learn from the process rather than simply viewing it as a top-down sending of information.

Other interviewees also viewed community engagement as an important part of strengthening their agency's legitimacy and ability to interact and intervene positively in particular localities:

[Community engagement] relates to all our work. I guess the bottom line is we can't do our work without the moral licence, if you like, from the community and the support and engagement from the community. Without it I guess we don't get political support. We then don't get financial support and then we find it very difficult to do any work at all. So engaging with the community and having the community you know both directly involved and generally supporting the work we do – I know that not every person is going to be enthralled with some of the decisions we make or of the work we do, but it's extremely important to us to have in the main, community support to undertake the activity.

CRCWAST 05

The value of community engagement in this instance is that it provides a moral licence to a range of activities initiated by and involving agencies.

In other cases, and obviously building on the capacities of agencies, a more instrumental approach to community engagement was promoted.

There's only 2000 of us in Western Australia in our organisation. If we think we can do fire on our own, then we're spitting in the wind. We've got to have an engagement process that works with the communities where we're based.

CRCWAST 10

This comment highlights the practical importance of employing community engagement strategies. With only limited agency personnel, residents need to participate in order to spread bushfire safety information effectively. There were some divergent views on this aspect, however, with some participants expressing the view that existing staff could be deployed more efficiently to support community engagement activities. One Melbourne Fire Brigade staff spoke of the urban context when considering community engagement:

Because you've got 1600 fire fighters, that's a lot of resources to go out and promote that. They should be out in shopping centres, they should be really out there engaging with the community and not sitting at the stations. They've got to be out at community engagement.

CRCVICST 08

In this instance, community engagement is seen as a valuable objective in its own right. Similar comments were made by some of the professional and volunteer staff from the CFA.

For agency staff community engagement was valued in its own right by some, while others looked at the practice of engagement in more instrumental terms. What is notable, however, is that while community engagement was defined in terms of participation, seldom was there a recognition of the marginal or indeed of the conditions for such involvement. Participants generally presented community engagement as an unproblematic feature of their organisation's bushfire mitigation strategies although some were more critical of the role of community engagement within their organisations. Some participants recognised that 'doing' community engagement represented a change in how agencies work with the public and that there was value in conducting preparation and education activities. Others spoke about how, within emergency management, there was a growing emphasis placed on consulting with community members rather than simply telling the public what to do.

Related to these changes within agencies, another theme from the interviews concerned attitudes of agencies staff and brigade members towards community engagement. Several participants noted a difference between older and newer brigade volunteers in their views:

Members aren't interested or don't believe that it is part of their role as a firefighter. A lot of them are like 'I go out and fight fires. That's what I do. I don't want to educate'. They really don't get their head around why it's important to educate the public, because it is not exciting to them, they can't be bothered. Most of them don't understand what the key messages are that we're getting across

CRCNSWKUR 25

This view that firefighters are here to 'fight fires, not to educate' is both relatively common and part of a more traditional assessment of what it means to be a firefighter. Nonetheless, others recognised that the demographics of the agencies are changing, with consequences for activity within the localities. As noted:

Before I came here, we got called 'Dad's Army', because there was a heap of older generation here, and they weren't getting out there to the community. But now we've got younger people there, and we're showing the community that we're here to help

CRCNSWDEN 5

Nonetheless, this statement is not about engagement in a reciprocal way but is about 'showing the community' that the brigade and the agency is 'here to help'.

Such developments can be partial and uneven. As indicated, many volunteers do not see the value of engagement.

If I said we had 40 members, 30 of those have no interest in community engagement. Amongst the senior members, not just age but experience, it would be more and more seeing the value in working with the community

CRCNSWST 11

The interviewee (an agency staff member who referred to their local brigade) refutes the idea that age is the most important factor in determining willingness to engage; over time volunteers are seeing the value of engagement.

Given the context of such comments from agency volunteers, it is important to recognise the fractured understandings of, and attitudes towards, community engagement within agencies. While there may be an official stance from the agency in favour of community engagement in some form, there are often more diverse perspectives and practices evident within the agency, both professional and volunteer staff. In some ways, the different views regarding community

engagement within organisations can prove to be an impediment to improving community engagement practices.

Barriers to community engagement

It is often assumed that the only barriers to effective community engagement lie outside the agencies, within the community itself. A number of participants mentioned that there was scepticism surrounding community engagement within parts of their organisations. When asked why community engagement was not viewed positively by some agency personnel, several participants noted the difficulty in juggling traditional operational activities, focused on firefighting, and community engagement activities, focused on preparedness and mitigation.

Because our key decision makers have come up through the brigade based on operational knowledge and strength. So that's where their comfort zone lies. They know in their heads from what happened to Victoria that they need to be seen to support engagement, and verbally they do to a limited degree. But in regards to putting resources in or even attending community engagement events and showing leadership – they don't ... It's not as sexy as the actual fire. There is no political kudos for them by putting time into community engagement

CRCNSWST 06

While there may be recognition of the value of community engagement, there are limited resources available to address this aspect of bushfire preparation. For others the lack of engagement results from non-recognition of the abilities and value of engagement.

The problem that we have is the mindset of our volunteers and our career firefighters. They join up to go and fight fires, so they don't join up to go and engage people. They don't want to mitigate the risk or reduce the risk and they don't see the benefits in that because then they're not going to have to go and fight as many fires and the communities will be safer. I think we also recruit people and we don't look at skill-sets. So because we are such a huge volunteer organisation, there may be volunteers out there that can't go fight a fire for various reasons, but are brilliant at engaging and communicating and forming networks. We haven't differentiated that skill-set to then use those people as local champions within the community. So I think, until it's led from the top that there's to be this community engagement approach and risk-based approach to our business – so we form that shared responsibility with the community – I think we'll be struggling

CRCWAST 03

These tensions are a reflection of the changing remit of fire agencies. While once the primary or even sole focus may have been firefighting, there are now broader requirements regarding communications. As these participants suggest, cultural change within agencies is likely to lead to the development of more effective community engagement programs.

Related to this changing character of fire agencies, other participants noted not only tensions within the agency itself, but tensions between the public face agencies wish to promote about operational firefighting and how this may, at times, be at odds with concepts of community engagement and shared responsibility with residents. When asked to comment on the relevance of engagement and empowerment, for example, the following participant spoke about the cultural construction of agencies as 'heroes' and how this may undermine meaningful attempts at community engagement.

It's like we're the experts in this so this is our domain, we'll handle the situation but they've kind of socially negotiated themselves as heroes. They're firefighters and they have this certain standing and they have this certain responsibility to be seen to be in control. Our whole agency does. It's like we tell the community we've got a Heliport and all this because we want the community to have faith in the emergency services and to believe that they can trust us. But then, at the same time, we make ourselves look like we're so in control that the community goes I don't have to worry about that because we've got all these heroes running around in the helicopters and stuff that will save the day

CRCWAST 02

Again, this suggests an almost contradictory position within agencies. That traditionally, there has been a valorisation of the operational and firefighting aspects of agency work and that the focus on these, both within agencies and popular perceptions, has affected the environment in which messages about resident responsibility are received and understood.

There were also more practical barriers to effective community engagement mentioned by other participants. For instance, when asked if the local brigade conducted any forms of community engagement, some volunteer brigade members in rural locations reported that members were limited because they did not have time for community engagement activities:

We have been involved in the past with organisations like Rotary and doing talks for them. But generally there is a need within the community for that face to face interaction with groups. But again, it's the 'flog the volunteers' scenario in that we have a very limited group of volunteers and time is of a premium nowadays with everybody

CRCTASSCT 11

Even where time is deemed a problem, when agencies focus on engagement volunteer staff will develop more positive views about engagement.

[Some] brigades are made up of farmers who just don't have the time. They're happy to jump on the truck but they don't have that engagement or time to get out there and engage. So it's one thing we struggle with down here but we're starting to get more and more interest from individuals within those brigades that they would like to become a liaison to the community. So we are building that sort of a network but, yeah, obviously, it takes time and it takes quite a large commitment from those people

CRCTASCT 10

One way of addressing the question of community engagement is to develop practices that in some respects reflect the character of engagement itself, via social networks.

While rural fire services, and indeed many volunteer organisations, are facing challenges in terms of recruitment of new members and amount of members' time available, these comments from agency staff may also indicate that community engagement may not be seen as a particularly high priority. That is, if there is something left out of brigade activities, is it most likely to be something that is perceived as less important? Not 'having time' for community engagement therefore suggests it is seen as less critical than other activities.

This section suggests that there may be divisions within bushfire agencies themselves that may compromise the effectiveness of community engagement activities, or even the possibility of including community engagement strategies within an agency's remit. Some participants still gave a generally positive assessment of the concept of community engagement but noted a lack of capacity within their organisations to be capable of carrying out community engagement activities. Other practical barriers to community engagement mentioned by volunteers included the remoteness of location, which was reported as having an impact on the ability to provide up to date information coming from central offices elsewhere, as well as simple communication activities being hampered by a lack of mobile phone and internet coverage.

Assessment: The Importance of Community Engagement?

The data presented in this chapter indicates that there are a number of problems that agencies face when implementing community engagement approaches. In this chapter we have focused on an often overlooked aspect of these challenges, the different and often fractured understandings of community engagement within bushfire agencies and among bushfire agency personnel. These include the challenges to convince some volunteers and agency staff about the merits of adopting community engagement approaches, as well as adopting a more unified approach to community engagement and understanding the underlying purpose of community engagement activities. Further work could be done to explore the extent to which there are variations of community engagement based on social-economic status and the role of social taboos in discouraging others from participating.

In Australia, and internationally, governments have shown a renewed interest in community engagement (Cavaye 2004; Reddel and Woolcock 2004; King and Cruickshank 2012). There is evidence that appropriate community engagement produces positive social outcomes across a range of policy areas including: crime, employment and housing (Rogers and Robinson 2004). Head (2007) argues that justification for this official interest in community engagement can be traced to different levels. Nationally, for example, an interest in community reflects an acknowledgement that governments cannot resolve complex problems without sharing responsibility (McLennan and Handmer, 2014).

For us, community engagement is a precondition for sharing responsibility; without a comprehensive and participative form of engagement there is a return to a top down

promotion of engagement. As indicated by the research, there are three aspects to consider, First, as indicated by a number of agency personnel and experienced within the community, there is a local or geographical basis to community engagement. As stated there are a number of measures, ranging from the provision of information and consultation on the one hand, to the active involvement of citizens, together with agency personnel in practices exemplified by Community Fireguard in Victoria, and their equivalents elsewhere.

Second, and an extension of the first point, for many, community is associated with a sense of belonging. According to Rogers and Robinson's (2004) review of the evidence showing the benefits of community engagement, the means by which community engagement promotes positive social outcomes are often complex and multifaceted. The authors, however, identify three primary processes involved:

- *Socialisation*: how communities foster the internalisation of co-operative and sociable standards;
- *Guardianship*: how neighbours look-out for one another and others in the community;
- *Information flows*: how communities work with public organisations, offering information about the way things work, and opinions about how they might work more effectively.

Aspects of these processes were evident in the work carried out by volunteer brigades. For example, some participants from the 'Effective Communications' project referred to particular brigades which were known to be proactive notably in targeting new residents with information about bushfire risk as well as encouraging their involvement in the bushfire brigade. In such cases the brigade acts to normalise particular forms of behaviour that promote community safety.

Community engagement has been justified at the local level, hence in relation to networks, and related activity. According to Head (2007), this is manifested through the emphasis on localised responses to particular problems. In other words, local people devise solutions to issues they face. The widespread adoption of community engagement approaches across a range of policy issues has also created dilemmas for those who seek to promote such engagement as agency staff. Hence, a number of staff, particularly those with locally-based and focused responsibilities spoke of the disjunction between agency executives and these staff.

Third, the critical point here is that such engagement requires that agencies learn from the community, that it is a mutually reinforcing process. Thus: 'Evidence-based in our decision-making localised strategies, localised issues and being targeted in where we run our program...' (CRCWAST 03). In contrast, it is argued that government's interest in all things community, including engagement, waxes and wanes and can be born out of cynical opportunism (Mowbray 2005). Craig (2007) also argues that the ways in which governments manage community activities can strengthen control at the centre and actually weaken localised community development that would ordinarily look to identify, shape and give voice to, local interests.

These debates can be applied to bushfire management as well. For instance, the Victorian Bushfire Safety Policy Framework (FSC 2011) states that all Victorians, including government

and emergency organisations, need to take responsibility for preparing for and learning about bushfires. Another policy priority is local community fire planning, where agencies and residents examine various options to reduce the risk of bushfire. In addition, one of the recommendations from the Victorian Bushfires Royal Commission was for the state's agencies to review its bushfire education programs against key criteria to:

[E]nsure that in content and delivery the program is flexible enough to engage individuals, households and communities and to accommodate their needs and circumstances (Teague et al. 2010).

This review returns us to the question of power. When considering power relations, the recognition of rights and benefits is a first step. The second complementary step is to understand the complexity of community engagement, and hence note who is the subject, how are understandings generated, and under what conditions. So, community engagement matters.

Having considered why community engagement is important and how it works, it is necessary to consider why, and under what conditions, community engagement may not be achieved. In relation to public health in the UK, Pickin and colleagues (2002) argue that the constraining factors their participants reported covered five domains: the community's capacity to engage; the skills of organisation staff; the dominant professional service culture; the overall organisational ethos; and the dynamics of local and national political systems.

Taylor (2007) draws on governmentality theory that seeks to explore new forms of governance, that is governing beyond the state. Some see this notion positively, as identifying new opportunities for communities to be involved in decision-making processes. However, Taylor (2007: 314) is less optimistic and states that despite the governance rhetoric:

[N]ew governance spaces are still inscribed with a state agenda, with responsibilities pushed down to communities and individuals at the same time that control is retained at the centre, through the imposition and internalisation of performance cultures that require 'appropriate' behaviour.

Expanding Taylor's observation, others criticise the way in which particular structures and systems are privileged over others. As Eversole (2011: 68) states: 'Communities are encouraged to engage in government institutions and processes, while their own institutions and processes remain invisible.'

Efforts by fire agencies to develop community engagement strategies for bushfire safety are relatively new. Wettenhall's (1975) critical account of the 1967 Hobart fires in Tasmania, for example, demonstrated how bushfire management arrangements, including community engagement, were *ad hoc* and under developed. As fire services have become more formally organised, they have developed community engagement programs and there are growing

research interests and guidelines relating to community engagement and bushfire (e.g. Gilbert 2005; Gilbert and Marsh 2009; Fairbrother *et al.* 2010; Frandsen *et al.* 2011). Gilbert (2007), for example, reviewed 60 programs. Specific community-based programs in Western Australia, New South Wales and Victoria have also been examined.

More recently, research in Tasmania examined community engagement methods and a community development approach to encourage bushfire preparedness (Frandsen *et al.* 2011). The authors report that community engagement encourages bushfire preparedness and that bushfire preparedness could be 'community driven' using community development approaches. The Federal Government has also published detailed guidelines regarding community education and engagement programs (Elsworth *et al.* 2010). The authors argue that bushfire education and engagement programs should be informed by a set of principles including devising ways to:

Optimise the balance between 'central' policy positions, agency operational requirements and specialist expertise on the one hand and community participation in planning, decision-making, preparation and response activities on the other (Elsworth *et al.* 2010: 9).

Again, this focus emphasises the importance of agency and operational change as part of community engagement processes.

Community engagement initiatives regarding bushfire/wildfire have generally received positive reviews in academic literature. McGee (2011) explores participants' involvement in neighbourhood level wildfire mitigation programs in Canada, the US and Australia and presents a positive view of these programs, including Community Fireguard in Victoria. The author argues that such initiatives not only decrease the risk of wildfire in communities, but that they foster community resilience and develop relationships between residents and agencies. However, Fairbrother and colleagues (2010), in their review of CFG groups in relation to bushfire report a number of limitations. Officially, CFG groups are considered to be successful when the four main topics have been completed and when the group subsequently meets with their facilitator at least once, annually. However, 50 per cent of the participants surveyed by Fairbrother and colleagues thought that less than half of the members of their CFG group had completed the core program. In addition, despite the importance of at-risk residents being psychologically prepared to face a bushfire, this aspect was not addressed within the core program or in the facilitator's training materials. The authors of the review also argue that it was difficult to assess the overall effectiveness of CFG because of reporting inconsistencies. Generally, we can see that fire and related agencies and volunteers spend considerable time and resources in promoting awareness of bushfire risk and how residents should prepare for the fire season.

This broad context raises questions about power relations. The first point to note is that power differentials between citizens in a locality and others play out within existing political and economic structures (Nelson *et al.* 2008). Second, communities as localities are marked by a range of distinctions and differences that in turn shape the processes and forms of engagement. Third,

agencies need to respond to different groups in neighbourhood in terms of their social capital; different forms of community engagement (referred to as support provided by and for members of a locality) found in affluent and less affluent localities (Brannan *et al.* 2006 and Williams 2009). Hence, the specific forms of community engagement in relation to bushfire are shaped by a complex set of relations that define communities and the agencies that work with them.

Summary

This chapter addresses the complex arrangements in relation to community engagement and bushfire. There are varied understandings of what constitutes community engagement. These accounts draw attention to the processes whereby citizens participate in activity in relation to bushfire preparedness and response. On the one hand, citizens find themselves in a range of situations which may or may not enable ready engagement around such matters. On the other hand, agencies deal with multiple publics, involving some and marginalizing others.

Within localities, community engagement was experienced in complex and for some in attenuated ways. The weakness in the perception of community engagement by agency members is that community is often viewed as a locality, with limited perception of the multifaceted ways of defining community, thereby overlooking the sense of belonging and social groups and networks. There was limited recognition of the marginal and the different. Hence, the outcome is a limited attempt to build and maintain relationships between the brigade and non-brigade members as well as to persuade the broader publics to adopt particular bushfire preparedness behaviours. There was evidence that a layer of state-level staff tended to view community engagement as something done to people; a more top-down approach, which fails to recognise the value of adopting community engagement as a two-way interaction that may affect agencies as well as residents. Thus, there are significant barriers to community engagement organizationally; agency staff are often divided, in many instances along hierarchical lines, as are the personnel within individual brigades.

Whether agencies are able or willing to adopt community engagement approaches depends on a range of factors, including material and practical considerations, such as having skilled staff and the resources to support them. Community engagement raises a fundamental question for agencies. Rather than asking the public why they do not engage with agencies, the question is: What is it about agencies that prevents people from engaging with what they are doing? Until the importance of this question is acknowledged, agencies may find the effectiveness of their community engagement strategies to be limited. Of equal importance, is the detail of the ways in which citizens, as residents and others play their parts in the communities, as involved and marginalised. This question is the focus of the next chapter.

Implications

1. Community engagement takes different forms including top-down one-way approaches and two-way participatory approaches. Governments and organisations should consider which approach will be most effective in achieving their intended objectives given the inherent benefits and limitations of each approach.
2. Agencies and brigades should consider, not only the types of participation they are initiating, but also who is taking part and who is absent. Rather than viewing community engagement as a 'thing' that a particular department / unit or individual does, agencies and volunteers would be best served by viewing community engagement as a process and integrating forms of community engagement into whole of brigade/organisation approaches.
3. While community engagement is generally seen in a positive light, tensions are seen to exist in different kinds of community engagement. Government and relevant organisations should be mindful of these tensions in order to increase the effectiveness of community engagement and their operations.
4. Attention should be given to the social barriers and capital barriers to community engagement.

Directions for Future Research

1. An in-depth investigation of the types of community engagement activities being undertaken, including the resource requirements, expectations and outcomes from both a community and organisation perspective would be valuable. Such research would provide insights into the costs and benefits of effective community engagement and offer guidelines and lessons on how to achieve improved outcomes.
2. Longitudinal research examining the processes of community engagement initiatives from their conception, to implementation and review would be valuable. Such a study could investigate community engagement initiatives which are one-way, two-way, bottom-up and top-down.
3. Future research should examine more closely, the tensions that exist within organisations and between organisations; and the tensions between organisations and community, so as to cultivate improved community engagement.

References

- Adams, M.A. and Attiwill, P.M. 2011. *Burning Issues: Sustainability and management of Australia's southern forests*. CSIRO: Melbourne.
- Arnstein, S. 1969. A Ladder of Citizen Participation. *AIP Journal*, July: 216-214. Blackshaw, T. 2010. *Key Concepts in Community Studies*. Sage: Los Angeles.
- Brannan, T., John, P. and Stoker, G. 2006. Active Citizenship and Effective Public Services and Programs: How can we know what really works? *Urban Studies*, 43(5-6): 993-1008.
- Braun, V. and Clarke, V. 2006. Using Thematic Analysis in psychology. *Qualitative Research in Psychology*, 3(2): 77-101.
- Bunton, R., Baldwin, S., Flynn, D. and Whitelaw, S. 2000. The 'Stages of Change' Model in Health Promotion: Science and ideology. *Critical Public Health*, 10(1): 55-70.
- Cavaye, J. (2004) Governance and Community Engagement: The Australian experience. In Lovan, W.R., Murray M. and Shaffer, R. (eds) *Participatory Governance: Planning, Conflict Mediation and Public Decision Making in Civil Society*. Ashgate: London.
- Cornwall, A. 2008. Unpacking 'Participation': Models, meanings and practices. *Community Development Journal*, 43(3): 269-283.
- Craig, G. 2007. Community Capacity-building: Something Old, Something New...? *Critical Social Policy*, 27(3): 335-359.
- Elsworth, G., Gilbert, J., Stevens, K., Robinson, P. and Rowe, C. 2010. *Guidelines for the Development of Community Education, Awareness and Engagement Programs*. Commonwealth of Australia: Canberra.
- Eversole, R. 2011. Community Agency and Community Engagement: Re-theorising participation in governance. *Journal of Public Policy*, 31(1): 51-71.
- Eversole, R. 2012. Remaking Participation: Challenges for community development practice. *Community Development Journal*, 47(1): 29-41.
- Fairbrother, P., Hart, A., Stratford, J. and Prokopiv, V. 2010. *CFA Community Fireguard Review: Improving quality control and assurance..* RMIT University: Melbourne.
- Fairbrother, P., Tyler, M., Hart, A., Mees, B., Phillips, R., Stratford, J. and Toh, K. 2013. Creating 'Community'? Preparing for bushfire in rural Victoria. *Rural Sociology*, 78(2): 186-209.

Frandsen, M., Paton, D. and Sakariassen, K, 2011. Fostering Community Bushfire Preparedness through Engagement and Empowerment. *The Australian Journal of Emergency Management*, 26(2): 23-30.

Fraser, N. 1992. Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy. In Barker, F., Hulme, P. and Iverson, M. (Eds.), *Postmodernism and the Rereading of Modernity*. New York: Manchester University Press.

Fraser, N. 2009 *Scales of Justice: Reimagining Political Space in a Globalizing World*, New York: Columbia University Press

FSC. 2011. *Bushfire Safety Policy Framework, September 2011*. FSC: Melbourne.

Gilbert, J. 2005. *An Evaluation of the Street FireWise Community Education Program in the Blue Mountains, New South Wales*. Bushfire CRC: Melbourne.

Gilbert, J. 2007. *Community Education, Awareness and Engagement Programs for Bushfire: An initial assessment of practices across Australia*. Bushfire CRC: Melbourne.

Gilbert, J. and Marsh, G. 2009. *Final Report: BRAG (Bushfire Ready Action Group) in Western Australia: Three evaluative case studies*. Bushfire CRC: Melbourne.

Grewal, M. 2007 'Partnerships for creating inclusive and successful communities', *Smart Growth Tactics*, Issue Number 38: Inclusive communities.
http://www.planningmi.org/downloads/issue_38_inclusive_communities.pdf

Head, B.W. 2007. Community Engagement: Participation on whose terms? *Australian Journal of Political Science*, 42(3): 441-454.

IAPP. 2014. IAP2's Public Participation Spectrum.
<http://www.iap2.org.au/documents/item/84>

King, C. and Cruickshank, M. 2012. Building Capacity to Engage: Community engagement or government engagement? *Community Development Journal*, 47(1): 5-28.

Keelty, M. 2011. *A Shared Responsibility: the Report of the Perth Hills Bushfire February 2011 Review*. Government of Western Australia: Perth.

McCaffrey, S.M., Stidham, M., Toman, E. and Shindler, B. 2011. Outreach Programs, Peer Pressure, and Common Sense: What motivates homeowners to mitigate wildfire Risk? *Environmental Management*, 48(3): 475-88.

McGee, T.K. 2011. Public Engagement in Neighbourhood Level Wildfire Mitigation and Preparedness: Case studies from Canada, the US and Australia. *Journal of Environmental Management*, 92: 2524-2532.

- McLennan, B. and Handmer, J. (2014) Sharing Responsibility in Australian Disaster Management: Final Report for the Sharing Responsibility Project, East Melbourne: Bushfire Cooperative Research Centre.
http://www.bushfirecrc.com/sites/default/files/sharingresponsibilityfinal_report.pdf
- Mowbray, M. 2005. Community Capacity Building or State Opportunism? *Community Development Journal*, 40(3): 255-264.
- Nelson, A., Babon, A., Berry, M. and Keath, N. 2008. Engagement, But For What Kind of Marriage? Community members and local planning authorities. *Community Development Journal*, 43(1): 37-51.
- Pickin, C., Popay, J., Staley, K., Bruce, N., Jones, C., and Gowman, N. 2002. Developing a Model to Enhance the Capacity of Statutory Organisation to Engage with Lay Communities. *Journal of Health Services Research and Policy*, 7(1): 34-42.
- Reddel, T. and Woolcock, G. 2004. From Consultation to Participatory Governance? A critical review of citizen engagement strategies in Queensland. *Australian Journal of Public Administration*, 63(3): 75-87.
- Rhodes, A., Gilbert, J., Nelsson, C. and Preece, E. 2011. *Evaluation Report 2010-2011. C2.10B Evaluation and Effectiveness Project*. CFA: Melbourne.
- Rios. M. 2004 Multiple Publics, Urban Design and the Right to the City: Assessing Participation in the Plaza del Colibrí. In (Re)constructing Communities: Design Participation in the Face of Change, Proceedings of the 5th Pacific Rim Conference on Participatory Community Design. Edited by Jeffrey Hou, Mark Francis and Nathan Brightbill Published by Center for Design Research, University of California, Davis. 2005.
<http://www.openspace.eca.ac.uk/conference/proceedings/PDF/Rios1.pdf>
- Rogers, B. and Robinson, E. 2004. *The Benefits of Community Engagement: A review of the evidence*. Active Citizenship Centre: London.
- Taylor, M. 2003. *Public Policy in the Community*. Palgrave MacMillan: Basingstoke.
- Taylor, M. 2007. Community Participation in the Real World: Opportunities and pitfalls in new governance spaces. *Urban Studies*, 44(2): 297-317.
- United Nations 2005. The Brisbane Declaration on Community Engagement.
www.iap2.org.au/sitebuilder/resources/knowledge/asset/files/37/unbrisbanedclarationcommunityengagement.pdf accessed 01/10/2013
- Wettenhall, R. L. 1975. *Bushfire Disaster: An Australian community in crisis*, Angus & Robertson: Sydney.

Williams, C.C. 2009. Geographical Variations in the Nature of Community Engagement: A total social organization of labour approach. *Community Development Journal*, 46(2): 213-228.

Chapter 8: Communication within Households: Bushfire Preparedness, Bushfire Response and Gender

As the important role of the social sciences has increasingly become recognised in bushfire research in Australia, the areas of investigation have expanded. Following the Royal Commission into the Black Saturday fires in Victoria, there has been significant public discussion about how best to understand the relationship between people, place and bushfires: how best to prepare for, communicate about, respond to, and recover from these kinds of disaster events. There has also been discussion around the now substantial amount of bushfire-related research undertaken in Australia and debate over what areas are most in need of future exploration. As Tyler *et al.* (2012) and Tyler and Fairbrother (2013a, 2013b) have argued, however, an understanding of the social construction of gender is both critically important and generally overlooked in bushfire research at this point in time, and that this area warrants further examination.

While the study of gender and associated questions about the social construction of masculinity and femininity have been established as important elements of social science research for decades, gendered analysis entered disaster studies relatively recently. It was not until the late 1990s, for example, that the first edited collection on gender and disaster was published (Enarson and Morrow 1998). Since this time, there has been a steady increase in international literature dealing with the relationship between gender and disaster, and there has been some progress too, in Australia. In 2013, the *Australian Journal of Emergency Management* published its first special issue on gender and in 2012, the annual conference of the Australasian Fire and Emergency Service Authorities Council (AFAC), included a special panel addressing gender and disaster. However, there is still a long way to go before gendered analysis is accepted as a valued part of academic bushfire research in this country, and there is still virtually no recognition of the influence of gender norms or inequalities in the official strategies of fire agencies or in government policy.

In this chapter, we draw on the existing international literature on gender and disaster and build on the fledgling work that has already been published on gender and bushfire in Australia. We aim to extend existing research in this area by considering the importance of the social construction of gender with reference to bushfire preparedness and response strategies, focussing especially on communication between heterosexual couples and within households. The focus of this chapter is on data gathered from interviews with residents in bushfire-prone areas across three Australian states (Victoria, New South Wales and Western Australia) in 2011 and 2012.

Background: Why is Gender Important?

It should be noted that the study of gender is not concerned with biological differences between men and women. Gender refers specifically to the ‘socially learned behaviour and expectations that distinguish masculinity and femininity’ (Peterson and Runyan 1999: 5). For some decades, the social construction of gender has been a focus in disciplines such as sociology and anthropology, with gendered analyses evident in areas ranging from criminology to international political economy. The importance of gender is also recognised in trends towards ‘gender mainstreaming’ evident in many national and international public policy discourses (Walby 2005).

The integration of gendered analysis in the social sciences has led to a greater recognition of the role that the social construction of gender plays in affecting the attitudes and behaviours of individuals as well as social, political and economic institutions. There are few, if any, areas of social life where norms of masculinity and femininity, as well as inequalities between men and women, are not evident (Lorber 1994). In terms of disaster, one of the more obvious ways in which the influence of gender norms has been recognised is through the masculinised and male-dominated structure of emergency services organisations (Tyler and Fairbrother 2013b). There are, however, a number of more complex and subtle ways in which disasters have gendered consequences. For instance, there is evidence to suggest that, globally speaking women are at greater risk from the effects of disaster than men (Enarson and Morrow 1998; Enarson and Chakrabarti 2009). Gendered differences have also been documented in relation to disaster risk perception and exposure, preparedness behaviour, styles of and access to warning communication, response to warning communication (especially with regard to evacuation), physical and psychological impacts, recovery and reconstruction (Fothergill 1998).

What emerges from this work on gender and disaster is that women are, in a number of different ways, more vulnerable to the effects of disaster than men. Again, this is not thought to be the result of some innate or biological differences between men and women; rather, these differences are understood to be the result of socio-political factors, including gender inequality. Marginalised groups are more likely to suffer from the effects of disaster; women are often disadvantaged because of their social and economic positions in society.

Various gendered social restrictions impact upon women’s responses to disaster. For example, women are less likely than their male counterparts to have been taught how to swim. They are also more likely to wear restrictive or inappropriate clothing, because of gendered expectations about dress (Enarson and Morrow 1998; Enarson and Chakrabarti 2009). It is therefore not surprising that women are over-represented in deaths from drowning during floods and tsunamis (Ariyabandu 2009). In some instances, regardless of type of natural hazard, women are hampered in their attempts to flee because they are more likely to experience restrictions on their outdoor or public movements (Ariyabandu 2009; Chakrabarti and Walia 2009). Women are also more likely to take on care-giving responsibilities for children, the elderly and the infirm, and it has been theorised that these responsibilities often impede a woman’s ability to escape imminent danger (Enarson and Morrow 1998). In terms of preparation and communication, in many developing countries, women are less likely to be literate and therefore the chances of women

being able to read and understand preparedness information and disaster warnings are diminished (Enarson and Morrow 1998).

Substantial gendered differences have also been found in disaster preparation and response in (post)industrialised states. One of the most prominent of these discrepancies is women's more common preference for evacuation (e.g. Scanlon *et al.* 1996; Bolin *et al.* 1998; Fothergill 1998; Bateman and Edwards 2002; Mozumder *et al.* 2008). The evidence for this difference comes mostly from instances of floods, hurricanes and earthquakes but has also been noted in some case study research on forest fire (e.g. Mozumder *et al.* 2008). This literature indicates that women are significantly more likely to favour preparation for evacuation, while men are more likely to want to stay in an area of danger (Scanlon *et al.* 1996; Bolin *et al.* 1998; Mozumder *et al.* 2008). In some places around the world, women's preference for evacuation is actually portrayed in a positive light. Enarson (2009), for example, shows that women's more common preference for evacuation is seen by a number of emergency agencies internationally as a valuable asset in promoting risk aversion.

There is an understanding within many of these agencies that a preference for evacuation is often linked to gendered norms of responsibility (e.g. care-giving). This understanding, highlighting the social roots of gendered behavioural difference, is further supported by studies on risk perception, which show that the most privileged groups – in particular, wealthy, white men – are much more likely to have low risk perception (Finucane *et al.* 2000; Bateman and Edwards 2002); while the poor, minority groups, and women are more likely to have high risk perception. Finucane and others (2000) suggest this stems from inequality, different environmental factors, and life experience. That is, those who are the most privileged tend to experience the least fear in their everyday lives and, as a consequence, may under-rate risks associated with events such as natural disasters.

Gender, Evacuation and Bushfire in Australia

As McLennan and colleagues (2012) note, there are still very few studies exploring residents' readiness to evacuate for wildfire/bushfire disasters. In Australia, women's preference for evacuation during a bushfire threat has been noted by Proudley (2008), and is also mentioned in a recent report from the Office of the Emergency Services Commissioner in Victoria (OESC 2010), but these accounts have not yet been supported by other peer-reviewed studies with extensive data or in-depth analysis. We have written elsewhere (Tyler and Fairbrother 2013b), that many fire agencies in Australia take a notably different view of women's more likely preference for evacuation from their overseas counterparts. Indeed, there have been programs which have tried to 'educate' women out of their initially stated choice of evacuation (Tyler and Fairbrother 2013b).

What is also very different in the Australian context is the unusually gendered nature of bushfire death-tolls. Unlike the trend in disasters internationally, where women are over-represented in death tolls (Enarson and Chakrabarti, 2009), in Australia, more men than women die in bushfires. Indeed, a recent survey of bushfire deaths has shown that almost three times more civilian men than women died in bushfire events in Australia between 1900 and 2008 (Haynes *et*

al., 2010). Haynes and colleagues (2010: 192) suggest that one of the reasons men may be over-represented in bushfire fatalities is that they are more likely to ‘actively defend a house’ during a fire while women are more likely to ‘shelter passively’.

However, the issue is not only the course of action in response to a disaster event, it is also *how* that course of action is chosen. There is evidence to suggest that disagreements between men and women within a household, over the best course of action to take during a fire threat, are a significant issue. Proudley (2008), for example, found in her study of couples in South Australia, that there were noticeable differences between what husbands and wives believed was the best course of action to take when bushfire threatened. Furthermore, Handmer and colleagues (2010) have shown how the consequences of disagreement within a household can, in fact, be deadly. In a review of fatalities from the Black Saturday fires, Handmer and colleagues submitted the following to the Royal Commission:

There is evidence of disagreements as the fire approached. In virtually all cases this was between women who wanted to leave and take the men with them and men who either wanted to stay and defend or who felt they had to support others in that role. In some cases it appears that the difference in opinion was long standing, in other cases it was only acknowledged at the last minute. This led to some people changing their plans at the last minute. This appears particularly the case for couples. There are instances where women who fled under these circumstances survived. Conversely, there is also evidence of such disagreements where males refused to leave, but relatives decided to stay, leading to additional fatalities – assuming they would have survived leaving (Handmer *et al.* 2010: 22).

The ‘Effective Communities’ research project, in part, picks up on these disagreements. In the course of the interviews, participants often spoke about what they believed they would do if (and occasionally, what they had done when) a bushfire threatened their area or home. In all but one of the nine locality case studies, there were recorded instances of heterosexual couples preferring different courses of action. The most obvious pattern that emerged from these differences was that couples or families who had agreed that the female partner would leave and, if there were children in the household, evacuate with them while the male partner would stay with the property; either to make further preparations, or with the intention of staying to defend. The research team also found several instances of stated disagreements between couples as to their bushfire preparation and response planning.

This study is not, therefore, intended to show that women are more likely to favour evacuation (although this did seem common), but rather to add to existing evidence that there are likely to be differences in the favoured method of bushfire preparation and response between men and women. Furthermore, the authors explore the gendered dynamics that may be involved in determining a household bushfire plan, and the way in which gendered expectations may, in fact, impair a heterosexual couple’s ability to communicate and negotiate effectively with regard to bushfire safety. This is a notably different approach from much existing research. Instead of adopting an individual-based psychology of decision-making approach (Johnson *et al.* 2012), the project team focused on understanding the social (in this case, gendered) relations of intra-household communication.

The findings analysed here also suggest a more complex understanding of household decision making and gender norms than that put forward recently by Goodman and Cottrell (2012). Drawing on a relatively small sample (17 interviews in one locality), Goodman and Cottrell detail a common theme of men's 'burden' of decision making within households with regard to bushfire preparedness and response. They also outline the stories of several women who were 'dependant' on advice from their husbands during a bushfire threat. The data collected by the 'Effective Communication' research team, however, shows a much more multifaceted process of negotiation between members of heterosexual couples regarding bushfire safety. While some female respondents did report deferring to their husbands on issues of bushfire preparation and response, it was much more common for there to be active disagreement within households, where men and women had substantially differing opinions about the best course of action to pursue. Many women were very vocal in their opposition to their male partners' plans to 'stay and defend', for example, but expressed difficulty convincing male partners that leaving early was a better option. The implications of these findings are discussed later in the chapter.

The Data

The data analysed here is drawn from a series of interviews that were conducted by members of the research team in 2011 and 2012, and the data analysed here is drawn from interviews that were carried out in nine different localities across three states (Victoria, New South Wales and Western Australia). In each state, three high-risk bushfire localities were chosen; one rural, one urban-rural interface, and one 'tree change'/'sea change' or tourist destination. In Victoria these locations were St Arnaud, Selby-Belgrave and Anglesea; in New South Wales, Deniliquin, Kuring-Gai and Shoalhaven; and in Western Australia, Bridgetown, Bedfordale and Dunsborough.

Prior to visiting each locality, the research team contacted local volunteer fire brigades, community groups and organisations, as well as local government, to explain the research project and to generate interest in participation. A snowballing method was used, and the team conducted a number of interviews in each area on the basis of referrals from these contacts and other interviewees. The interviews were separated into those with residents, based on their experiences of bushfire communication, preparation and planning, and those with local authorities, focused on their aims with regard to communication and bushfire preparedness within the local community. The data analysed in this chapter is taken only from interviews with residents.

Interviews were based around a standard set of open-ended and follow-up questions relating to community, communication and bushfire preparedness. Gender differences and expectations were not mentioned explicitly in the standard set of questions. Interviews were conducted face-to-face, most often in a resident's home. In total, 107 interviews with residents were conducted in the nine localities, involving 116 participants (some interviews were with couples and, in one instance, friends). Following the completion of the interview process, all recordings were transcribed.

It should be noted that the participants for this project are not a representative sample of the demographic make-up of the localities studied in the project. Overall, we found that retirees were substantially over-represented among our interviewees and that recent migrants and residents from culturally and linguistically diverse backgrounds were under-represented. It may also be that those who wished to participate in the interviews for this project were more likely to be aware of, or interested in, bushfire preparation than other residents, as they were willing to sit down with a researcher for 45 minutes to an hour, to discuss bushfire preparation and response.

As the interviews conducted in each State were undertaken by different researchers, there is some level of disparity in the focus of the interviews, particularly regarding follow-up questions and in some instances this makes direct comparison across the States difficult. The interviews with residents in Victoria were, on average, longer and more detailed than those in the other two States, for example, and were the only interviews where gender was explicitly mentioned by the researcher/facilitator. Nonetheless, cross-checks and agreed coding arrangements were initiated to ensure the highest degree of comparability of the database.

While gender was not a focal point of the interviews, the framework of analysis was designed to determine if gendered themes existed in residents' discussions of bushfire preparedness and response, particularly in terms of their own household plans regarding bushfire preparation and response. A theoretical thematic analysis (Braun and Clarke 2006) of the 107 interviews was carried out. First, an initial gender coding framework was designed to help identify areas of the data where issues of gender might have been raised by participants (see appendix for the final list of coding terms). Building on international research on gender and disaster, as well as our own previous research on gender and bushfire in Australia (Tyler and Fairbrother 2013a), there was a particular focus on analysing residents' discussions of bushfire planning and preparation to determine if there was any noticeable difference in the plans of men and women. Second, to ensure that individual search terms were not included out of context, the interactions immediately preceding and immediately after flagged terms, were read in their entirety. This stage of the analysis moved beyond simple coding of terms and began to involve the documentation of broader themes in the data set.

Of the 107 interviews included in this analysis, 62 were flagged as having significant interactions regarding gender and bushfire preparedness. That is, after initial coding and reading each coded section in context, 62 of the interviews contained an interaction (either between the facilitator and the participant, or between participants, in some instances) that indicated one or more of the following: a gendered difference in bushfire preparation and/or response; a gendered difference in stated motivation for a particular course of action with regard to bushfire preparation and response; a disagreement between members of a heterosexual couple regarding the best course of action for bushfire preparation and/or response; or a comment on who was responsible within the household for decision making regarding bushfire preparation and/or response.

Gender and Fire

The most prevalent themes around gender and bushfire safety were found to be: a bushfire plan that involves a female partner evacuating and a male partner staying; disagreement between

members of a heterosexual couple regarding an optimal bushfire plan; a lack of clarity between a heterosexual couple as to an agreed bushfire plan; and gendered differences in motivations to ‘stay and defend’ or evacuate. The first two of these themes are the primary focus of the analysis in this chapter.

Men stay, women (and children) leave

Among those residents interviewed who did have a clear bushfire plan, and articulated this view, there was a noticeable trend among those who stated that ‘stay and defend’ was part of their bushfire response plan. While there were instances where both members of a heterosexual couple planned to stay, it was more common that the male partner planned to stay and the female partner planned to evacuate. This trend was often brought out in discussions with the researcher about bushfire planning for the household, so in response to questions such as: ‘Do you have a bushfire plan?’, ‘Are you preparing to evacuate?’, ‘Is there a trigger that would lead you to evacuate?’ or ‘Have you discussed this plan with anyone else in the household?’

One participant in Victoria stated, for example: ‘I will not leave my property.’ When asked if his wife was leaving, he responded: ‘My wife knows she’s got to walk one property up to the school’ (CRCVICSEL 13). Another participant in New South Wales gave his ‘general strategy’ as:

[M]y wife and daughter ... they would vacate the area and then we’d [the participant and his son] make an assessment as to whether there was a need to stay...

CRCNSWKUR 27

A woman in Western Australia talked about why she had concerns about staying to defend with her husband:

[W]e have said if it’s really, really imminent over there somewhere, [my wife] and the girls and I will go in the safe time and you [her husband] and [our son] will stay. Because I don’t think – I think I would be a bit useless quite frankly.

CRCWADUN 26

These are indicative examples of the kinds of ways in which residents explained an agreed difference in approach to bushfire response within the household.

It is important to note that there were no instances found where women planned to stay while their male partners planned to evacuate. These kinds of plans, which involve the splitting up of the adult members of the household, were found to be present among older retirees and younger couples, both with and without children, although children were sometimes mentioned as a motivating factor for evacuation. So while there may be a connection to gendered norms of care-giving, as mentioned in the international literature on gender and disaster (e.g. Enarson and Morrow 1998; Bateman and Edwards 2002), this is not the only issue. There were, for example,

several instances where children, or the care of others, were not factors in determining that a female partner would leave and a male partner would stay.

Indeed, it seemed that underlying gendered expectations of behaviour ran deeper than the norm of women's caregiving. Several men also expressed a belief that it was their role, *as men*, to stay. In at least one instance, a male partner could not articulate why he was not prepared to leave with his partner. When questioned as to why he had chosen to 'stay and defend', he responded by saying:

I'm not sure why because I don't have a huge emotional tie to the whole place and it's insured...But I just think that's what I should do.

CRCWADUN 21

Other participants, when asked to explain the reasoning behind their current bushfire plans, gave examples of past experience where gender had been a defining factor:

I went through Ash Wednesday and I could see that you could save your house by staying there, as long as you're well prepared. My wife wouldn't do that, she'd clear out.

CRCVICANG 13

Observation of a prior event suggested to this man that property could, and should be protected. It was not clear why his wife took a different view, presumably because she had not had this experience.

During the 2001 [bushfire] event, my wife and daughter were evacuated. It wasn't a compulsory evacuation at the time ... I was determined to stay here and did so...

CRCNSWSHO 14

In this case, in 2001, the husband had stayed, survived and this experience then informed his future actions. Nonetheless, in practice he may make a different decision, depending on the character of the fire, and the lead up to it.

[B]ecause I'd just had my little girl when the last fire went through, so it was a case of getting them [his daughter and female partner] down to where they had to be so that I could stay with the house.

CRCNSWSHO 09

The man clearly felt a responsibility for his child, and partner, so they were evacuated, while he stayed and defended.

[A]ll the guys stayed in '86 or '83. All the guys would and all the women left ... back then they were saying evacuate women and children.

CRCVICSEL 12

In an earlier period, the assumption seemed to be that men stayed and defended while women and children left. It may be the case that such approaches, and successful experiences, continue to inform the attitudes to bushfire events.

Also drawing on past experience, one interviewee mentioned that he did not necessarily plan to 'stay and defend' but would stay longer than his wife, in order to assess the situation:

I know from experience that you get your wife and your children away from the danger and then you make a decision, how well you are prepared to either stand the fire against the house or whether to leave yourself.

CRCNSWSHO 08

Another man in New South Wales described a similar plan:

I would get my wife to leave with her photographs and the other stuff...I would have my car parked up the street, ready to leave, but I would stay as long as I could basically, and put the sprinkler system on and also have the grounds wet; make sure that we've got buckets of water around and all that sort of stuff.

CRCNSWKUR 17

These plans should be of particular interest to agencies, which have focused on trying to dissuade residents from late evacuation (AFAC 2005; Tibbits *et al.* 2008). In some ways, this strategy of separation within a household can be seen as a way of delaying or deferring more concrete and specific decisions on whether to stay or go. They take the form: women should remain 'safe' and prepare for early evacuation while men believe they are better equipped to prepare the house and *possibly* stay and defend, but also *possibly* attempt late evacuation.

Furthermore, it appears that such plans are not uncommon. Indeed, two participants commented on having noticed a more widespread practice of women leaving early and men staying to either defend or wait and see. As one said:

The scary thing is most of them are probably half and half. So often it's the wife and kids are going to go and the husbands are going to stay.

CRCVICSEL 08

There appears to be a clear-cut gendered approach to stay or go, rooted in past experience and defined within a masculinist view that men defend and women go. As another respondent stated:

Well, I know most of the women here are planning to leave ... All the women have said: 'We're just going. We're not going to be staying here. We're not risking our lives in it'

CRCWADUN 23

Taken together, the evidence from the residents we interviewed across Victoria, New South Wales and Western Australia, as well as previous research from Proudley (2008) and the OESC (2010) does suggest that there is a noticeable trend in planning for bushfire that splits households along gender lines. This trend, combined with some participants' inability to explain *why* men should stay and women should leave, confirms the limited existing research on bushfire and gender in Australia, which has shown that bushfires are largely seen as 'men's business' (Poiner 1990; Eriksen *et al.* 2010; Tyler and Fairbrother 2013a). As the next section will explore in more depth, this assumption of appropriate gender roles, which means that men are much more likely to stay and fight a bushfire, can cause significant tension within a household and may limit a couple's ability to effectively communicate and negotiate around bushfire safety.

Disagreement over bushfire plans

While it is clear that many heterosexual couples had an agreed plan for the woman to leave and the man to stay, there was also a group of participants who mentioned disagreement over a bushfire plan. Again, this generally centred on whether or not the male partner or both members of the couple would 'stay and defend'. The issue of disagreement was often raised by participants after the researcher asked if a bushfire plan had been discussed with all members of the household and, if so, if there was any dispute. Some typical examples of the disagreements recounted by participants are given below.

Researcher: Was there any disagreement?

Participant [female]: There was to an extent. I've been very clear. I said: '[Husband,] really you're much more important to me. I don't want to have that fear of thinking you're not all right.'

CRCVICANG 11

Here the woman appreciated the potential danger and wanted her partner with her, away from the property.

Researcher: So there was more disagreement over the plan about you defending the property?

Participant [male]: That was probably the biggest disagreement, my macho defensive, protective thing. But I wouldn't have stuck to that if my life was at risk and I would change it a bit now anyway.

CRCVICANG 13

In this case, the male had begun to reflect on his previous approach, as a 'macho' stance. On reflection, and with the passage of time, and debate, he had now come to a more cautious view. Another:

Researcher: [W]ould you plan to evacuate early or would you stay and defend?

Participant [female]: I talked about this with [my husband] and he – I sort of think 'oh, grab [the animals] and run'. He is more of the opinion that we'd stay because our property – we've got five acres ... We haven't got any huge trees around the house. We keep things clear. So [he] is of the opinion that he'd stay, or we'd stay. I'm of the opinion, open the gates, let the [animals] go, grab the dogs and shove them in the car and go. But he's pretty gung-ho my husband.

CRCWABRG 04

And here, there was a straightforward different assessment of the situation, along gendered lines.

In all of the occurrences of disagreements about bushfire plans, it was men who wanted to stay and women who wanted to leave. The research team encountered no examples of women trying to convince their male partners to stay, or of men trying to convince their female partners to evacuate. Nonetheless, there is some evidence of reflection and qualification of previously more fixed views, on the part of some men, a minority.

In some instances, such as the one above, the disagreement had still not been resolved at the time of the interview. On-going disagreement over a plan was mentioned by other participants as well, and in the case below, with reference to a previous experience when a bushfire had threatened:

Researcher: Okay. You're planning to go. Did you discuss that with your husband as a formal thing?

Participant [female]: [H]e was more confident about being all right here. I never was. Perhaps. I'm a scaredy cat. I don't know ... I'm very cautious.

CRCVICSEL15

This woman is more cautious than her partner and in the process denigrates herself, in relation to her partner's stance. Sometimes these different views and assessments led to anger, and resignation.

Researcher: He was saying: ‘Well maybe we could stay’?

Participant [female]: I hate saying this – am I allowed to say it? He was saying ‘it’s not a worry’. I was quite angry with him for a time ... I did feel very slightly – I realised how on my own I was ... I didn’t want to be here, but I had no means of getting out on my own. This is going to sound a rather morbid thing to say, but I would probably rather perish with [him] ... I don’t know that I’d want to live and have him left behind to perish.

CRCVICSEL15

In another case:

Researcher: [W]as there some kind of argument or conflict?

Participant [female]: No argument, no. Just [my husband] making that statement. I know my husband very well, and I just thought: ‘Right, maybe, but I don’t want to do it’ [stay and defend]. As it played out though, I ended up staying in this house...

CRCVICSEL 16

This woman became quite upset during the interview process and perhaps this should not be surprising; when asked about bushfire plans, many residents perceived this to be a serious life or death issue. She felt as though she had to face the possibility of staying with her husband to die, or leaving him to risk death alone.

In fact, a number of women in our interviews explicitly spoke of their fear about having to choose between staying with their husbands, even when they wished to leave, or leaving their husbands to stay and defend on their own. As one woman in Western Australia commented, while being interviewed with her husband: ‘But the other thing is, how would I go leaving you? I just don’t know’ (CRCWADUN 26). Her husband, perhaps in response to his wife’s intimation that she feels uncomfortable with the idea of leaving him, suggests that they could stay together. He interrupts her at this point of the interview, quite authoritatively, by saying:

And this is where we do the defend and go...We can get everything prepared, turn the defences on, stay until the last minute...

CRCWADUN 26

Like many of the plans agreed by couples where there was a gender split (female partner leaves, male partner stays), it appears there may be a link here that results in a *plan* for late evacuation. It is possible that conflict within a household, or between a couple, may result in a preference for late evacuation as some sort of compromise.

It must also be acknowledged that these discussions on bushfire planning between couples may actually be extremely difficult and can create significant tension and emotional distress. This too, may influence the way in which a couple determines their bushfire plan. Indeed, some women, rather than trying to resolve disagreement regarding a bushfire plan, simply hoped to convince their partners to come with them, quite literally in the heat of the moment. One participant stated that she thought her husband ‘might change his mind’ (CRCVICSTA16) if there was a serious bushfire event, while another thought that: If we were in that situation and we realised how close it can get, he would – I could convince him to go (CRCVICSEL 05)

The following exchange is another typical example of how several female respondents believed they were going to deal with disparate views within the household:

Researcher: Now, in terms of your own household, what’s your plan?

Participant [female]: My husband and I have talked about this ... He says he would stay and I’m not okay with that. I would like to go. I would only go purely because of my children ... So we have a little bit of a differing opinion about this. He would – he says he would stay for as long as he thought it was safe and then he would go. There’s no way I would stay here with the kids.

Researcher: How do you think it’s going to be resolved?

Participant [female]: I don’t know. I think it would be resolved if it got scary and he said: ‘Yeah, you’re right. Let’s get out of here’.

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It is interesting to note that in this participant’s story, a divergence of opinion on whether to ‘stay or go’ is minimised; she refers to it only as ‘a little bit of a differing opinion’ but it is possible to see from her account how such ‘differing opinions’ may lead to serious problems. It is not just that this couple have not determined an agreed bushfire plan but that they fundamentally disagree on the type of action to take. It is not difficult to understand how such situations can lead to the kind of crisis within a household described by Handmer and colleagues (2010) during the Black Saturday fires. That is, disagreement at the time of a fire may lead to a delay or a lack of action that puts members of the household in danger.

The ability to make the best decision and communicate effectively in a time of crisis is likely to be limited by conflict within the household. However, the data collected here points to something more than simply intra-household conflict, it shows that there are broader influences regarding the social construction of gender that are likely to lead men and women to believe that different courses of action are best. That is, it is important to consider *why* there were no recorded instances of men trying to convince their ‘gung ho’ female partners that early evacuation was the best option, and *why* the ‘Effective Communication’ team found no clear cut

instances of women trying to convince reluctant male partners to ‘stay and defend’. The relationship between dominant constructions of masculinity in Australia and staying to defend certainly warrant further examination. As staying to defend largely conforms to norms of Australian hegemonic masculinity (Tyler *et al.* 2012; Tyler and Fairbrother 2013a), there are likely to be forms of social pressure on men to choose this course of action. In comparison, leaving early is seen as more feminised and even weak (Griffiths 2012; Tyler *et al.* 2012; Tyler and Fairbrother 2013a). Taking this course of action, as one of the residents put it, may mean that you are seen by others, or may even see yourself, as a ‘scaredy cat’ (CRCVICSEL 16). Furthermore, the fact that these kinds of gendered expectations are prevalent, and yet are rarely mentioned in either policy or research, certainly lends support to the claim that such assumptions about gendered behaviour are deeply ingrained.

Summary

The difference in gendered expectations associated with bushfire response, coupled with the cultural construction of bushfires as ‘men’s business’ in Australia, are likely to create difficult conditions for compromise among couples with differing preferences for a household bushfire plan. It may be especially difficult for women to voice their concerns about their husbands ‘staying to defend’ and have them taken seriously in a cultural environment which tends to privilege men’s knowledge of bushfire as innately more authoritative (Poiner 1990). The husband from Western Australia who interrupts his wife to clarify their plan as ‘defend and go’ is an illustrative example. His wife would prefer early evacuation but he takes over the discussion to explain that the better option for them is really late evacuation, even though late evacuation is inherently more risky and is actively discouraged by fire agencies (Tibbits *et al.* 2008). It also suggests that many women are not ‘dependant’ on advice from their husbands, as has been put forward elsewhere (Goodman and Cottrell 2012), but rather that they actively disagree with such ‘advice’. Instead, it seems many women are involved in a process of negotiation within the household, which they are likely to find challenging given the social support for men’s decision making regarding bushfire safety.

The cultural support for men’s decision making regarding bushfire preparation and response, especially if their planned course of action is to ‘stay and defend’, may also help to account for the theme of women in this study avoiding on-going negotiation over a bushfire plan. Instead of confronting the issue with their male partner, several female participants reported gambling on being able to convince a male partner to leave once a fire actually threatens. This may have been perceived as an easier or less stressful option than having on-going discussions about an issue that women are culturally deemed to know less about. Alternatively, it may have been seen as easier, or as less stressful, than having to challenge the dominant masculine norm of ‘stay and defend’, in trying to convince a male partner to adopt the ‘feminised’ plan of early evacuation. However, the decision to raise the issue again, only when a fire threatens, is obviously fraught with danger. If a woman succeeds in changing her partner’s mind, then this process may lead to late evacuation; if she is unsuccessful, then she has to decide whether to leave him to defend the house alone, or reluctantly stay with him, against her own judgement.

More broadly speaking, these problems highlight the power dynamics and complexity of intra-household communication and decision making around bushfire preparedness and response. Decision making in disaster contexts has often been analysed at the level of the individual, with little consideration of the influence of socio-cultural factors (Johnson *et al.* 2012). This research highlights that the social construction of gender is a critical factor in determining what course of action may appeal to residents and how they determine, or attempt to determine, an agreed course of action within a household. Gendered expectations, particularly regarding hegemonic masculinity and the valorisation of ‘stay and defend’ for men, may play a role in inhibiting open discussion and negotiation between members of a heterosexual couple about the best course of action to take *as a couple* during a bushfire event. That is, there are competing expectations for men and women (who are more likely to feel comfortable leaving early, or feel responsible for the evacuation of others, especially children), which may make reaching agreement difficult. Even if couples *do* reach agreement on a split plan (where a male partner stays and a female partner leaves early), this brings with it, a range of other problems. The emotional strain that some women expressed, for example, about leaving their husbands is a very real problem, as it raises the possibility that when a fire threatens a couple become reluctant to separate.

Any on-going disagreement within a household over a bushfire plan is therefore likely to create more risky outcomes for couples and families. Disagreement may result in a lack of preparation and delay or inhibit effective action when a bushfire event occurs. Evidence from the Black Saturday fires, suggests that these kinds of disagreements may even have been a contributing factor in several deaths (Handmer *et al.* 2010). What has not yet been widely recognised, however, is the important role that the social construction of gender, gender roles and gendered expectations play in defining these disagreements. While this research provides substantial evidence of ‘split’ household plans, where men leave and women stay, what is even more glaring is that not a single instance was found where these roles were reversed and women stayed while men left. This suggests an extremely gendered set of practices and expectations around bushfire preparation and response. In order for agencies and researchers to better understand intra-household communication and decision-making, it is clear that the social construction of gender and associated inequalities must be taken into account.

Implications

1. It is important that bushfire agencies are aware of the substantial gender differences in evacuation preference and that this is likely to create difficulties for many heterosexual couples in reaching an agreed bushfire plan (or plans) within a household.
2. Most of the supporting documents available from the relevant fire agency websites (CFA in Victoria, FESA - now Department of Fire and Emergency Services in Western Australia and RFS in New South Wales) on developing bushfire plans separate out plans to 'stay and defend' from plans to 'evacuate' relatively early on in the material. There is much less content available on actually determining which one of these decisions is appropriate. There is also little or no acknowledgement that there may be disagreement within the household as to the best course of action and the importance of resolving any disagreement.
3. It may assist in making bushfire safety communication from agencies more effective if the possibility of disagreement within the household was openly acknowledged in the available support materials for residents in bushfire prone areas.

Directions for future research

1. More peer-reviewed research is needed into the gendered dynamics of household decision making and communication around bushfire safety.
2. Further surveys on evacuation preference by gender in the Australian context would be valuable, as would in-depth qualitative research on why some heterosexual couples disagree on bushfire preparedness and response and how others have overcome disagreement.
3. There needs to be more research addressing the social construction of gender in the context of bushfire, particularly the associations between dominant concepts of masculinity and 'staying to defend.'

References

Ariyabandu, M. 2009. Sex, Gender and Gender Relations in Disasters. In Enarson, E. and Chakrabarti, P.G. (eds) *Women, Gender and Disaster: Global issues and initiatives*. Sage: London.

AFAC 2005. *Position Paper on Bushfires and Community Safety*. AFAC: Melbourne.

<http://www.royalcommission.vic.gov.au/Documents/Document-files/Exhibits/TEN-001-001-0077>

Bateman, J. and Edwards, B. 2002. Gender and Evacuation: A closer look at why women are more likely to evacuate for hurricanes. *Natural Hazards Review*, 3(3): 107-117.

Bolin, R., Jackson, M. and Crist, A. 1998. Gender Inequality, Vulnerability and Disaster: Issues in theory and research. In Enarson, E. and Morrow, H. (eds) *The Gendered Terrain of Disaster: Through women's eyes*. Praeger: Santa Barbara.

Braun, V. and Clarke, V. 2006. Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2): 77-101.

Chakrabarti, P.G. and A. Walia 2009. Toolkit for Mainstreaming Gender in Emergency Response. In Enarson, E. and Chakrabarti, P.G. (eds) *Women, Gender and Disaster: Global issues and initiatives*. Sage: London.

Enarson, E. 2009. Gendering Disaster Risk Reduction: 57 steps from words to action. In Enarson, E. and Chakrabarti, P.G. (eds) *Women, Gender and Disaster: Global issues and initiatives*. Sage: London.

Enarson, E. and Chakrabarti, P.G. 2009. (eds) *Women, Gender and Disaster: Global issues and initiatives*. Sage: London.

Enarson, E. and Morrow, H. 1998. (eds) *The Gendered Terrain of Disaster: Through women's eyes*. Praeger: Santa Barbara.

Eriksen, C., Gill, N. and Head, L. 2010. The Gendered Dimensions of Bushfire in Changing Rural Landscapes in Australia. *Journal of Rural Studies*, 26(4): 332-342.

Finucane, M., Slovic, P., Mertz, C.K., Flynn, J. and Satterfield, T. 2000. Gender, Race and Perceived Risk: The 'white male' effect. *Health, Risk and Society*, 2(2): 159-172.

Fothergill, A. 1998. The Neglect of Gender in Disaster Work: An overview of the literature. In Enarson, E. and Morrow, H. (eds) *The Gendered Terrain of Disaster: Through women's eyes*. Praeger: Santa Barbara.

Goodman, H. and Cottrell, A. 2012. Responding to a Fire Threat: Gender roles, dependency and responsibility. In Paton, D. and Tedim, F. *Wildfire and Community: Facilitating preparedness and resilience*. Charles Thomas Publishing: Springfield.

Griffiths, T. 2013. The Language of Catastrophe. *Griffith Review*, 30
<https://griffithreview.com/edition-35-surviving/the-language-of-catastrophe>

Handmer, J., O'Neil, S. and Killalea, D. 2010. *Review of Fatalities in the February 7, 2009 Bushfires*. Report prepared for the Victorian Bushfires Royal Commission.
www.bushfirecrc.com/managed/resource/review-fatalities-february-7.pdf

Haynes, K., Handmer, J., McAneney, J., Tibbits, A. and Coates, L. 2010. Australian Bushfire Fatalities 1900-2008: Exploring trends in relation to the 'prepare, stay and defend or leave early' policy. *Environmental Science and Policy*, 13(3): 185-194.

Johnson, P., Johnson, C. and Sutherland, C. 2012. Stay or Go? Human behaviour and decision making in bushfires and other emergencies. *Fire Technology*, 48(1): 137-153.

Lorber, J. 1994. *Paradoxes of Gender*. Yale University Press: New York.

McLennan, J., Elliott, G. and M. Omodei, M. 2012. Householder Decision-making under Imminent Wildfire Threat: Stay and defend or leave? *International Journal of Wildland Fire*, 21(3): 915-925.

Mozumder, P., Raheem, N., Talberth, J. and Berrens, R. 2008. Investigating Intended Evacuation from Wildfires in the Wildland-Urban Interface: Application of a bivariate probit model. *Forest Policy and Economics*, 10(6): 415-423.

Office of the Emergency Services Commissioner (OESC) 2010. *'Where Are They Going?' People movement during bushfires*. OESC: Melbourne.
http://www.oesc.vic.gov.au/resources/d7e8b082-4488-4df7-b020-340ff861ea6/people_movement_during_bushfires_research+-+final+report+march+2010.pdf

Peterson, V.S. and Runyan, A. (eds) 1999. *Global Gender Issues*. Westview Press: New York.

Poiner, G. 1990. *The Good Old Rule: Gender and other power relationships in a rural community*. Sydney University Press: Sydney.

Proudley, M. 2008. Fire, Families, Decisions. *Australian Journal of Emergency Management*, 23(1): 37-43.

Scanlon, J., Osborne, G. and McClellan, S. 1996. *The 1992 Peace River Ice Jam and Evacuation: An Alberta Town adapts to a sudden emergency*. Emergency Communications Unit: Ottawa.

Tibbits, A., Handmer, J. Haynes, K., Lowe, T. and Wittaker, J. 2008. Prepare, Stay and Defend or Leave Early: Evidence for the Australian approach?. In Handmer, J. and Haynes, K. *Community Bushfire Safety*. CSIRO: Melbourne.

Tyler, M., Fairbrother P., Chaplin, S., Mees, B., Phillips, R. and Toh, K. 2012. Gender Matters: Applying gendered analysis to bushfire research in Australia. *Working Papers in Sustainable Organisations and Work* no. 3. RMIT University: Melbourne.

Tyler, M. and Fairbrother, P. 2013a. Bushfires are 'Men's Business': The importance of gender and rural hegemonic masculinity in Australian understandings of bushfire. *Journal of Rural Studies*, 30(2): 110-119.

Tyler, M. and Fairbrother, P. 2013b. Gender, Masculinity and Bushfire: Australia in an international context. *Australian Journal of Emergency Management*, 28(2): 22-27.

Walby, S. 2005. Comparative Gender Mainstreaming in a Global Era. *International Feminist Journal of Politics*, 7(4): 453-470.

Chapter 9: The Emerging Challenge: The Urban-Rural Interface and the Sea- Change Community

Over the last two decades there has been a pattern of urban to rural migration, usually permanent and sometimes transitory, into peri-urban localities and to life-style based localities. These changes have been facilitated by the conversion of former agricultural lands, located near the fringes of metropolitan and regional cities, into residential estates and gated communities. Such residential developments are also taking place in coastal and inland towns for life-style, and economic reasons, often within commuting distance of large urban centres. Many of these areas are also highly vulnerable to the risk of bushfire.

The argument of this chapter is that effective communication strategies should recognise these very specific types of community. This means that strategies rooted in a past view of rural life may no longer suffice. There may, for example be a significant diversity amongst the needs and aspirations of people living in the peri-urban localities and sea-change/tree-change communities. Three aspects of this diversity in expectations and needs have implications for the ability of communities in bushfire prone areas to preparedness for disaster. The first is the creation of 'hybrid spaces in which rural and urban values, cultures and landscapes have become fused' (Woods 2009: 853). The second is the contested nature of some rural landscapes and the third is the socio-economic characteristics of amenity migrants, who may be well-educated and enterprising people (as is often the case with retirement migration) and how this impacts on long term residents in receiving communities. Each will be considered below.

The first and second section of this chapter examines how these mobilities are changing rural landscapes and communities and often creating hybrid places in which the boundaries between the urban and rural are increasing blurred. The third section provides an account of the method and approach. The fourth section outlines a profile of the four localities. In section five, an analysis is presented of these developments in relation to bushfire preparedness and response. The themes are drawn to together in the final section.

Population Mobility

Amenity migration is a process that is transforming rural landscapes in Australia and across the world. Former urban residents are buying 'primary or secondary residences in rural areas valued for their aesthetic, recreational, and other consumption-oriented use values' (McCarthy 2008: 130). While there is nothing particular new about wealthy urban residents buying a country house or retreat, it is the scale and social variability of these transformations that are significantly different. Therefore it is 'important to acknowledge that the term refers to a variety of migration processes taking place in diverse spatial, politics, social and economic contexts' (Gosnell and Abrams 2011: 305). For some it can be a vision of the rural idyll with views of rolling hills, lakes, beaches, the ocean or forests; for others it is a different or less stressful lifestyle that is

perceived as being out of the mainstream; and for yet others, the amenity is a cheaper cost of living which includes affordable housing in new low density estates and gated communities. Many of these housing developments are creating landscapes that may retain a 'rural look' but are in effect functioning as suburbs (McCarthy 2008).

Australians are one of the most mobile populations in the world with 41.7 per cent of people over the age of five years changing their residence between the census dates in 2006 and 2011. This means that 4.6 million people moved locally and three million people moved to a different statistical area of Australia. Half a million (530,500) of these moves were to coastal centres and significantly for this study, more than a third of these new residents (35 per cent) had been living in a capital city in 2006 and 22 per cent overseas. While coastal centres tend to attract both young and older migrants, people over the age of 55 years represented a larger share of all new residents than is found in capital cities highlighting 'sea-change' retirement migration. During the same period 147,300 people moved to inland centres. Almost 14 per cent of these new residents were aged 55 years and over, 23 per cent were students aged 15 years and older and 30 per cent had been living in a capital city in 2006 (ABS 2012).

Rural-urban Interface

The rural-urban interface describes communities that have developed within proximity to urban centres, along with rural-urban fringe areas, part of the peri-urban interface. These areas are created by the continuing extension of urban settlements. There is often significant geographical, demographic, socio-economic and infrastructural diversity both within, and between, rural-urban interface localities which poses challenges for any 'one size fits all' approach to disaster preparedness. Often a considerable percentage of the population will be daily commuters to nearby urban or metropolitan centres for employment and social activities.

At one end, these communities are near the urban fringe, but have the distinctive characteristic that a significant number of residences are located within 100-200 metres of highly bushfire prone forest, bushland or grassland. They are: (1) classic urban sprawl which comprises new suburban low density developments with homes on small blocks and nearby shopping centres, recreational and other service facilities that are near bush; (2) a rural-urban intermix of small scale agriculture or hobby farms and housing within proximity of the urban fringe; (3) the isolated bush-urban mix of often remote residences with limited road access; and (4) bush-urban islands within established urban areas (Paveglio *et al.* 2009).

The search for affordable housing and less stressful lifestyles is a driver for many families who have moved into peri-urban interface areas around Australia's major cities. The new residential estates have a particular appeal to young families, on low to middle level incomes, who are seeking a better environment in which to raise their children. Affordable housing and a better lifestyle are also drivers for welfare dependent families, pensioners and retirees who have migrated to sea-change and tree-change localities (Ragusa 2011). Other issues are that people want to get away from perceptions of high levels of crime and costs of housing in urban areas and are therefore seeking a better place to raise a family, have a shorter commute to work and a

greater sense of community involvement (Hugo and Bell 1998; Marshall *et al.* 2005; Burnley *et al.* 2007; and Black *et al.* 2008).

Sea change/Tree change

The terms ‘sea-change’ and ‘tree-change’ have often been used to describe amenity migration in Australia. The process of retirees and those seeking ‘alternative lifestyles’ moving north to Queensland’s Gold and Sunshine coasts, parts of the northern NSW coast and Tasmania was first noticed in the 1970s (Gurran 2008). Tree-change migration is the movement of people from urban centres to non-coastal rural locations in search of a ‘rural idyll’. Such tree-change migration is in contrast to the population decline that is often being experienced in many other rural areas due to rural-urban migration, particularly amongst young people who seek access to further education, training and employment (Race *et al.* 2011).

There are basically two types of sea-change location – coastal areas within the rural-urban interface around metropolitan areas which extend to the outer limits of the commuting zone, and high amenity growth regions and towns along coastlines. The Australian Bureau of Statistics (2012) defines sea-change migration as the movement of former urban residents to coastal centres that are within 50 kilometres of the coast and have a population of 25,000 or more people. Gurran (2008) has suggested there are five basic types of setting for coastal amenity migration in Australia. They are (1) coastal commuters who live in urban centres and communities within the rural-urban interface of the capital cities which offer coastal lifestyles and affordable housing, but are in transition to suburbia; (2) the ‘getaway’ towns and villages within three hours commute of the capital cities where people have second homes for weekends, holidays and maybe retirement; (3) coastal cities with populations of more than 100,000 which offer employment possibilities and slower paced lifestyles; (4) coastal lifestyle destinations which are more than three hours drive from capital cities and attractive to people wanting to ‘downsize’ and enjoy the recreation possibilities of rural/natural landscapes; and (5) the ‘coastal hamlet’ which have less than 15,000 people and are surrounded by national parks, forests or other areas of significant natural resources.

Contested views and expectations

In the context of population movement and the accompanying social changes there is often contestation and tension in relation to the character and infrastructure of localities, with implications for bushfire preparedness.

First, nature can often mean different things to people such as being a destination, a place of retreat, a vision of the ‘rural idyll’, a natural resource to be exploited or preserved. These different views of nature often come to the forefront when there are competing stakeholders and when changes are being made in land management. This can vary from pressures to cease resource extraction activities, proposals to create new national parks and reserves or the development of new residential areas, increases in tourism potential through second home ownership and marketing of localities to retirees.

Amenity migrants can also bring specific expectations about nature which can create a feeling that 'nature is what happens when land is left alone' (Cadieux 2011: 356). This understanding of nature may explain some of the disputes over forestry and national parks that have at times divided towns, such as in Tasmania's Huon Valley. The most significant divisions are related to the issues of the future of the forestry industry and fuel reduction burning by Forestry Tasmania, Parks and Wildlife Service and volunteer brigades. The recent Forestry Agreement (State of Tasmania and Commonwealth of Australia 2011) and the continuing pro and anti-forestry rallies and campaigns have created, at times, a very hostile atmosphere and thus very real tensions and divisions within the Huon Valley (see *The Mercury* 2012 for a recent confrontation in Huonville).

Second, the commitment of 'new' or transient residents to safety and preparedness may vary. Race and colleagues (2011: 14) found that 'when people move from cities to rural landscapes and communities, they often bring aspects of urbanisation that do not always transfer easily or well into a rural context'. Besides having higher disposable incomes, these former urban residents may have different ideas about how to manage the local landscape and how to become engaged with a local community. Such differences in values and expectations can cause disruptions which may threaten the local social fabric.

Amenity driven migrants and temporary residents (second home owners and seasonal holiday makers) often have varying needs and expectations regarding the provision of infrastructure, local services and cultural activities than do long term residents. Rapid in-migration by former urban residents who bring different spending and investment patterns, ideas of land ownership have the potential to undermine social connectedness, participation and even pride within the receiving community (Slemp *et al.* 2012). But amenity migrants can also contribute to changing community social dynamics in a beneficial manner (Slemp *et al.* 2012 and Gosnell and Abrams 2011) by enhancing the local economy through increases in consumption and other activities, such as tourism.

Guidelines that have been implemented to enhance preparedness within bushfire prone communities such as 'Stay and Defend or Go' do not necessarily improve levels of awareness and preparedness. Such change is likely to occur only when these policies begin to engage with the everyday lives of residents, which are shaped by their mobilities into high bushfire risk areas, daily commuting and the significant differences in demographics, socio-economic status, environmental knowledge and infrastructure levels within and between these localities. These factors are significant influences on how residents understand the risk of bushfire (and other natural disasters) and their capacity, capability and willingness to engage in awareness and preparedness activities. In this chapter it is argued that large numbers of individuals and households within bushfire prone areas are ignoring policies such as 'Stay and Defend or Go' because of how their age, socio-economic status, gender or environmental interests impact on their capacities and capabilities to prepare.

Data

The data for this chapter was generated by ethnographic-type research undertaken in five rural-urban interface communities and four sea change communities in Victoria, New South

Wales, Western Australia and Tasmania. The five rural-urban interface communities are Selby-Belgrave (Victoria), Kingston/Kingborough municipality and the Huon Valley (Tasmania), Kuring-gai municipality (NSW) and Bedforddale/Roleystone (WA). The four sea-change localities are St Helen's (Tasmania's east coast), Dunsborough (south of Perth), Shoalhaven (NSW south coast) and Anglesea (Great Ocean Road, Victoria). Many of the participants had actually experienced bushfire or had heard stories from family members. These localities were selected because they are designated as highly vulnerable to bushfire by the respective state fire agencies. In each there were local fire authority brigades. Many had promoted bushfire education programs.

The Localities and Their Residents

Amenity migrants, and in particular second home owners, are often thought to lack a sense of belonging because of the hybrid nature of their everyday lives. But two Australian studies highlight that such concerns about a divided sense of belonging amongst new residents maybe misplaced. In a study of the amenity rich Augusta-Margaret River region in Western Australia, Kelly and Hosking (2008) found no significant differences in place attachment between second-home owners and multigenerational home owners. For second-home owners their sense of place attachment was found to be strongly related to maintaining the attributes of the natural environment which had first attracted them to this region. These views of opposing more development were also shared with the long term residents. A study of tree-change migrants in the Southern Highlands region of NSW by Drozdowski and colleagues (2011), which examines the drivers of tree-change migration and the social, economic and cultural impacts on receiving communities, found that most new residents reported high levels of social inclusion and being made to feel welcome, even while maintaining their urban connections.

The levels of mobility in the case study localities are presented in Tables 1 and 2.

Table 1 – Mobility in selected rural-urban interface localities

	KIN (TAS)	BED (WA)	KUR (NSW)	SEB (VIC)	HUV (TAS)
% of population					
Different address 1 year ago	13.8	15.8	13.1	8.7	13.2
Moved locally during last year ago	3	1.2	2.2	1.4	4.8
Moved from within state one year ago	7.7	13.5	7.8	6.2	4.8
Moved from another state or overseas one year ago	3.1	1.1	3.1	1.1	3.6

Different address 5 years ago	38.1	41.3	36.5	27.1	36.9
Moved locally in last 5 years	7.1	4.8	4.6	4	11.8
Moved from within state one year ago	20.2	31.9	21.7	18.4	10.9
Moved from another state or overseas in last 5 years	10.8	4.6	10.2	4.7	14.2

Source: All data is based on the basic community profile for the selected communities from the ABS Census 2011 QuickStats website www.abs.gov.au/websitedbs/censushome.nsf/home/quickstats

Inward migration is a feature of these localities, with more than 10 per cent inward migration within the last 12 months. Victorian peri-urban localities are less fluid, at just under 9 per cent, possibly reflecting longer established residential localities. A similar pattern is evident over a five year period, with around a third moving into the area during this period in three cases, and just under a quarter in the Victorian case.

Table 2 – Mobility in selected sea-change localities

	STH (TAS)	DUN (WA)	SHO (NSW)	ANG (VIC)
% of population				
Different address one year ago	13.8	21.4	13.6	13.2
Moved locally during last year ago	7	9.6	5	3.5
Moved from within state one year ago	3.4	8.2	6.8	8.8
Moved from another state or overseas one year ago	3.4	3.6	1.8	1.7
Different address 5 years ago	36	53.5	35.6	36.4
Moved locally in last 5 years	13.4	19.7	10.9	8.9
moved from within state one year ago	11.1	22.9	19.6	23.5
moved from another state or overseas in last 5 years	11.5	10.9	4.1	4

Source: All data is based on the basic community profile for the selected communities from the ABS Census 2011 QuickStats website www.abs.gov.au/websitedbs/censushome.nsf/home/quickstats

Of particular note is the mobility in the WA localities of Dunsborough and Bedfordale where 53.5 percent and 41.3 percent of residents had a different address five years ago in areas that have recently experienced bushfire. In all localities except Selby-Belgrave (27 percent) more than a third of all residents lived a different address five years ago (ABS 2012). Such levels of mobility seem likely to continue, in the sea-change/tree-change, and rural-urban interface localities. (Networked Rural Councils Program 2012).

Table 3 – Selected characteristics of rural-urban interface localities

	KIN (TAS)	BED (WA)	KUR (NSW)	SEB (VIC)	HUV (TAS)
Total population	33,893	2,239	109,297	10,063	15,140
% of population					
Age groups					
0-34 years	43	44	41.6	45.9	39.5
35-59 years	35.2	39	35.2	39.9	37
60+ years	21.8	17	23.2	14.2	23.5
Country of birth					
Australia	79.5	66.6	60.8	79.4	81.8
England	6.5	16.4	6.2	5.8	6.7
Parents born overseas	22.5	42.36	45	23.8	17.5
Unpaid work					
Cared for children*	32.8	34.6	31.6	33.5	29.1
Care for person with disability*	12.2	11.1	11.9	11.8	12.4
Voluntary work	24.3	20.3	26.5	23.1	20.7

Household structure					
Couples with children	43.7	52.2	56.8	53	39.6
Couples without children	40.8	41	32.2	31.8	44.8
Single parent	14.5	5.9	9.9	14.5	14.6
Female single parent**	82.5	61.5	83.8	78.9	73.6
Families employment					
Both employed working full-time	12.4	19	19.2	20.5	13.5
One full-time, one part-time	24.9	24.4	22.7	27	19.3
One full-time, other not working	18.6	18.6	18.9	18.7	12.8
Both not working	19.7	14.8	17.9	10.8	25.2
Housing					
Unoccupied private dwellings	19.7	5.2	7.1	5.8	19.4
Single person household	22.6	8.6	16.2	16.2	24.6

NOTES

1. * during last 2 weeks before Census date

2. ** percentage of single parents

Source: All data is based on the basic community profile for the selected communities from the ABS Census 2011 QuickStats website www.abs.gov.au/websitedbs/censushome.nsf/home/quickstats

In the rural-urban interface localities nearly 8 out 10 families had at least one member working full-time, nearly a third of households were caring for children and a further 12 percent were involved in caring for a person with disability.

Table 4 – Selected characteristics of sea-change localities

	STH (TAS)	DUN (WA)	SHO (NSW)	ANG (VIC)
Total population	6,177	4,531	92,812	2,454
% of population				
Age groups				
0-34 years	29.8	47.8	36.9	33
35-59 years	30.3	35.9	32	34.2
60+ years	39.9	16.3	31.1	32.8
Country of birth				
Australia	82.1	75.6	81	83.9
England	6.6	8	4.9	3.1
parents born overseas	17.3	25.1	16.8	14.3
Unpaid work				
cared for children*	18.8	35.9	24.8	25
care for person with disability*	12.4	8.4	13.3	12.2
voluntary work	22.4	24.1	20.2	30.4
Household structure				
couples with children	51.3	40.8	47.5	46.8
couples without children	24.7	46.6	34.1	38.4
single parent	23.1	12.3	17.3	14
female single parent**	85.6	83.7	80.9	78.7
Families employment				
both employed working full-time	12	16	13.2	10.8
one full-time, one part-time	9.5	25	17.4	24.6

one full-time, other not working	12	12.4	11.5	12.3
both not working	39.6	14.9	34.8	24.3
Housing				
unoccupied private dwellings	25.1	42.2	27.5	66.6
single person household	40.6	19.4	27.7	29.8

NOTES

1. * during last 2 weeks before Census date
2. ** percentage of single parents

Source: All data is based on the basic community profile for the selected communities from the ABS Census 2011, QuickStats website www.abs.gov.au/websitedbs/censushome.nsf/home/quickstats

Despite the older demographic in the sea-change localities, more than a quarter of households (with the exception of St Helens) were caring for children and 10-12 percent for a person with a disability.

While the ABS Census does not collect second-home ownership data, the recording of vacant private premises in July is an indication. For example Census 2011 (Tables 3 and 4) indicates that the sea-change locality of Anglesea (Victoria) had 66.6 percent of private dwellings unoccupied. Likewise in Dunsborough (Western Australia) 42.2 percent were unoccupied, 27.5 percent in Shoalhaven (NSW) and 25.1 percent in St Helens (Tasmania). Assuming that half of these residences were second homes, this represents around a quarter of the population being seasonal visitors in Anglesea and Dunsborough. The issue is not as significant in the rural-urban localities where perhaps 10 percent of unoccupied dwellings in Kingborough and the Huon Valley are second homes, often located in bushfire prone areas.

Table 5 – Employment data for selected rural-urban areas (Census 2011)

Municipality	Employed	Local area	Metro or other area
% of population			
Ku-ring-gai (NSW)	58.0	14.2	43.8

Armadale (WA)	60.8	14.7	46.1
Kingborough (TAS)	59.7	24.2	35.3
Yarra Ranges (VIC)	63.5	21.8	41.7

Source: All data is based on the basic community profile for the selected communities from the ABS Census 2011, QuickStats website www.abs.gov.au/websitedbs/censushome.nsf/home/quickstats

Employment in four rural-urban areas is between 58 and 63.5 per cent of the municipal population. However, less than a quarter work within the municipality. In Ku-ring-gai 43.8 per cent of those employed are working outside the municipality. Similar percentages apply for the municipalities of Armadale (46.1 per cent) which includes Bedfordale, Kingborough (35.3 per cent) and the Yarra Ranges (41.7 per cent) which includes Selby-Belgrave. In many circumstances this can mean commutes of at least 40-60 minutes either way. Hence one of the characteristics of such localities is that the vast majority of the working population in these areas commute in and out on a daily basis.

Preparing for Bushfire

Several issues were identified that residents and agency staff felt were impacting on the capacities of their respective communities to prepare for a bushfire event. These included the changing nature of these localities, population growth and mobility and the challenge of engaging new and seasonal residents in local activities.

Turnover of populations was seen as one concern:

There's quite a turnover of people coming and going, so that makes it a little bit difficult [to have a friendly community] and ... there is a little bit of a feeling of an us and them, like us meaning the people who were born here and whose parents grew up here and them, meaning the people that have come here to retire

CRCNSWSHO 11

Many participants also expressed a concern about an increase in the number of older people, socio-economic differences and conflicts and divisions that had arisen around environmental, landscape values and development issues.

I think there is a big elderly population down here actually. I would say ... that 60 per cent of people who I see are elderly but there are a lot of chronically sick people in this community as well who have chronic disease

CRCTASKIN 14

While conflicts over environmental and land use can create divisions within communities they can also bring some people together. A Shoalhaven participant noted for example that:

[W]e just recently had an application for a development within the town area, and the town got together and fought it and won. That built a bit of community that wasn't there previously

CRCNSWSHO 14

These factors interact and impact on the ability of residents and communities in complex ways.

'Everyday life' and a lack of time

Many interviewees expressed concern that the demands of 'everyday life' can result in a significant number of residents not having the time available to foster connections with other community members or develop an attachment to a new community. Reflecting on the impact of amenity migrants in the Huon Valley (Tasmania) one participant observed that:

[P]eople are very preoccupied. They build a house, they renovate a house, they make a garden and they've kind of gotten themselves self-contained but it's not purposefully. It's just because they're so busy getting themselves together, you know, and that could take them two or three years, by which time often they move. But often ... they haven't made the effort up to that point, to get connected

CRCTASHUV 16

The implication is that it may be difficult for agencies to engage residents in rural-urban interface and sea-change communities in preparedness activities where people are 'time poor'. Williams and colleagues (2009) found that the demands of work and home mean that many residents living in these new urban fringe localities just do not have the opportunity for community meetings and other informal social interactions with neighbours. A Ku-ring-gai resident who commutes daily to the Sydney CBD said that:

[As a] professional working in the city, I only get home at seven o'clock at night so I don't tap into the [local] community very well.

CRCNSWKUR 20

Two longer term residents in Kingston, Tasmania, commented on the impact employment patterns can have on a community during the day:

[W]hen you go for a walk around the place, you can see there's no real interaction between the people because they're all out working ... At the weekends they're probably busy doing something or going off for recreation.

CRCTASKIN 05 and 06

A lack of time was often cited as a reason that people do not come to meetings to discuss preparations for the coming fire season even though they live in close proximity to bushland. In Ku-ring-gai, New South Wales, a participant mentioned that:

We have people who are well meaning, but just can't find the time on a Sunday for an hour or so to join, or to come to [community] meetings.

CRCNSWKUR 19

Likewise for a Kingborough resident, whose family is now trying to balance their enjoyment of living in bushland settings with the time it takes every weekend to ensure they are prepared for the next bushfire season. In fact it had probably reached a tipping point as they were actually considering a move away in the near future because even though they:

[L]ove the bush ... we spend months of the year raking and back-burning, and we're not having time with our family because we're preparing our block for bushfire.

CRCTASKIN 01

In the case of part-time residents who have second homes in these bushfire prone areas, many are not inclined to spend their limited time over a weekend undertaking bushfire mitigation work. They have a residence in the area to enjoy the recreational and outdoor activities afforded by the landscape (Brenkert-Smith 2010) rather than doing maintenance or fuel reduction work. For example a Ku-ring-gai focus group participant, who is a member of a Community Fire Unit said:

You go round on Monday and half of them aren't there. You go round on Tuesday, they're still not there because they're at work. You go round on Wednesday, they're still not there. You go round on the weekend [and] they're not there because they're off doing sport or something or other. So, I mean, who's going to come along to these sort of things? When are you going to organise them? You can't do them on a Saturday. You can't do them on a Sunday. You can't do them in the middle of the week, because they're all at work

CRCNSWKURFG 02

Community Fire Units are established and supported by NSW Rural Fire Service upon requests from residents living in those streets which border bushland areas. All members receive some training in how to use the supplied equipment (hoses, helmets, gloves, stand

pipe and so on) which are housed in a stationery red cabinet or a trailer located in the street. Their role is to enable residents to defend their homes and extinguish spot fires once the fire front has passed (see also Dillon 2011).

This clash between the demands of ‘everyday life’ and having time for local activities is a particular challenge for community organisations when they are trying to arrange meetings on bushfire awareness, or other issues.

Informal social interactions and their role in preparedness activities

Informal social interactions and conversations can play an important role in the flow of bushfire preparedness information within and between communities and residents (see also chapter 10). Informal social interactions can create opportunities for residents to exchange information about their shared bushfire risk; support decision-making and actions by neighbours to address their shared risk (often through fuel reduction activities); and facilitate the development of meaningful connections amongst residents (Brenkert-Smith 2010). A US study by Gordon and colleagues (2010) found there were three factors which could undermine community preparedness efforts. First was the lack of time spent in the community by the residents living in gated residential estates due to commuting or being snowbirds (i.e. older people who travel to second homes in warm climes during the winter months in their first homes), the second was the lack of centralised community spaces where all residents could interact informally, and thirdly, the nature of the gated and remote residential developments physically separated residents into new and long term groups. This meant that:

[N]ew and long-time residents failed to engage in everyday forms of social interaction. In turn, it was unlikely they would engage in informal exchanges of knowledge about fire. The physical and social isolation of gated developments presented barriers to interaction in the broader community, which, therefore, resulted in distinctive identities for residents within and outside developments (Gordon *et al.* 2010: 466).

Moreover, the actual planning and design of many new residential developments is making casual social interactions more difficult (Williams *et al.* 2009). The likelihood of conversations over fences with neighbours, or people passing by can be impeded by automatic garages and homes that lack verandas and front gardens. The prioritising of shopping centres over local corner stores and cafes further limits the spaces for informal conversations and the development of neighbourhood social networks.

In some circumstances however, the actual experience of bushfire can help in not only building a sense of community, but also provide an opportunity for informal conversations and the development of social networks through which information about recovery and preparedness may be distributed. A Selby-Belgrave, Victoria, resident stated that this shared experience of bushfire has created:

[T]he most amazing ‘grape vine’ in the hills... Because it’s a smaller community and because it’s a community that has had to help other people ... we tend to be aware of people and be interested in people. People look out for people here. That’s what makes it so special and so different

CRCVICSEBFG 02

But can such informal discussions help newly arrived amenity migrants to develop a more detailed understanding and awareness of their local environment conditions and the nature of bushfire risk?

Environmental awareness and bushfire risk perceptions

Place attachment is a significant factor in community-level actions such as land use planning and natural hazard risk mitigation (Collins and Bolin 2009) and such attachment takes time to develop. Many participants reported that new residents in rural-urban interface and sea-change/tree-change communities lack an awareness of the risk in living in such areas, even though the attraction of living in a rural environment has drawn them to an area. For example, a long term resident in St Helens, Tasmania, said:

We’ve still got this huge transient factor so people are coming from wherever and a lot of them are not familiar with actually what they’re getting themselves into.

CRCTASSTH 03

In a recent Australian study, Eriksen and Gil (2010) argue that it was often a trade-off between lifestyle, environmental and economic values. Many of the landowners in their study were commuting to work in the city, had little time available for preparedness measures and would probably not be home in the event of a bushfire. So many of these landholders resolved the dilemma by having home insurance that includes loss due to bushfire, which meant they do not have to engage in bushfire management. Such an approach contrasts with the actions of longer term residents who seemed to have a greater emotional attachment to place, and so were inclined to ‘stay and defend’.

In the case of the Ku-ring-gai municipality, where a large number of residents live within at least 300 metres of bushland, a participant involved in fire management activities reflected on the risk perceptions of new residents:

[I]t’s a fine balance because people are attracted to this area because of the bushland and being able to have a property that backs onto the bushland. .. I personally think they understand that there is a high risk of living in Ku-ring-gai, but how prepared they are for that risk and to respond, that’s a whole other issue I don’t really know about.

CRCNSWKUR 1-3 (Group)

One of the factors that may contribute to such a lack of awareness in Ku-ring-gai is that it is a bushland-urban island municipality physically located on the very suburban North Shore rather than out on the urban fringe. As a result it is fairly well serviced by brigades from Fire and Rescue NSW and the NSW Rural Fire Service and hence residents do not feel the need to make their own preparations, particularly if that involves clearing bushland in close proximity to their homes. Or as one participant expressed it:

[S]hould I talk to people here, they will say, 'Look, hold on, last time the fire brigade were here, they had it all stitched up. And not only were the fire brigade here, but we also had the Rural Fire Brigade people here' ... which is great, as long as they are available and they're not already working somewhere else.

CRCNSWKUR 09

Then there are those new residents, whom, when they learn about the risk of bushfire may over react and want to clear all the vegetation from around their home. Such actions can cause conflict with long term neighbours who were also attracted to the area because of its environmental attractions. A Selby-Belgrave participant gave an example:

People move up here because they love the environment and they want to live with it. Then there are other people who move up here not really thinking about it, and then want to ... minimise their danger, and change it all, and pave it, and concrete it.

CRCVICSEB 05

What is the relationship between bushfire risk perceptions and social interactions amongst residents? In their study of two Colorado rural-urban interface communities, Brenkert-Smith and colleagues (2012a: 14) found that '[p]eople with high risk perceptions seek out information, which further reinforces risk perceptions, while those who do not are left out'. Also social interactions and informal conversations between neighbours about the possibility of attending a formal fire-related event were found to be the most likely way of changing risk perceptions.

Social Vulnerabilities and Capacities to Prepare

There can be significant financial expenditures and physical abilities involved in undertaking bushfire risk mitigation activities. The issue of how the social vulnerabilities of some residents in rural-urban interface and sea-change communities impacts on their capacity to prepare is under explored. In their study of the flood risk perceptions of residents living in a socially disadvantaged area in Launceston, Willis and colleagues (2011) found that the risk of such an event was often a very marginal concern in their everyday life. Instead, residents found that the convenience for daily living in that locality (i.e. easy access to public transport, places of work and shops) significantly outweigh concerns about the possible risk of flooding. Overall many

residents perceived the risk as small which was based on information obtained through informal sources such as local historical knowledge and personal stories. Another perspective is that low income residents just do not have the time when every day can be a struggle to 'make ends meet'. A participant working for a community based support organisation in Bedfordale said that:

I think they've got too many other things going on to even think about bushfires. They're thinking about how they're getting food on the table and what's going on at school and relationship issues and all sorts of different things.

CRCWABED 3-5 (Group)

A recent study of bushfire risk in the Ku-ring-gai municipality highlights how social vulnerability can vary across a locality. In the northern and eastern suburbs of the municipality, social vulnerability was associated with residents who had special needs, were elderly or females living on limited incomes. But in the southern areas, social vulnerability was associated with the large numbers of people on lower income living in rental housing (Solangaarachchi *et al.* 2012). This variability requires different responses from fire management agencies. In the case of those with special needs or elderly females, physical assistance needs to be provided. While NSW Rural Fire Service has the AIDER program which provides a once only assistance for clearing gutters, thinning vegetation, removing leaf and tree debris or slashing long grass, such support services need to be provided at least annually. In the case of people living in rental housing, their need would seem to be for information about how and when to evacuate.

The capacity of residents with young families to prepare for a natural disaster can be rather limited when they do not have access to a motor vehicle and are therefore reliant on public transport. In a study of the relationship between transport and disadvantage, Rosier and McDonald (2011) found that young mothers, dependent on public transport, face barriers in participating in community events. They also have difficulty in developing and maintaining supportive social networks. The importance of networks is highlighted in a study about young families who had moved to non-metropolitan areas where 'the disruption of supportive social networks can have serious consequences for individual and family wellbeing' (Healy *et al.* 2009: 42). Many of these young families also report a limited sense of participation within their new communities which was attributed to the time commitments of daily commuting and not knowing anyone in their new communities. Community support services such as child care and playgroups and cultural and support groups were found to be very helpful in overcoming some of these barriers. While local employment provided a link to community participation for some new residents, one of the most common ways of being involved in community activities was through participation in activities organised by social, cultural and sporting groups and service clubs such as Lions, Rotary and schools. But the financial costs of such activities and poor access to transport was found to represent a barrier to the inclusion of young families (Healy *et al.* 2009) and thus potentially limit their opportunities for informal conversations about bushfire preparedness.

Amenity migration into fast growing rural-urban interface communities often creates isolated households that have limited social and kinship networks on which to call upon in times of natural disaster or any other crisis (Morrow 1999). On average in 2011, just under a quarter of households in Australia are one person, an increasing proportion over time. Australian Institute of Family Studies 2011). And, 14 per cent of Australian people were aged 65 years and over. One quarter of these people lived alone in a private dwelling. It is more common for women than men to live alone – 32 per cent compared with 17 per cent. Of older people who lived alone, most reported a legal registered marital status of widowed (59%) but this varied between men and women – 69% of women and 38% of men who lived alone were widowed (ABS 2013). In 2011, nearly one in five older people (19%) required assistance with one or more of the core everyday activities of self-care, mobility and communication. The rate was higher for women than men (22% compared with 16%) and increased with age for both sexes. This may mean they are highly susceptible to increases in the cost of living and often experience financial difficulties. It has also been suggested that perhaps a third of older Australians, who were born overseas, have poor English language skills and as a result are at risk of social exclusion due to a lack of social networks and physical mobility (Lui *et al.* 2011).

A key factor for social isolation among older people is the death of a partner, other family member or close friend, because most social support is usually derived from kin (Cloutier-Fisher *et al.* 2011). This is particularly the case when social networks have been spouse centred (Cloutier-Fisher *et al.* 2011). While children can replace some of this support, it becomes more problematic when couples move to another locality for retirement. In these times of high mobility children are quite likely to be living in another city, interstate or overseas.

Some long-term elderly residents have good support networks. One elderly participant spoke about the support she has from women in her street:

[W]e have word of mouth, we have close contact, we do know our neighbours, we do have – we meet every time anyone has a birthday, there were about 15 of us, now all our husbands are dead or gone there's only seven and they're all women. We meet and have drinks one night of the week, and nibbles. So we are seeing each other on mass fairly regularly.

CRCNSWKUR 17

Little is known of the capacity and capabilities of elderly residents living in these types of high-risk areas to prepare for bushfires. Concern for the capacity of elderly female residents to prepare for a bushfire was expressed by a Bedfordale participant:

There are those who have lived in the hills as a lifestyle choice ... They oftentimes have moved there as a couple ... if the man who would have done the outside work has predeceased his wife, oftentimes he had more of an idea of fire prevention than his wife.

CRCWABED 07

One study by the Yarra Ranges Council (2010) located on Melbourne's eastern peri-urban fringe focused on bushfire preparedness amongst 60 frail older and vulnerable residents independently living in isolated high risk areas of the municipality who were clients of the council's Home and Community Support service. This study found that the majority of participants either did not accept, or were ignoring, the bushfire preparedness messages. Additionally many participants expressed an over-reliance on authorities and agencies to provide a safe place during a bushfire.

Population mobility and residents 'lack of time' is also having an impact on the sustainability and capacity of some Community Fire Units in Ku-ring-gai. They are facing the challenge of the ageing of their members:

[W]e seem to have a lot of retirees, which makes it hard for the Community Fire Unit, because most of us aren't really up to constantly rolling up a hose, or rolling it out. It's quite hard work

CRCNSWKUR 12-14

While amenity migrants may bring new resources to revitalise a locality (Rowland 2012), the resulting land subdivisions and expansion of existing settlements can contribute to the marginalisation of some long term residents such as welfare dependent retirees, long term residents who are ageing-in-place or those working in low skilled occupations or are unemployed.

Summary

Amenity migration is creating very diverse and complex communities in rural-urban interface and sea-change localities across Australia. These demographic, social, and economic changes are challenging conventional approaches to community engagement which is a significant plank of efforts to raise bushfire awareness and preparedness. The daily lives of many people today are now organised around managing the competing claims on their time of long hours work, commuting, caring for children and other family members who have disabilities or are ageing. This can limit their social and spatial embeddedness within these rural-urban interface or sea-change communities which in turn reduces their opportunities for informal interactions with neighbours and other community members which are important in the distribution of locality specific environmental and preparedness information.

This study provides examples of how informal social interactions can foster the exchange of preparedness information amongst residents living in bushfire prone communities. These exchanges often take place at the neighbourhood or street level. Based on these understandings of the impacts of amenity migration within rural-urban interface and sea-change communities, efforts to increase bushfire preparedness must be tailored to meet the local needs and expectations. A more effective approach would seem to be one that engages residents in those places and spaces where they spend significant amounts of their time every day. Building locality specific environmental awareness and risk perceptions often comes from the sharing of personal stories amongst neighbours or other community members. For those who are second home owners perhaps the emphasis needs to be mainly on insurance as they often do not have the same emotional and financial commitment to a holiday location as they have for a primary residence.

Implications

1. When developing strategies in relation to bushfire preparedness and response it is important to take into account the specificities of locality, such as peri-urban, sea/tree change and like features. One particular aspect that should be taken into account is the tension between everyday life and having time for local involvement and engagement, a feature that may be difficult where households live in two houses.
2. Given the importance of informal interactions and conversations in relation to locality awareness, it is important that agencies take these matters into account when developing awareness strategies.
3. When developing awareness strategies for these types of communities the socio-demographics often associated with vulnerability should be taken into account, such as age, language differences, lifestyle and financial well-being.

Directions for Future Research

1. One area of neglect in relation to understanding communities is in relation to household organisation, composition about and resource. Too often research focuses on individuals to the neglect of households as such, with the result there is a gap in our knowledge.
2. Little is known of the ways in which informal relations, involving conversation, local meeting places and related social practices and the ways they may have a bearing on bushfire preparedness and response; these social features may take on particular forms in peri-urban and sea/tree change localities.

References

ABS 2011, 'Population by age and sex, Australian states and territories.' Australian Demographic Statistics. 3101.0.

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Mar%202013?OpenDocument>

ABS 2012. Still on the Move: Reflecting a nation's stories from the 2011 Census. ABS, 2071.0. www.abs.gov.au/ausstats/abs@.nsf/mf/2071.0/

Australian Bureau of Statistics 2013 *Where and how do Australia's Older People live?*

<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2071.0main+features602012-2013>

Australian Institute of Family Studies 2011 *Family Facts and Figures*, Australian Government

<http://www.aifs.gov.au/institute/info/charts/households/index.html>

Black, D., Kalb, G. and McGuinness, S. 2008. *Location Economics of Income Support Recipients: A comparison to the general population*. Final report prepared for the Australian Government Department of Education, Employment and Workplace Relations. University of Melbourne: Melbourne.

<http://melbourneinstitute.com/downloads/labour/5-06%20Final%20Report.pdf>

Brenkert-Smith, H. 2010. Building Bridges to Fight Fire: The role of informal social interactions in six Colorado wildland-urban interface communities.' *International Journal of Wildland Fire*, 19(6): 689-697.

Burnley, I.H., Marshall, N., Murphy, P.A. and Hugo, G.J. 2007. Housing Factors in Welfare Migration to and from Metropolitan Cities in Australia. *Urban Policy and Research*, 25(3): 287-304.

Cadieux, K. 2011. Competing Discourses of Nature in Exurbia. *GeoJournal*, 76: 341-363.

Cloutier-Fisher, D., Kobayashi, K. and Smith, A. 2011. The Subjective Dimension of Social Isolation A qualitative investigation of older adults' experiences in small social support networks. *Journal of Ageing Studies*, 25(4): 407-414.

Collins, T.W. and Bolin, B. 2009. Situating Hazard Vulnerability: People's negotiations with wildfire environments in the U.S. Southwest. *Environmental Management*, 44(3): 441-455.

Dillon, A. 2011. NSW RFS Community Fire Units Rolled Out. *Bushfire Bulletin*, 33(2): 13.

Drozdowski, D., Shaw, W. and Godfrey, N. 2011. *Treechange Migration to the NSW Southern Highlands: Motivations and outcomes of urban to rural migration*. The University of New South Wales: Sydney. www.bees.unsw.edu.au/webfm_send/210

- Eriksen, C. and Gill, N. 2010. Bushfire and Everyday Life: Examining the awareness-action 'gap'.in changing rural landscapes. *Geoforum*, 41(5): 814-825.
- Gordon, J.S., Matarrita-Cascante, D., Stedman, R.C. and Luloff, A.E. 2010. Wildfire Perception and Community Change. *Rural Sociology*, 75(3): 455-477.
- Gosnell, H. and Abrams, J. 2011. Amenity Migration: Diverse conceptualizations of drivers, socioeconomic dimensions, and emerging challenges. *GeoJournal*, 76: 303-322.
- Gurran, N. 2008. The 'Turning Tide': Amenity migration in coastal Australia.. *International Planning Studies*, 13(4): 391-414.
- Healy, K., Rawsthorne, M., Donnet, A., Caniglia, F., Hampshire, A. and Michaux, A. 2009. *Promoting the Social Inclusion of Young Families Moving to Non-metropolitan Areas*. The University of Queensland: Brisbane.
- Hugo, G.J. and Bell, M. 1998. The Hypothesis of Welfare-led Migration to Rural Areas: The Australian case. In Boyle, P. and Halfacree, K. (eds) *Migration into Rural Areas: Theories and issues*. Wiley: Chichester.
- Kelly, G. and Hosking, K. 2008. Nonpermanent Residents, Place Attachment, and 'Sea Change' Communities. *Environment and Behavior*, 40(4): 575-594.
- Liu, C.H., Warburton, J., Winteron, R. and Bartlett, H. 2011. Critical Reflections on a Social Inclusion Approach for an Ageing Australia. *Australian Social Work*, 64(3): 266-282.
- Marshall, N., Murphy, P.A., Burnley, I.H. and Hugo, G. 2005. Australian Intrastate Migration – The story of age pensioners?, *Australian Social Policy*, 5: 65-86.
- McCarthy, J. 2008. Rural Geography: Globalising the countryside. *Progress in Human Geography*, 32(1): 129-137.
- Mercury 2012. Angst in a Town Divided. *The Mercury*, 19 February.
www.themercury.com.au/article/2012/19/302285.html
- Morrow, B.H. 1999. Identifying and Mapping Community Vulnerability. *Disasters*, 23(1): 1-18.
- Networked Rural Councils Program. 2012. Rural Migration Trends and Drivers. Municipal Association of Victoria: Melbourne. www.ruralcouncilsvictoria.org.au/wp-content/uploads/FINAL-Rural-Migration-Trends-and-Drivers_NRCP-5-2_14-December-2012.pdf
- Paveglio, T.B., Jakes, P.J., Carroll, M.S. and Williams, D.R. 2009. Understanding Social Complexity within the Wildland-urban Interface: A new species of human habitation? *Environmental Management*, 43(6): 1085-1095.

Race, D., Luck, G.W. and Black, R. 2011. Patterns, Drivers and Implications of Demographic Change in Rural Landscapes. In Luck, G.W., Race, D. and Black, R. (eds) *Demographic Change in Australia's Rural Landscapes: Implications for society and the environment*. Springer Science+Business and CSIRO: Melbourne.

Ragusa, A.T. 2011. Seeking Trees or Escaping Traffic? Socio-cultural factors and 'tree-change' migration in Australia. In Luck, G.W., Race, D. and Black, R. (eds) *Demographic Change in Australia's Rural Landscapes: Implications for society and the environment*. Springer Science+Business and CSIRO: Melbourne.

Rosier, K. and McDonald, M. 2011. The Relationship between Transport and Disadvantage in Australia. CAFCA Resource Sheet. Communities and Families Clearinghouse Australia: Canberra. www.aifs.gov.au/cafca/pubs/sheets/rs/rs4.pdf

Rowland, D.T. 2012. Population Aging: The transformation of societies. *International Perspectives on Aging*, 3: 209-225.

Slemp, C., Davenport, M., Seekamp, E., Brehm, J., Schoonover, J. and Williard, K. 2012. Growing Too Fast: Local stakeholders speak out about growth and its consequences for community well-being in the urban-rural interface. *Landscape and Urban Planning*, 106(2): 139-148.

Solangaarachchi, D., Griffin, AL. And Doherty, MD. 2012. Social Vulnerability in the Context of Bushfire Risk at the Urban-bush Interface in Sydney: A case study of the Blue Mountains and Ku-ring-gai local council areas. *Natural Hazards*, 64(2): 1873-1898.

State of Tasmania and Commonwealth of Australia (2011 *Tasmanian Forests Intergovernmental Agreement between the Commonwealth of Australia and the State of Tasmania*, 7 August 2011. <http://www.environment.gov.au/system/files/pages/88396b17-ea57-466d-858a-ad896d98fa16/files/tasmanian-forests-intergovernmental-agreement.pdf>

Yarra Ranges Council. 2010. *I Fought Two Wars, I Can Fight This: Bushfire awareness and preparedness of frail older and vulnerable residents in Yarra Ranges*. Project Report, Yarra Ranges Council: Melbourne.

Williams, P., Pocock, B. and Bridge, K. 2009. *Linked-up Lives: Putting together work, home and community in ten Australian suburbs*. University of Adelaide: Adelaide. <http://w3.unisa.edu.au/hawkeinstitute/cwl/documents/linked-up-lives.pdf>

Willis, K.F., Natalier, K. and Revie, M. 2011. Understanding Risk, Choice and Amenity in an Urban Area at Risk of Flooding. *Housing Studies*, 26(2): 225-239.

Woods, M. 2009. Rural Geography: Blurring boundaries and making connections. *Progress in Human Geography*, 33(6): 849-858.

Chapter 10: Social Networks and Bushfire Preparedness

Social networks matter and their importance in relation to bushfire preparedness cannot be underestimated. This chapter reports a social network study based on the premise that social networks play a particularly important role in collective action in building adaptive capacity (Gilchrist 2009; Ireland and Thomalla 2011). Social networks are those relationships that connect one person to another, creating links between social groups. They are dynamic, organic constellations of lateral social connections. These relationships are significant in helping communities and individuals cope with unexpected events, such as natural disasters. Studies of communities hit by a catastrophe such as landslides or heatwaves demonstrate that people with well-connected social networks are more likely to recover than others where their networks are obliterated or non-existent (Gilchrist 2009). A study during and after Hurricane Katrina in 2005 highlighted that such networks were critical in enabling individuals to obtain information about the storm, make decisions and plan for evacuation as well as accessing a variety of resources during and after the event (Messias *et al.* 2012). In principle, there is no reason to think that such networks are not as valuable in other disaster settings, such as bushfire.

Social networks operate in complex ways. There is mounting evidence that during bushfires information is passed between persons, such as family, friends and neighbours (Paton n.d.; Brenkert-Smith 2010; Stelling *et al.* 2011). Brenkert-Smith (2010) argues that such social interactions are important in creating opportunities for residents to exchange information on shared risks and can lead them to take collective actions to address this risk. In other words, there is a mutually beneficial relationship between individual exchange and collective action. This exchange can become a key vehicle for building adaptive capacity and recovery in communities, as Stelling and colleagues show in their study of north-east Victoria (Stelling *et al.* 2011). Interviews with residents in Kilmore East after the 2009 Black Saturday tragedy indicate that almost half of the residents interviewed (51%) relied on environmental indications and phone calls from family and friends as cues for enacting their plans, rather than the agency websites (1%) (Elliott and McLennan 2011). Thus there is evidence to suggest that social networks are critical in disaster contexts, including bushfires.

Relatively little is known about the flow of information among localised social networks in diverse neighbourhoods (*cf.* Johnson and Pattie 2011: 302, focusing on such flows in relation to voting patterns in relatively homogeneous neighbourhoods, socially and behaviourally). The peri-urban localities we studied had recently experienced demographic and socio-economic changes, driven by amenity-led migration. These changing patterns have resulted in a diverse rural-urban interface community, fragmenting networks and, in a number of instances, social isolation. Such changes may present challenges for fire agencies, dealing with populations from diverse backgrounds and experiences.

This chapter argues for a comprehensive understanding of the way social networks perform in localised communities, particularly with reference to Australian bushfire research. Strategies for unlocking and realising the full value of social networks are under-explored and poorly appreciated. This study goes some way to address this gap in our knowledge. Given that communities are complex, dynamic and diverse, this study develops an approach that highlights and explains diversity, relationships and values in relation to network building. It seeks to understand what kinds of resources flow through different kinds of networks.

The remainder of the chapter is structured as follows. First a brief overview of key concepts is provided. Second, a framework for considering social capital is outlined so as to consider the nature and configurations of social networks. Third, the methodology and approach of the social networks study is provided. Fourth, insights into social networks for bushfire preparedness are provided through interviews with participants in three localities are provided. Fifth, systems that can support social networks are discussed. Sixth the practical benefits of visualisation tools as a method to support individuals to ‘make-sense’ of the complex issues and challenges related to bushfire preparedness are provided. Finally, conclusions are made, implications are highlighted and future research directions are outlined.

Social Networks, Social Capital and Community Resilience

As introduced in Chapter 2, social networks usually extend beyond geographical boundaries depending on social actors’ work, their family ties and interests, their friendships and acquaintances. Such networks have a number of functions such as creating a communications web via various modes (e.g. digital media or word-of-mouth), enabling mobilisation for collective action, being sources of support and advice, providing a basis for a shared identity, foundation for cross-sectoral collaboration and a reservoir of information, resources and social capital (Gilchrist 2009).

Conceptually, social networks have been related to social capital, where these two concepts are often treated as two-sides of the same set of relationships. The implication is that the value of such relationships is based on not *what* you know (human capital such as individuals’ education, health, skills and knowledge) but *who* you know (Woolcock 2001). Social capital is thus commonly understood as the value of assets held in or accessed through social networks, and also includes aspects of people’s position in society and their ability to co-operate with others (Putnam 2000). In his definitive study, Putnam (2000) argues that social capital is a collective resource that allows societies and economies to thrive, and his definition includes the dimensions of trust and shared norms. The interest in social capital represents an attempt to measure ‘community spirit’, and is based on quantifying three aspects – levels of trust between people and social institutions; participation in social and civil activities; and networks of personal contacts (Australian Social Inclusion Board 2009).

Our particular focus is on the role of social networks with respect to community resilience. Most definitions on resilience include the ability to cope in the face of adversity (Gilchrist 2009; McAslan 2011). The term is often coupled with adaptive capacity, the presence of a local, strong kinship network and its ability to adapt over time to buffer stress to potentially

threatening environments (Smit and Wandel 2006). A key factor is the strength and ability to overcome vulnerabilities and be able to positively adapt to change (Australian Social Inclusion Board 2009). Resilience is thus dependent on social interaction and collective action based on networks of relationships, reciprocity, trust, social norms (McAslan 2011). Further, this process involves a linking of adaptive capacities among populations after a disturbance (Norris 2008).

A Social Network Framework

To understand the value of social networks in building community resilience, our approach looks at the nature and configuration of connections within social networks. Three sets of social relationships are central to the understanding of social networks, *bonding*, *bridging* and *linking*.

- a. **Bonding:** This concept refers to the relations between peoples with strong mutual commitments to each other, such as between friends, family and other close-knit groups. The importance of bonding in building cohesion is evident for communities that have been fragmented by ethnic, sectarian and other social fissures (Woolcock, 2001; Gilchrist 2009). Such relations provide the basis for developing social networks in communities as localities. However, of note, such relations can be inclusive and exclusive in their practice, depending on the ways these relations are framed and focused.
- b. **Bridging:** The concept of bridging refers to horizontal connections, implying links between people and social groups (Woolcock 2001). It is formed from the connections between people who have less in common, but may have overlapping interests, for example, between neighbours, colleagues or between different groups within a community (Gilchrist 2009). Bridging allows connections among otherwise disconnected groups or civic organisations. Such ties facilitate the exchange of information between distinct groups, and help to expedite the flow of ideas. As such, they are important to the process of education or mobilizing for collective action (Kavanaugh *et al.* 2005).
- c. **Linking:** This concept adds a vertical dimension to the analysis, entailing strategies to forge alliances and promote positive relations between locally-based and non-local social groups, individuals and organisations. This aspect adds the dimension of power and influence into the analysis. Linking describes the capacity to leverage resources, ideas and information from formal institutions beyond the community (Woolcock 2001; Gilchrist 2009).

These dimensions of social networks are often complex and unclear – the distinctions between these three types of social capital are not clear-cut, and they frequently overlap. The history of this framework is that many scholars have built on Putnam's (2000) definition of *bridging* and *bonding* social capital and Granovetter's (1973) seminal work that distinguished between *strong* and *weak* ties. Granovetter suggested that 'weak ties are more likely to link

members of different small groups than are strong ones, which tend to be concentrated within particular groups' (Granovetter 1973: 1376). However, the simple dichotomy of 'strong' and 'weak' implied in these bold distinctions is insufficient in capturing subtle nuances of a tie. Crow (2004) argues that the ties that make up a social network can be stronger or weaker in several different ways. This outcome depends on the number of people in the network, the extent to which people in the network have overlapping interconnections, the degree of geographical concentration or dispersion of the network population, the extent to which the relations between network members are characterized by equality and reciprocity, and the impact of the broader social setting within which the network is located.

The links between members of networks thus have several aspects to them. To side-step the obscurity of what is meant by 'strong' and 'weak' distinctions, Burt (2000) explains the importance of the 'bridges' across the 'structural holes' in a network that make this dimension valuable. Woolcock (2001) adds that to understand the ways in which social capital is produced, it is necessary to understand how repeated interactions within communities create trust and reciprocity. This framework provides a way to examine the kinds of roles and relationships within a network and how different interactions occur. Further, Gilchrist (2009), with reference to community development, explains that a 'well-connected' community can help build bridges for managing diversity and maintaining community cohesion, and create opportunities for empowerment and partnership. So by taking such a multi-dimensional approach, this study provides a way of understanding the ways the relationships, of *bonding*, *bridging* and *linking* provide a framework for examining the construction of social networks in relation to bushfire.

Methodology and Approach

The first stage of the 'Effective Communication: Communities and Bushfires' project interviewed several women in southeast Tasmania who actively used and developed their social networks to increase awareness and preparedness in their communities. In many cases these women had migrated from other states in Australia. Each had different roles and associated networks. Several people in their networks were interviewed. The social network study built on the first stage of the project. The core of this second stage involved intense research with ten participants from three localities, in Kingborough and Huon Valley municipalities in southeast Tasmania, Australia.

The study looked at how trust and reciprocity are expressed or demonstrated and why certain members were more relied upon than others. This focus provided a basis to understand when and how information might come from fire agencies and other formal institutions, and how this may pass along and through social networks.

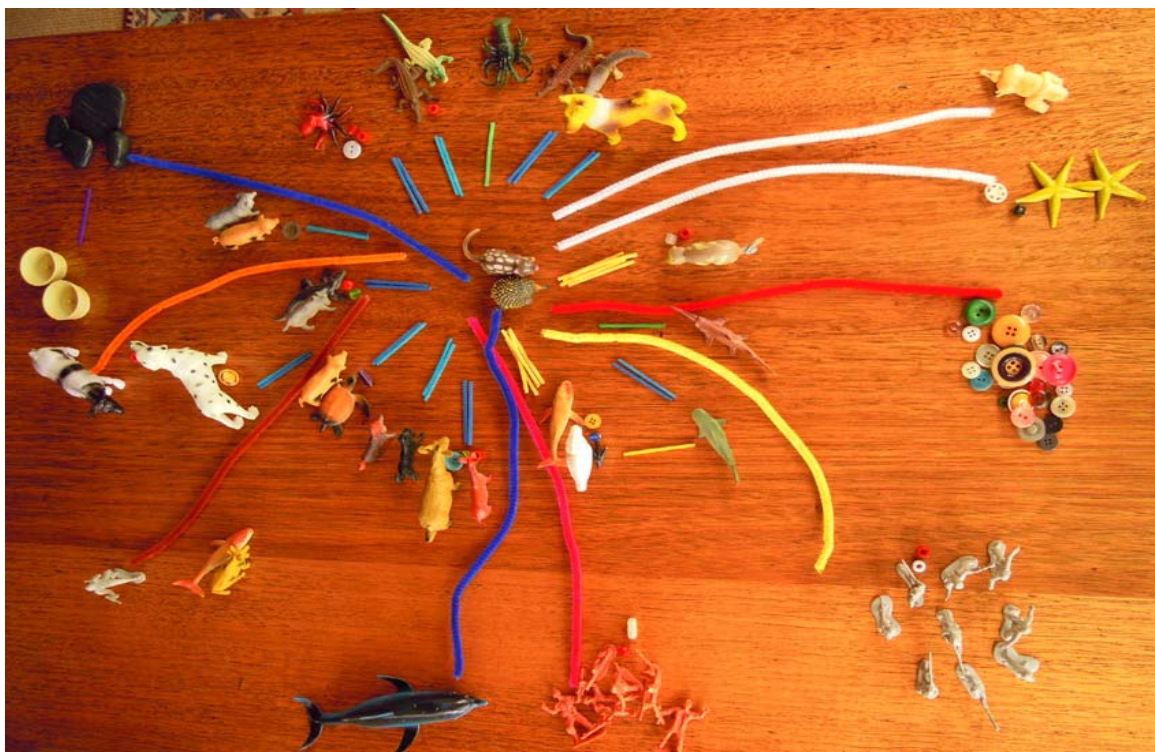
The interviews were complemented with a visualisation tool titled 'Playful Triggers' (Loi 2005; Akama *et al.* 2007). The methodological principle used here is to design a mechanism by which the data collection can be open whilst providing 'handles' for thick description and interpretation. Figure 5 shows a close up of the objects that make up the Playful Triggers. Daria Loi (2005: 18), who first developed Playful Triggers, explains that they:

[G]enerate receptive modes through their tactile, visual, mysterious, playful, tridimensional, poetic, ambiguous and metaphorical qualities. These triggers ask people to challenge taken for granted or conventional ways of doing, seeing and articulating things to co-generate shared understandings and collaborative practices.

Building on the work by Loi (2005) and Akama and colleagues (2007), Playful Triggers are used in this interview as ethnomethodological tools. They are scaffolds for conversation and engagement where learning is generative and supported by the construction of temporary structures (Wood, Bruner and Ross 1976; Vygotsky 1978; Sanders 2000). This approach focuses on the ways in which people understand their everyday activities from within and reflexively display their understanding of it (Garfinkel 1967).

The method employs a way of interpreting everyday events as opportunities through which members of the community make sense of the world and how they use that understanding (Button 2000). The artefacts take on the meanings placed on them by the participants (Arias and Fischer 2000). These objects enhance the creation of shared understandings.

Figure 5 – An example of a social network visualised using artefacts called Playful Triggers



Artefacts are considered as ‘a language of interaction’ (Krippendorff 2006: 46). Moreover, they enable social science researchers to complement interview data with interactional

understandings. Thus, the method helps to illuminate the complex human interactions that are inherent in people's personal networks.

Even though there was a standard set of questions asked of all interviewees, once the conversation commenced, it was driven collaboratively. Both interviewer and interviewee would manipulate the objects on the table in order to explore the details of the interviewee's social interactions. The interviewee began by choosing various animals to denote different characteristics of people (see various animals used in Figure 5). There was no right or wrong way to create the visualization as it was not governed by rules set by the interviewer. These conversations often evolved, where questions and responses triggering a memory or past interaction, prompting the participant to recall and visualize another tie with a person that they had forgotten to mention earlier. The objects enabled an accessible and fluid scaffold to build upon and to delve deeply into their social world.

The social network visualization is partly based on imagining what 'could happen' – interactions that lie in the future, and in an emergency. Questions about seeking advice or providing assistance became a focal point during this part of the interview. This prompted the participants to add other people in their network, for example, the local fire brigade or neighbours with specific knowledge on fire or preparedness (see Wack 1985; Schwartz 1996; Manzini and Jegou 2004).

Ten interviews were conducted over an hour as informal face-to-face conversations at the participant's home. Each interview was audio recorded together with photographs of the visualisations. The data, including the transcripts, visual photographs, notes and observations were analysed in order to create a second set of visualisations that combined the personal networks to analyse how bridging and linking roles are undertaken in creating social capital. These diagrams are critical components throughout the discussion in illustrating each network characteristic. This chapter is largely based on this investigation in southeast Tasmania, but also draws on interview data from other states. The purpose is to examine individuals' experiences in terms of their role and positions in networks of relationships within and between local groups and organisations.

Social Networks in Practice

Residents in bushfire prone Tasmania and other localities demonstrate the characteristics of bonding, bridging and linking social capital in relation to bushfire preparation.

Bonding networks

As noted, bonding describes the connectedness among close-knit groups, such as friends and family. However, bonding networks can be problematic when they are inward looking and insular. This aspect was observed in southeast Tasmania. Some families who had lived in this area for a long time appeared to have little reason to go 'past the family', and therefore had not expanded their social networks. One resident reported:

[T]here's a lot of people who live here who don't have a network other than perhaps a relative network ... Sometimes that can work and sometimes it can't.

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Wenger (1985) characterises such networks as a 'local family dependent support network', where primary ties are with close family and have very few ties with friends and neighbours. Another resident described a long-term neighbour in his 60s:

[D]oesn't want to know...If you try and approach them, they just back off even more and I find it doesn't work...I've asked the [fire fighters] to talk to him, he virtually told them to go somewhere else...he doesn't want to be [in the phone tree]. He made it perfectly clear.

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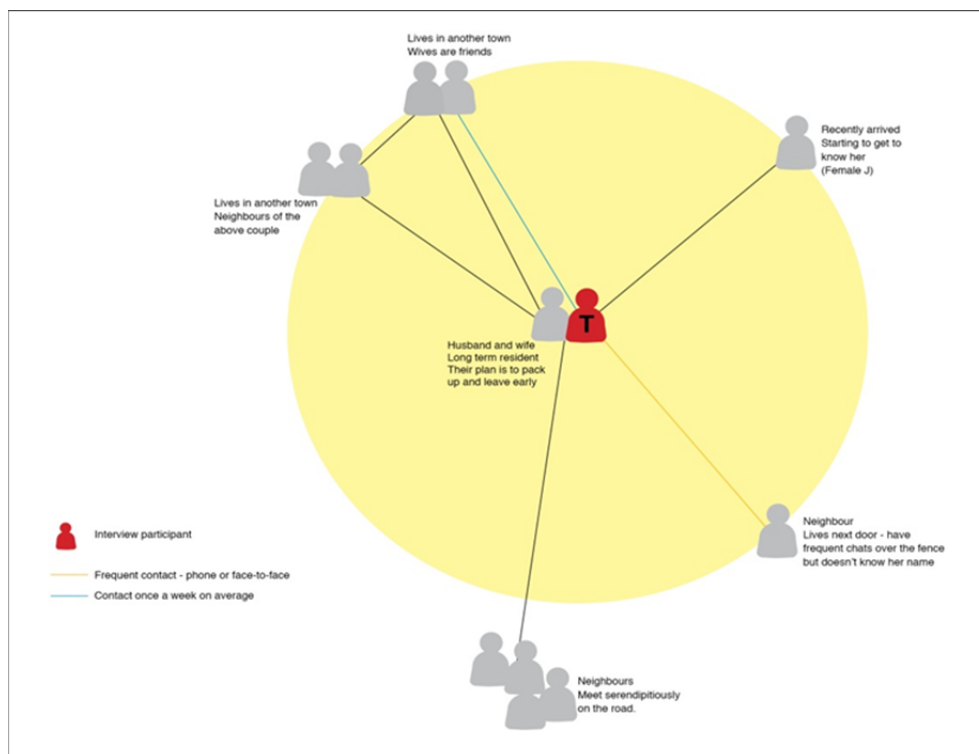
His disinterest and isolation was a great concern to the this resident for fire preparedness. Similarly, new residents may also lack connectivity. As Stelling and colleagues (2011: 36) report:

... the newcomers have got the issue where they're not connected in the community and that's where they're isolated and not resilient...

This issue of new arrivals or intentional disconnect from the community is also observed in a coastal area in Victoria that has a large influx of non-permanent residents. Akama and Ivanka (2010) explain that these residents, often consisting of sea/tree-changers and holiday- home owners/renters, are there to 'switch off' from a busy lifestyle. Often they can disassociate with the local community network through frequent absence or deliberate desire to disconnect socially and technologically. The authors argue that new arrivals who have a lack of knowledge about people and their environment can create situations that make them more susceptible to bushfire risks.

Risks associated with an insular bonding network are illustrated by a male resident's network in Tasmania (see Figure 6 – labelled as T).

Figure 6 – An example of a private bonding network



“T” is aged above 60 and had moved to the area many years ago. Contact with neighbours was minimal and often *ad-hoc*, for example, waving to each other when someone drives down their road, or having a casual chat across the fence line. Many of his friends had moved away from the neighbourhood and he appeared to be either shy or reluctant in connecting with others. Only two couples appear on his network as friends, mainly through his wife. Unfortunately, it was not possible to interview his wife, who may have revealed a very different network to the husband and how he could be connected to others through her social network. Although he had knowledge of most of the residents in his locality, he explicitly stated that he would not contact or be contacted by anyone in an emergency, since his plan was to leave early.

To date, bushfire research has not examined the significance of insular social networks. Very little is known about such networks, and the forms of insularity that may develop, even though social exclusion is addressed by research on community services in general (Wenger 1995; Gilchrist 2009). More generally, other forms of bridging and linking mechanisms must be in place for an individual or community to benefit from the positive aspects of social capital.

Bridging networks

People as members of one or more community organisations or groups can serve as a link between different groups. Research suggests that some members will convey information from one group to another as part of their roles and activities. According to Kirschenbaum (2004), ‘gatekeepers’ have an important role to play in the diffusion of disaster information

through social networks. These people often have a position at critical intersections between several social networks. As noted:

As gatekeepers, their position in the information chain can be decisive in affecting disaster decisions of family, friend, and neighbouring networks (Kirschenbaum 2004: 101).

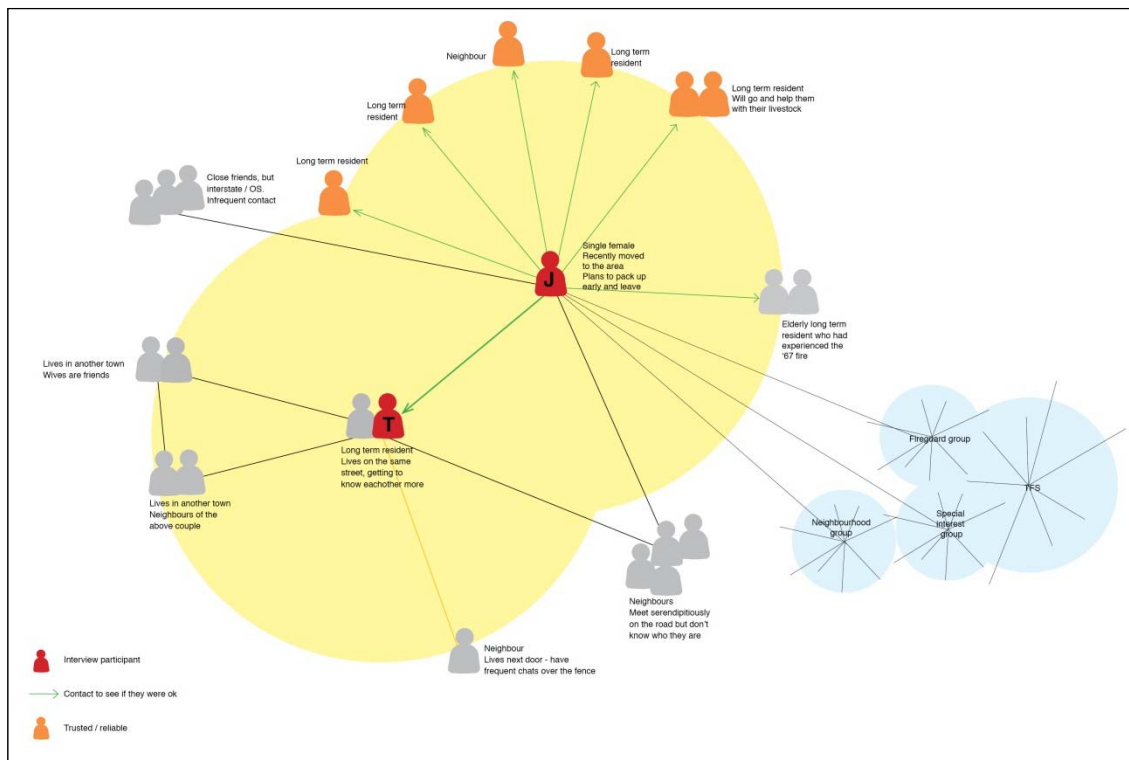
When combined with their abilities to decide what information is relevant and significant, these 'gatekeepers' are able to pass it along to other members in these networks.

One locality

A gatekeeper may initially pass information through a bonding network of family members and friends, and then pass information along to members of other organisations, such as work colleagues. These bridging activities were observed in Ku-ring-gai, New South Wales, where a participant had been actively involved with a number of community and voluntary groups for the last 23 years. These memberships included an environmental group, a residents association, and a friendship group. This participant was also involved in other discussions about residential development across Ku-ring-gai.

One insight revealed by our research is how the processes of social integration of isolated residents were made good through networks. Here, the social network of another resident in Launceston, Tasmania, became salient when describing a critical role as a *catalyst* in bringing people together. She is female 'J', who appears in the periphery of the male 'T' bonding network (see Figure 6 top right of the diagram) as someone he is beginning to know. 'J' has a proactive link as suggested in the diagram by a directional arrow (Figure 7), thus visualising how the two networks join up.

Figure 7 – A female resident J playing a bridging role, connecting with male T’s private bonding network



‘J’ is a recent arrival and a private business owner. She uses her personal interests to organise a ‘street connect’ group in her local area. She encourages people to prepare more collectively and effectively for bushfire events. Ten households responded to her initiative and showed a willingness to set up a phone tree. These bridging efforts were remarkable given that she had also managed to engage male ‘T’. Female ‘J’ indicated that she would contact ‘T’ and his wife immediately in a fire situation, as they both live on the same street. Despite appearing to be deliberately disengaged from others and stating that he did not need any advice or information, ‘T’ attended her gathering because of his concern about a ‘safe area’ where they could all go in the event of a fire emergency.

‘J’ also indicated that she would also contact people others in her network (those positioned above her in Figure 7) to ask if they needed help, to see how they were and to let them know her plans to leave early. In terms of preparedness, she will also ask:

Can I get you to come and cut some wood down? Can I use your bulldozer to move some logs? Can I get you to help me build a wood shed a long way away from my house? So it’s more just about property clearing.

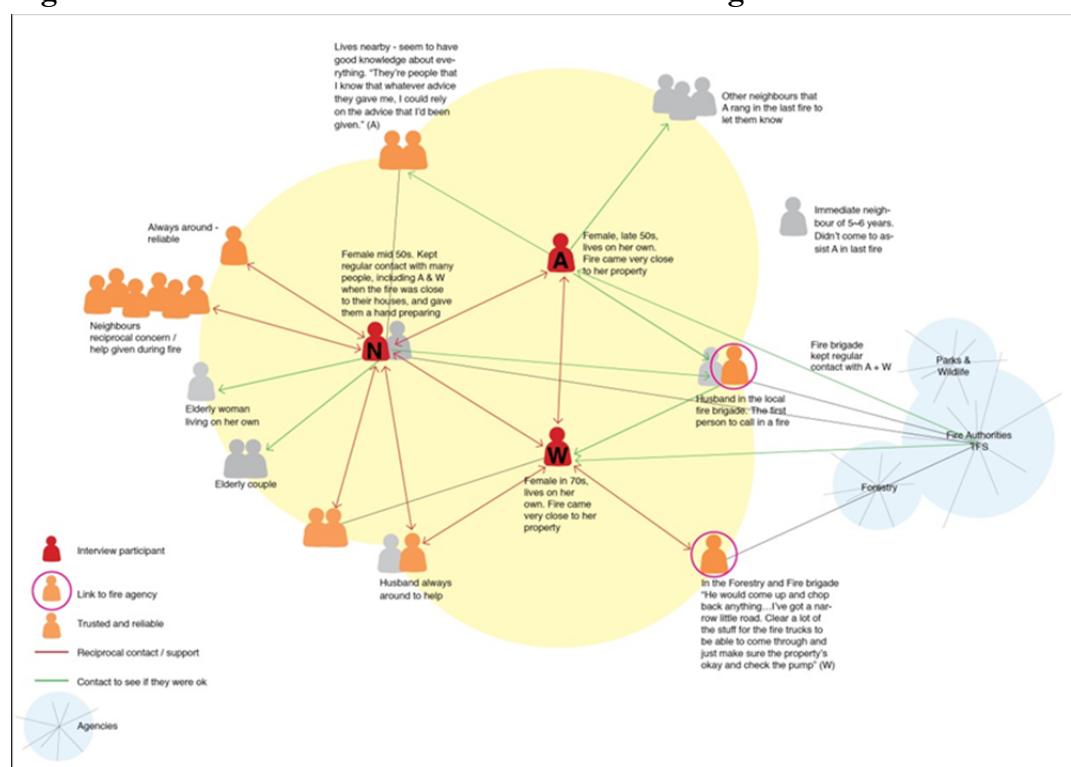
Her motivation in establishing the ‘street connect’ and phone tree is driven by a concern that she is new to the area and a female living on her own. She is proactively building her networks, which also includes social gatherings. The significance and value of ‘J’ in this social network is

highlighted by her admission that her connecting role is ‘sort of just like a conduit, not really the person that has all the answers’.

Another locality

In Dover, Tasmania, we undertook a network analysis of the interaction that took place between three women prior to a fire in January 2010. These participants described networks characterised by close relationships and frequent contact with local family, friends and neighbours (ranging between several days or weekly contact). Many neighbours were also described as friends. These residents had lived in the local area for a relatively long time (ranging from 7 to 30 years) and were active in a variety of social group. The network diagram (Figure 8) involving these three women displayed a collective phenomenon where different people had assisted them in different ways.

Figure 8 – Network interaction of three females during a fire



Females A and W could be classed as vulnerable residents given that ‘W’ was more than 70 years old and ‘A’ lives alone. In disaster literature, people are possibly vulnerable to natural hazards if they are elderly; have physical/mental health issues; reside with children; are living on their own; live in remote areas; do not have means of transport; live in unreliable buildings; deny the risks they face; and recently arrived residents (Paton n.d; Fothergill and Peek 2004; Wolf *et al.* 2010; Stelling *et al.* 2011).

Participants ‘A’ and ‘W’ noted that female ‘N’ was trustworthy, reliable and a source of information. ‘N’ explains, ‘I probably actively work at my network’, valuing the support that she provides to others as well as the support she receives from her friends and neighbours. Despite having no local kin, all three females identified many in their networks who

they had turned in an emergency, and those who had contacted them to offer assistance. Availability of mutual assistance and having sources of informal help has been indicated as a feature of support networks (Wenger 1995). In terms of ‘testing’ normative relationships, ‘A’ expressed disquiet about an immediate neighbour’s behaviour during a previous fire:

[M]y immediate neighbour, for instance, could see the fires behind my place, didn’t even come over to see if I was all right. ... I was gobsmacked... Knew I was on my own, so that was just sheer thoughtlessness on his part ... So the person who did actually ring me up was in fact [Female N], to make sure that I was okay ... I think [my immediate neighbour] was more worried about getting his hay out.

‘A’ illustrated this relationship by visualizing her trust and reliance with other members in her network, particularly with ‘N’ who actually assisted her (see Figure 8). ‘N’ helped both ‘A’ and ‘W’ clear out the gutters and filling them with water. These efforts were recognized by ‘W’ who said:

I apparently got a gold star [from the fire authority] for being so prepared!

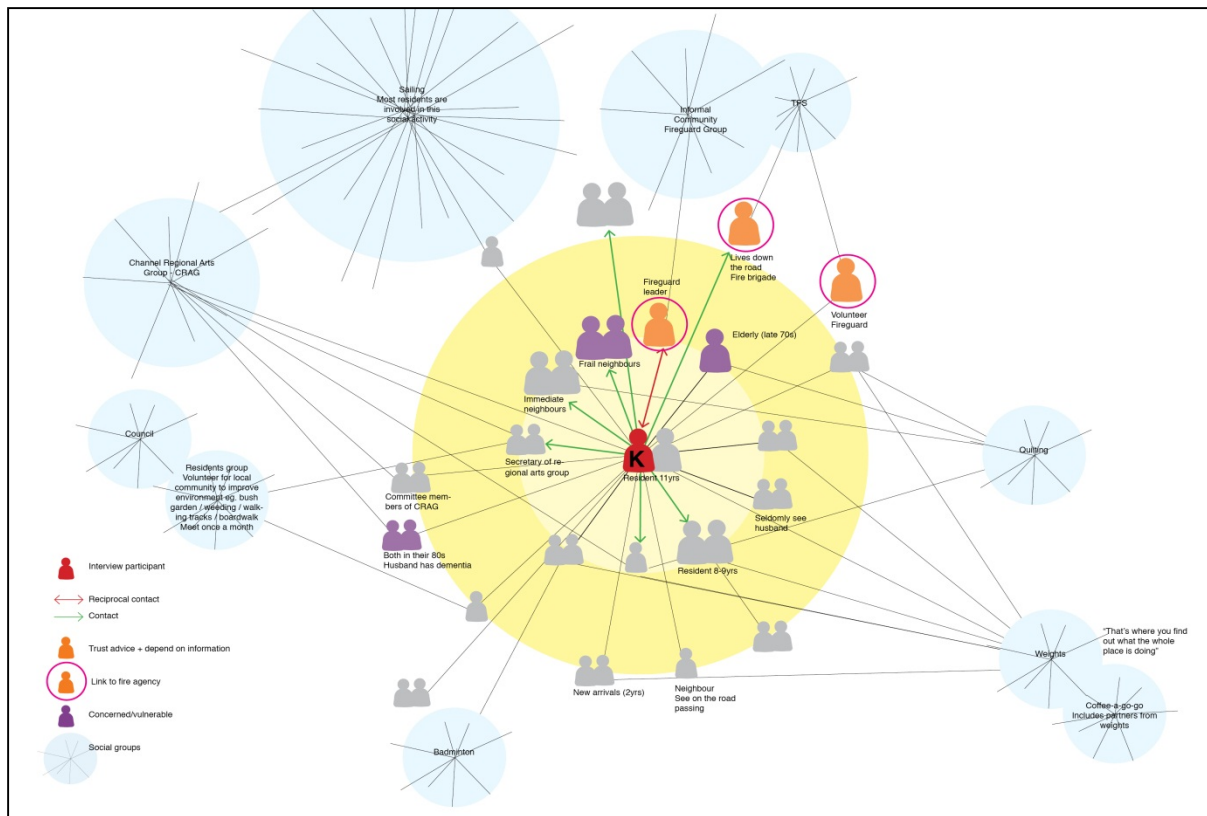
Thus *bridging* social networks enable preparation and risk mitigation.

Linking networks

Linking networks are important for leveraging resources, ideas and information. Some participants in the social network study reported that local fire brigade members performed linking roles with the fire and emergency services. Such linking networks were important for the three female residents in Dover, Tasmania (see Figure 8 – circled figures). Both A and W explained that the local fire brigade had kept an eye out for them by regularly maintaining contact to check their safety. The prior attendance at a fire preparation talk by these two women had alerted the authority staff to their needs. This example demonstrates the social and collective preparedness towards bushfire and means that these residents may be in a less vulnerable situation than they would otherwise be.

From a linking network perspective, Community Fireguard groups often demonstrate effective, formalised communication structures. The Community Fireguard program is a Victorian public bushfire education model that trains facilitators to assist neighbourhood groups in reducing risks and taking responsibility for their own bushfire safety (Fairbrother *et al.* 2010). Similar arrangements are promoted in Tasmania. These patterns are evident in another network, that of female ‘K’ (Figure 9).

Figure 9 – Female K's network showing extensive bridging and social activities



'K' lives in Kettering, where residents had established an 'informal' Community Fireguard group twelve years ago (Figure 9). By 2012, it comprised 170-200 people who were organised into eleven groups according to a street or area, with one volunteer leader for each group. The numbers in the group accounted for just under a quarter of its population (approximately 900). In a bushfire, the local fire chief is expected to call the leader of the group, who in turn will contact others on their phone tree system. In 'K's network, the Fireguard leader in her street played a critical *linking* role for the network with the fire authorities. The CFG leaders in this town meet once a year and are briefed by the fire authorities on new equipment, information or plans. Regular fire awareness sessions are organised at the start of the fire season and any relevant information is disseminated through the network. Research has shown the value of such formal and informal arrangements via the promotion of active participation, complementing and extending information delivery and encouraging bushfire planning and preparation (Gibbs *et al.* 2010).

The role of fire brigades in linking and bridging networks was also observed by a resident in Bedfordale, Western Australia. While this locality faced challenges bringing people together, principally due to a lack of public infrastructures, the local volunteer fire brigade is seen as an organisation that has:

[H]eld the community together ... without it, I'm sure it'd be a very different place to live.

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These residents run a Bushfire Ready Group and host an annual barbecue to create opportunities for people to meet.

Bonding, Bridging and Linking

The integration of the three frameworks of bonding, bridging and linking networks can create the basis for social preparedness for disaster situations, confirmed by other research. In the aftermath of Hurricane Katrina, for example, Hawkins and Maurer (2010: 1789) state that the 'interaction of bonding, bridging and linking social capital resources played and continues to play a significant role in the reconstruction' of the city. This means that displaying one type of framework may not be enough to prepare or survive disasters.

Evidence suggests that while bonding networks helped many families survive disaster, those who lacked, or suffered a breakdown in bridging and linking social relations found it difficult to access community resources (Woolcock 2001; Gilchrist 2009). Nonetheless, these networks can also be problematic. In another study of heatwave risk in the UK, Wolf and others (2010) cautioned that bonding networks among the elderly, for example, could exacerbate, rather than reduce, vulnerability. The elderly people saw ways to cope with heatwave as 'common sense', perpetuating narratives of resilience and independence through their bonding networks instead of actively seeking assistance from the outside to reduce risk. Wolf and colleagues (2010) suggests that formal and informal institutions such as health services and local community groups should provide the bridging and linking capital that can challenge such dominant narratives. Similarly, Rothberg (2012) identifies network actors who have attributes of respect, accessibility and problem solving skills, had also played bridging and linking roles in Tartapara, Bangladesh. Their roles included the diffusion of information and innovation for adaptive change.

Gender tends to be a peripheral theme in bushfire research and is still nascent in disaster literature (Tyler *et al.* 2012). This small case study, reinforces the role of women in disasters made by Tyler and colleagues (2012) who state that women are more likely to receive risk communication due to their social networks. Women, in particular, can play a critical link between the family unit and those beyond. Women's participation in voluntary organisations such as the Rural Women's Network or Country Women's Association are historically known to support members of rural communities and enhance community interaction (Tyler *et al.* 2012). Fothergill (1998: 16) explains that women become active in such groups through female friendship networks, and they see such memberships as an 'extension to their traditional domestic roles and responsibilities' because disasters poses a threat to their home and family.

Summary

Strategies for unlocking and realising the full value of social networks are under-explored and poorly understood in disaster literature. The contribution of this chapter marries theory and empirical evidence to highlight a range of formal and informal roles where residents display other capacities in building resilience. The discussion also questions what vulnerability means in the context of network interactions, highlighting that those who prefer to be isolated and have insular, bonding networks are also potentially at risk alongside those who are commonly regarded as being vulnerable, like women or the elderly living on their own. By building on a social capital framework of bonding, bridging and linking, this chapter demonstrates that these are not created by predetermined function of individuals, but generated through emergent, contextual, processual factors.

The disaster field needs to be aware of the transformative nature of networks and the latent qualities contained within a social network. Further, attention should be paid to systems and resources that can create or nurture social networks, and in particular bridging and linking networks. Thus, more research and new conceptualisations of emergent roles and relational dynamics is needed to understand how social networks perform in an emergency like a bushfire. While the catalytic roles played by individuals within networks have been identified, the disaster discourse would benefit from an examination of these roles as a process of transformative change and relations of reciprocal influence (Kirschenbaum 2004). Further research into the relational processes among people in these networks that enable reciprocity and transformation may provide key insights as to how collective adaptive capacities can be built.

Implications

1. Agencies should develop programs that facilitate network building (bonding, bridging and linking) and recognise the ways in which particular individuals, their characteristics and interactions, are critical for bushfire preparation.
2. Agencies and related bodies should consider the ways that social capital can be strengthened through various supportive systems, informal places and resources.
3. Practical methods that promote ways for stakeholders (e.g. agencies, volunteers) to adopt a social network approach to engage communities in bushfire preparedness are needed.

Directions for Future Research

1. Additional research investigating the application of the bonding, bridging and linking framework in the construction of social networks is needed to overcome the lack of clarity around 'strong' networks and generic descriptions of 'community'.
2. At present, there is a limited base relating to the roles that particular individuals play in the construction of networks, particularly in relation to bushfire preparation. This should be the subject of further research.
3. There is a pressing need to extend research on social network building so that the insights to date can be consolidated and extended in relation to strategies for bushfire preparation in recognition of network building as central to effective communication.

References

- Akama, Y., Cooper, R., Vaughan, L., Viller, S., Simpson, M., and Yuille, J. 2007. Show and Tell: Accessing and communicating implicit knowledge through artefacts. *Artifact*, 1(3):172-181.
- Akama, Y., and Ivanka, T. 2010. What Community? Facilitating awareness of 'community' through Playful Triggers. Paper presented at the Eleventh Conference on Participatory Design 2010, Sydney, Australia.
- Arias, E., and Fischer, M. 2000. Boundary Objects: Their role in articulating the task at hand and making information relevant to it. Paper presented at the International Symposium on Interactive and Collaborative Computing. University of Wollongong, Australia.
- Australian Social Inclusion Board. 2009. *Building Inclusive and Resilient Communities. Information Brochure*. Commonwealth of Australia: Canberra.
- Borgatti, S. P., and Cross, R. 2003. A Relational View of Information Seeking and Learning in Social Networks. *Management Science*, 49(4): 432-445.
- Borgatti, S.P. and Halgin, D.S. 2011. On Network Theory. *Organization Science*, 22(5): 1168-1181.
- Brenkert-Smith, H. 2010. Building Bridges to Fight Fire: The role of informal social interactions in six Colorado wildland-urban interface communities. *International Journal of Wildland Fire*, 19: 689-697.
- Burt, R. S. 2001. Structural Holes versus Network Closure as Social Capital. In Lin, N., Cook, K.S. and Burt, R.S. (eds) *Social Capital: Theory and Research*. Aldine de Gruyter: New York.
- Button, G. 2000. The Ethnographic Tradition in Design. *Design Studies*, 21(4): 319-332.
- Cherry, N. 1999. *Action Research: A pathway to action, knowledge and learning*. RMIT University: Melbourne.
- Chua, V., Madej, J., and Wellman, B. 2011. Personal Communities: The world according to me. In Scott, J. and Carrington, P. (eds) *The Sage Handbook of Social Network Analysis*. Sage: London.
- Crow, G. 2004. Social Networks and Social Exclusion: An overview of the debate. In Phillipson, C., Allan, G. and Morgan, D. (eds) *Social Networks and Social Exclusion: Sociological and policy perspectives*. Ashgate: Aldershot, UK.
- Elliott, G., and McLennan, J. 2011. *Civilian Decision Making Under Stress: Use of fire agency web-sites on Black Saturday*. Bushfire CRC: Melbourne. www.bushfirecrc.com/resources/poster/civilian-decision-making-under-stress-use-fire-agency-web-sites-black-saturday

- Fairbrother, P., Hart, A., Stratford, J. and Prokopiv, V. 2010. *CFA Community Fireguard Review: Improving quality control and assurance*. RMIT University: Melbourne.
- Fothergill, A. 1998. The Neglect of Gender in Disaster Work: An overview of the literature. In Enarson, E. and Morrow, H. (eds). *The Gendered Terrain of Disaster: Through women's eyes*. Praeger: Santa Barbara.
- Fothergill, A., and Peek, L. A. 2004. Poverty and Disasters in the United States: A review of recent sociological findings. *Natural Hazards*, 32: 89-110.
- Garfinkel, H. 1967. *Studies in Ethnomethodology*. Prentice-Hall: Englewood Cliffs, NJ.
- Gibbs, L., MacDougall, C., Clark, R., Kulkens, M., Rhodes, A., Clode, D., Niall, E. and Wostizky, H. 2010. *CFA Post-Fire Qualitative Research: A final report on the analysis of Community Fireguard Group members' experiences of the 2009 Victorian bushfires*. CFA: Melbourne.
www.cfa.vic.gov.au/documents/research/Post_Fire_Qualitative_Research_Final_Report.pdf
- Gilchrist, A. 2009. *The Well-connected Community: A networking approach to community development*. Policy Press: Bristol.
- Granovetter, M.S. 1973. The Strength of Weak Ties. *American Journal of Sociology*, 78(6): 1360-1380.
- Hawkins, R.L. and Maurer, K. 2010. Bonding, Bridging and Linking: How social capital operated in New Orleans following Hurricane Katrina. *British Journal of Social Work*, 40: 1777-1793.
- Holstein, B. 2011. Qualitative Approaches. In Scott, J. and Carrington, P.J. (eds) *The Sage Handbook of Social Network Analysis*. Sage: London.
- Ireland, P., and Thomalla, F. 2011. The Role of Collective Action in Enhancing Communities' Adaptive Capacity to Environmental Risk: An exploration of two case studies from Asia. *PLoS Currents*, 3: 1279-1289.
- Johnston, R., and Pattie, C. 2011. Social Networks, Geography and Neighbourhood Effects. In Scott, J. and Carrington, P.J. (eds) *The Sage Handbook of Social Network Analysis*. Sage: London.
- Kavanaugh, A.L., Reese, D.D., Carroll, J.M. and Rosson, M.B. 2005. Weak Ties in Networked Communities. *The Information Society: An International Journal*, 21(2): 119-131.
- Kirschenbaum, A. 2004. Generic Sources of Disaster Communities: A social network approach. *International Journal of Sociology and Social Policy*, 24(10): 94-129.
- Krippendorff, K. 2006. *The Semantic Turn: A new foundation for design*. Taylor & Francis: Boca Raton.

Loi, D. 2005. *The Book of Probes. Lavoretti per bimbi: Playful Triggers as key to foster collaborative practices and workspaces where people learn, Wonder and play*. RMIT University: Melbourne.

Manzini, E., and Jegou, F. 2004. Sustainable Everyday: Scenarios of Urban Life.
http://sustainable-everyday.net/scenarios/?page_id=28

McAslan, A. 2011. Community Resilience: Understanding the concept and its application.
Adelaide: Torrens Resilience Institute. www.torrensresilience.org/community-resilience

Messias, D. K. H., Barrington, C., and Lacy, E. 2012. Latino Social Network Dynamics and the Hurricane Katrina Disaster. *PLoS Currents*, 36(1), 101-121.

Norris, F.H., Stevens, S.P., Pfefferbaum, B., Wyche, K.F. and Pfefferbaum, R.L. 2008. Community Resilience as a Metaphor, Theory, Set of Capacities and Strategy for Disaster Readiness. *American Journal of Community Psychology*, 41: 127-150.

Paton, D. (n.d). *Promoting Household and Community Preparedness for Bushfires: A review of issues that inform the development and delivery of risk communication strategies*. Bushfire CRC: Melbourne.
<http://www.bushfirecrc.com/projects/c4/effective-risk-communication>

Putnam, R. D. 2000. *Bowling Alone. The collapse and revival of American community*. Simon & Schuster: New York.

Reason, P. 2001. *Learning and Change through Action Research*. Sage: London.

Rotberg, F.J.Y. 2012. Social Networks, Brokers, and Climate Change Adaptation: A Bangladeshi case. *Journal of International Development*, 25(5): 599-608.

Sanders, E. 2000. Generative Tools for CoDesigning. In Scrivener, B. a. W. (ed.) *Collaborative Design: Proceedings of Co-Designing 2000*. Springer-Verlag: London.

Schwartz, P. 2002. *The Art of the Long View: Planning for the future in an uncertain world*. Richmond: Sydney.

Smit, B. and Wandel, J. 2006. Adaptation, Adaptive Capacity and Vulnerability. *Global Environmental Change*, 16: 282-292.

Stelling, A., Millar, J., Boon, H., Cottrell, A., King, D., and Stevenson, B. 2011. *Recovery from Natural Disasters: Community experiences of bushfires in North East Victoria from 2003-2009*. Charles Sturt University: Albury.

Tyler, M., Fairbrother P., Chaplin, S., Mees, B., Phillips, R. and Toh, K. 2012. Gender Matters: Applying gendered analysis to bushfire research in Australia. *Working Papers in Sustainable Organisations and Work* no. 3. RMIT University: Melbourne.

Vygotsky, L.S. 1978. *Mind in Society: The development of higher psychological processes*. Harvard University Press: Cambridge, MA.

Wack, P. 1985. Scenarios: Shooting the rapids. *Harvard Business Review*, 63 (6), 139-150.

Wenger, G.C. 1995. A Comparison of Urban and Rural Support Networks. *Ageing and Society*, 15(1): 59-81.

Wolf, J., Adger, W.A., Lorenzonia, I., Abrahamson, V. And Raine, R. 2010. Social Capital, Individual Responses to Heatwaves and Climate Change Adaptation: An empirical study of two UK cities. *Global Environmental Change*, 20(1): 44–52.

Wood, D., Bruner, J., and Ross, G. 1976. The Role of Tutoring in Problem Solving. *Journal of Child Psychology and Psychiatry*, 17: 89-100.

Woolcock M. 2001. The Place of Social Capital in Understanding Social and Economic Outcomes. *Canadian Journal of Policy Research*, 2(1): 11-17.

Chapter 11: Educating for Bushfire Safety and Preparedness: Moving forward

Education is a crucial part of promoting bushfire preparedness. In the Victorian Fire Services Commissioner's 2011 policy framework, 'education and engagement' is the first of five priority areas identified to 'guide the development and implementation of policies, programs and initiatives' (FSC 2011: 5). The framework refers to a range of groups delivering engagement, education programs with the broad aim of creating resilience at both an individual and community level, together with an understanding about the risks associated with bushfires. It suggests that such programs need to include a diverse range of activities prior to, and during, the fire season. Thus, an integrated approach is called for using general media campaigns as well as localised information and events. It also suggests that audiences are diverse and consequently programs need to be varied in content and format to meet specific needs of a range of different groups such as cultural and linguistically diverse communities, schoolchildren, and those who are more vulnerable to bushfire risk.

The policy framework also recognises that despite agencies and governments providing information and programs, some people will choose not to, or be unable to, engage with the information or initiatives. In addition, key strategies and initiatives are outlined. Such examples include providing safety information in areas deemed at high-risk of bushfire and delivering initiatives at a local level all through a range of delivery modes. This chapter provides an overview of previous reports dealing with bushfire safety and preparedness education programs in Australia as well as drawing on more general literature, in particular, from public health. The chapter also reports suggestions by residents and their ideas about bushfire safety education.

Background: Understandings of Bushfire Education in Australia

Reports have been influential in determining how bushfire safety education is viewed in Australia. Each of the selected reports proposes a distinct but linked set of suggestions. This chapter gives a brief overview of these reports while relating them to findings from the 'Effective Communication: Communities and Bushfire' Project and offers ideas for moving forward in bushfire safety education.

- Bushfires and the Australian Environment Report (1984)
- Inquiry into the ACT Bushfires (2003)
- National Inquiry into Bushfire Mitigation and Management (2004)
- National Disaster Resilience Statement (2009)
- Guidelines for the Development of Community Education (2010)
- Victorian Bushfires Royal Commission (2010)
- Report on Perth Hills Bushfires (2011)
- Evaluation and Effectiveness Project (2011)

Each is reviewed.

Bushfires and the Australian Environment Report (1984)

Education has long been a focus in disaster preparedness and in particular for bushfires in particular. In 1984, a Commonwealth Government Standing Committee issued a report (Milton 1984) highlighting education in relation to bushfire events. This report, considered the first national inquiry into bushfire, specifically highlights the ongoing nature of the 'education' problem. In this respect, information is available and or delivered, but the public often do not respond in ways that bushfire agencies anticipate.

Specific findings in the report relating to bushfire safety and preparedness education include bushfire agencies who produce educational material aimed at:

- Educating the public regarding the dangers of bushfire and to discourage illegal and careless fire lighting.
- Advising the public as to the appropriate action to take during a bushfire.
- Informing the public about fire management practices such as fuel reduction burns.

The Committee found a vast amount of relevant information was available but that this was generally ignored by the intended audience.

Information had been widely distributed and after every major fire, a further range of materials was produced. The ineffectiveness of these efforts was demonstrated by:

- Poor public awareness regarding the risk of fire and what to do to reduce the threat.
- The increasing number of fires started by deliberate ignition or carelessness.
- The failure of the public to adhere to known practices designed to reduce loss of life and damage to property during 1982/83 season.

Submissions by the public highlight the need for information about local disaster procedures, for example, when to evacuate and where to assemble. Nevertheless, this report suggests that the materials were ignored because the content does not include those issues of concern to the public.

Milton (1984) also notes an over reliance on printed material and recommends that programs make more use of audio-visual material. In addition, local people should be encouraged to participate in dissemination events, agency education officers should be supported (training and resources) and public education specialists used more. The Committee recommended that a general national awareness campaign be developed relating to bushfire survival, building

protection, fire prevention and the role of fire in the Australian environment. Nearly thirty years later, in 2010, following Black Saturday in 2009, education was once again highlighted.

Inquiry into the ACT Bushfires (2003)

Overall, there is a long-standing concern with education as a vehicle for the promotion of preparedness and awareness. Following the 2003 ACT bushfires, the McLeod Inquiry was established. The report states that, generally, among the population there was an insufficient understanding regarding the bushfire risk of a city in a bushland setting. Major community education programs were required to help residents understand how they could adequately prepare. Submissions concerning the public information strategy were framed under: lack of timely information regarding the threat; need for appropriate public education about fire awareness and preparedness; and uncoordinated evacuation information. Some steps were recommended to begin to address this lack:

- Increase community awareness about the risks, so people will be more receptive to education programs. (McLeod Inquiry 2003: 172)
- Specific recommendations: additional resources given to improve public education drawing on CFA's experiences. Coordinated approach between agencies (e.g. fire and police) but including this in education programs. Knowledge about how agencies will act during an emergency would be beneficial. (McLeod Inquiry 2003: 235)

National Inquiry on Bushfire Mitigation and Management (2004)

This *Bushfire Mitigation and Management* inquiry (Ellis 2004) states that bushfires are an inherent and unpreventable feature of the Australian environment. Nonetheless, actions can be taken to minimise the risk to life, property, infrastructure and the environment. The authors argue that individuals cannot rely primarily on fire agencies for protection. For these authors, the report should be viewed as a contribution to the ongoing process of learning to live with bushfires.

These authors favour an integrated and nationwide program of community education for Australians to learn how to live with bushfire. They also state that current approaches are not sufficiently coordinated and consistent. The report recommends that regular community surveys are needed to ensure that programs retain their relevance and are delivered appropriately. The findings state that:

Well-informed and well-prepared individuals and communities complement the roles of land managers and fire agencies. This shared responsibility offers the best way of minimising risks to people, property and the environment. Effective community education, awareness and engagement programs targeted to the needs of local communities are required to achieve this objective (Ellis 2004: xxii).

It was noted, however, that community education programs have limitations and the authors call for a greater knowledge about living with bushfires and the role of bushfire in the landscape across the general population.

National Disaster Resilience Statement (2009)

The concept of disaster resilience has become increasingly influential in recent years. For example, in 2008 the Ministerial Council for Police and Emergency Management stated that the direction for Australian emergency management should focus around ‘creating a more disaster resilient Australia’ (Ministerial Council for Police and Emergency Management 2008:1).

As part of this commitment, a document titled *National Strategy for Disaster Resilience* was published in 2009 and formally adopted by the Council of Australian Governments (COAG) in February 2011. The rationale for changing emergency management was explained in terms of the potential increase in frequency and severity of hazards and increasing vulnerability to disasters through social, economic and demographic changes. In this context, governments face ‘unprecedented calls on their resources and expertise’ (COAG 2009: 2). Consequently, in order to manage unrealistic public expectations and avoid promoting:

unsuitable dependencies, factors that damage community capacity, communities ‘need to be empowered to take responsibility for coping with disasters’ (COAG 2009: 2).

In short, a resilience approach entails an:

‘integrated whole-of-nation effort encompassing enhanced partnerships, shared responsibility, a better understanding of the risk environment and disaster impacts, and an adaptive and empowered community that acts on this understanding.’

The statement goes on to outline the key aspects of a resilience approach and details a series of priority outcomes. For the purposes of this chapter, attention will be drawn to those aspects relating to education. Within addressing ‘a better understanding of the risk environment and disaster impacts’, a clearer understanding at the community level is required. Information, therefore, needs to be:

- Aimed at different audiences, reflecting a range of needs, interests and using a variety of delivery modes.
- Readily available, accurate and from trusted sources.

Supplemented with the means (not specified – my emphasis) to help communities to comprehend and take action around the information are also required.

Guidelines for the Development of Community Education (2010)

During 2006-2008, a research team from RMIT University carried out a national review of community education, awareness and engagement for natural hazards. The results of that review were published in 2010, in a report titled: *Guidelines for the Development of Community Education, Awareness and Engagement Programs*.

In this review, Elsworth and colleagues (2010: 200-203) argue that community education, awareness and engagement programs should be informed by the following principles:

- Localise programs and activities where possible.
- Develop a program theory model for present and new programs and activities that will provide a template for detailed planning and implementation, a 'roadmap' for evaluation and a permanent record of the thinking that occurred during program development.
- Develop a small suite of programs and/or activities that focus on achieving different intermediate steps (processes) along the pathway from 'risk awareness' to 'preparedness' (planning, physical preparation, psychological preparation) that are integrated into a general plan for enhancing natural hazard preparedness in a locality or region.
- Where appropriate, consider an integrated approach to planning, program development and research.
- Conduct and report frequent evaluations of programs and activities to continually enhance the evidence base for what works in particular contexts in community safety approaches.
- Optimise the balance between 'central' policy positions, agency operational requirements and specialist expertise on the one hand and community participation in planning, decision making, preparation and response activities on the other.

Many of these themes are also highlighted in earlier chapters.

Victorian Bushfires Royal Commission (2010)

The 2009 Victorian bushfire Royal Commission also addressed community education (Teague *et al.* 2010). Reporting on bushfire safety policy in Victoria prior to February 2009, the Commission's report outlines the previous role of community education, where fire authorities viewed the 'stay or go' policy as mostly non-operational, being delivered by 'community facilitators'. This situation arose because, in general, operational fire fighters did not tell the public what they should do or when they should leave. Rather, community members were viewed as responsible for making their own decisions. Consequently, effective community education was seen as crucial to the policy's implementation.

The Commission's interim report notes that despite the efforts and substantial resources behind previous awareness campaigns, levels of awareness and preparedness had not been translated into universally successful risk minimisation on Black Saturday. This report also recognises that the CFA used a range of different approaches to deliver education and awareness programs.

The Victorian Bushfire Royal Commission published its final report in July 2010.

Recommendation two (Teague *et al.* 2010: 23) suggests that the state ‘revise the approach to community bushfire education’ in order to:

- ensure that its publication and educational materials reflect the revised bushfire safety policy;
- equip all fire agency personnel with the information needed to effectively communicate the policy to the public as required;
- ensure that in content and delivery the program is flexible enough to engage individuals, households and communities and to accommodate their needs and circumstances;
- regularly evaluate the effectiveness of community education programs and amend them as necessary.

In addition, the final report states that:

Successful community education should aim to influence people who might be at risk of bushfire and encourage their participation as well as an appropriate safety response. The information needs to promote changes in behaviour that increases the chances of survival for people in bushfire-prone areas (Teague *et al.* 2010, Vol. 11, Chapter 1: 34).

The Commission recognises that populations and groups are diverse and that approaches need to be tailored accordingly. Further resources should be directed at community engagement together within a ‘nationally consistent approach’, such as the ‘Slip, Slap, Slop’ sunscreen campaign or the cyclone warning messages in other states.

The Commission states that providing information is not sufficient in order to influence behavioural change. Rather, individuals need to be able to view the information as useful and relevant to their particular circumstances. More specifically, community education strategies should account for how people actually behave. In this context, the role of volunteer fire fighters is crucial in communicating with local people. Therefore volunteers should be aware of the bushfire safety policy and be able to discuss it with community members. A mix of volunteers and paid positions may help to deliver this type of approach. Specialists are required to run education programs, with volunteers in a complementary role.

Report on Perth Hills bushfires (2011)

A Shared Responsibility, the inquiry into the Perth Hills bushfires (Keelty 2011), also mentions education. This report states that community education is a crucial part of bushfire preparedness in terms of informing residents about the actions needed to prepare their properties and about the conditions residents might expect during a bushfire. Keelty cites aspects of the 2009 Victorian Bushfire Royal Commission relating to the importance of appropriate, clear and direct advice given in an engaging way. The (then) Fire and Emergency Services Authority of Western Australia provided the inquiry with information about its community engagement framework and community education programs. FESA’s framework guiding this work stipulates the need for localised approaches to promote active involvement of community members in decision making and problem solving. FESA does this work through identifying

at-risk localities and using 'localised' engagement strategies'/activities to tackle local risk. Keelty makes specific recommendations for education regarding raising awareness about some of the resulting conditions both during and after a bushfire, such as disruptions to water and power supplies. Another point raised in this review is the importance of educating school children about bushfires.

In addition, the Major Incident Review (Ellis 2011) commissioned by FESA into the Perth Hills fires, reports that FESA's approach to community education approach is effective, disseminating relevant bushfire safety information to those in high risk areas. However, Keelty (2011: 47) presents evidence that suggests information regarding bushfire risk was not consistently timely or effective. Some residents report that they had received the 'Prepare, Act, Survive' publication after the bushfires. The inquiry was told that there was also a limited understanding about some of the key messages regarding bushfire preparedness. Consequently, further work is required to make communication effective to promote appropriate action. Keelty notes that engaging the community would serve a range of functions, including raising awareness and test the effectiveness of plans and policies.

Evaluation and Effectiveness Project (2011)

The CFA in Victoria ordered a review of the approach and impact of nine bushfire program initiatives (Rhodes *et al.*, 2011) to meet one of the Victorian Bushfire Royal Commission's recommendations regarding approaches to community bushfire safety, and to evaluate the effectiveness of education programs. Rhodes and colleagues (2011) argue that a set of assumptions underpin these initiatives that correspond to a view of how people react to risk communication. One such assumption, for example, is that increasing the awareness of bushfire risk will motivate people to take action. Or, that people can not only comprehend the information given to them by fire agencies but can then process that information into formulating specific types of behaviour. While this 'rational choice' model might be applicable to some members of a community, more likely it will be those who are already engaged and active in managing their bushfire risk; there are other groups, with different levels of motivation, that appear not to respond to this approach.

The report cautions against relying too heavily on disseminating bushfire-related information in order to increase levels of bushfire preparation and awareness. Rhodes and colleagues (2011) suggest that people have existing ideas of themselves in relation to the threat of bushfires. This view may or may not align with the advice given by agencies and governments. In order to change their response, people need to be engaged by encouraging them to critically think about their pre-existing ideas. General information, that is not tailored, will often be dismissed as inconsistent (with existing ideas) or not relevant. Consequently, this type of information fails to challenge people's thinking enough to motivate them to behave in a different way.

As noted above, some residents respond positively to the services and initiatives provided by the CFA. While agencies target high-risk areas, Rhodes and colleagues (2011) suggest that different levels of motivation to engage with bushfire safety can be identified. The review suggests that, generally, the CFA initiatives appealed to those people already actively involved in managing

their bushfire safety. An example of tailoring programs was Community Fireguard. These authors suggest that Community Fireguard has been effective because it addresses specific needs and uses 'best practice methods in its approach' (Rhodes *et al.* 2011: 71).

Although acknowledging the benefits and the work undertaken by existing initiatives, Rhodes and colleagues (2011) offer a number of recommendations to develop the CFA's approach to community bushfire safety, including:

- Identify other outcomes that are clearly defined and move away from awareness and understanding and preparation type responses.
- Recognise that many different factors (at both individual and social levels) will influence behaviour change. Information giving has been shown to be a weak driver of change.
- Employ a wider range of strategies and processes that relate to how people consider and react to risk.
- Set out clearly how programs aim to achieve change i.e., what are the triggers?
- Remove barriers to effective decision making and consider the context in which discussions occur and where decisions are made.
- Promote integrated localised activities that address specific issues of importance to the people within that area. Encourage trusted community members to deliver and facilitate.

The evaluation report (Rhodes *et al.* 2011), essentially argues for a different approach to bushfire education and if implemented would mean significant changes to how agencies think about designing, delivering and evaluating their bushfire awareness and education initiatives. This aligns with many of the implications and recommendations highlighted in the chapters of this report on the 'Effective Communication: Communities and Bushfire' project.

Summary

These reports show that the issue of effective bushfire education has been an ongoing concern for many years. That these concerns have been repeated suggest that new thinking is required to develop more effective ways of engaging the public. Overall, the *Evaluation and Effectiveness* (Rhodes *et al.* 2011) report provides a useful contribution to the debate about how fire agencies might approach bushfire education that would be, in some cases, significantly differ from previous attempts. This debate is complemented with a review of other literature, such as that from public health, that can inform how we think about and analyse concepts of effective community engagement and education.

What Is Known Already

This section identifies a set of guidelines or principles, which community education practitioners can use when promoting bushfire safety. A range of ideas are also presented to generate discussion among community engagement and education specialists and bushfire researchers, concerning the scope and nature of bushfire education.

The starting point is the recent CFA program evaluation by Rhodes and others (2011), who argue that educational methods that rely on the dissemination of information produce weak results in terms of behavioural change (see also Paton and Johnston 2001). They point out that increasing awareness or knowledge of risk does not lead to significant levels of action. Their conclusion is that the evaluated CFA programs are likely to influence those who already have an interest in bushfire safety and mitigation, rather than change the actions of people who had no previous interest.

A brief word on participation

Participation within community education requires consideration. Robyn Eversole (2010), a development anthropologist with extensive experience of working with rural communities, including in Australia, uses a critical perspective of participation and identifies some of the implications for community development practitioners. Eversole discusses some of the assumptions associated with participation and argues that calling for members of a community to participate in greater numbers is misplaced. Usually, this appeal is made within the context of a program or project. In this sense the 'shape' of participation is predetermined by an external organisation or institution. While participation can be viewed as promoting community empowerment, participation within a project or program may, according to Eversole, actually perpetuate a top-down approach. Applying this argument to bushfires, a fire agency's approach to community bushfire education could be viewed as part of an institutionalised response. The fire agency, for example, identifies the 'at risk community' as well as a program or course of action seen as appropriate for managing that risk. Or the agency will have stated outcomes they wish to achieve. In short the agenda is determined not by community members but by an outside agency.

Eversole (2010), however, also warns against an alternative approach that leaves people to fend for themselves, as this ignores the necessity for groups to access external resources. Rather, what is more desirable is a middle way, where the key difference is that the organisation is able to change as it works alongside a community. This way of thinking about participation throws into light, the knowledge and practices of both the community and the organisation.

Placing community education in context

When thinking about effective community education it is important to consider some of the wider influences that may stifle or promote such efforts. The political and economic contexts are two such influences. The use of business techniques such as social marketing in the public sector reflects an advanced form of liberalism (Rose, 1999). In this context, the state supports the freedoms of the marketplace but is also subject to business theories and techniques. This wider context could be viewed as hindering communality as it privileges individualism rather than collective forms of action. Likewise, Sennett (2012) argues that certain forms of economic and political arrangements undermine the role of community rituals that help promote cooperation, although, the human capacity to engage in rituals to relieve and resolve anxieties, remains intact.

Two approaches within which fire agencies could locate their education interventions are considered here. The first, an integrated approach, places educational programs as part of a wider policy agenda aimed, in this context, at increasing bushfire safety. Such an approach would involve legislation (e.g. restricting residential development; fire breaks), mass media campaigns as well as incentives. As Stewart (2011: 117) wryly observes:

Generally speaking, if you want Australians to do something, there is no need to appeal to our better nature. Just make it tax deductible or better still, the subject of special tax treatment, and we will go for it in droves...if you really want to give Australians an incentive to die for, make it absolutely tax-free.

An example of an integrated approach include efforts to promote bicycle use in Portland, Oregon (Pucher and Buehler 2009) and in some European countries, such as Denmark and Germany (Pucher and Buehler 2008). Such policies are supported by significant investment in infrastructure and are based on a coordinated approach that ensures policies support the desired behaviour rather than promote contradictory actions (intended or unintended). Clearly this requires a long-term commitment, resourcing and political leadership. Others label this 'mainstreaming', an aim of recent work exploring how fire and emergency management could be mainstreamed across policy and legal sectors (Eburn and Dovers 2012)., Following Keelty (2011), Eburn and Dovers (2012) argue that the starting point is for emergency management to have clear objectives, in other words, asking what is it meant to achieve? Even so, further debate is required to ascertain the level of costs – social, economic and environmental – of fire and emergency management that might be acceptable for governments and citizens.

The second approach is one that is variegated, characterised by localised and varied initiatives. Here, a more generalised approach to bushfires is taken and the focus is on an overall objective, such as generating community-wide resilience to a range of natural and other disasters. One way of implementing this approach would be to foster opportunities for 'spaces of appearances' (Arendt, 1958), which occur when people speak to each other and act together. A key distinction is that activities may not initially appear related to increasing bushfire safety, rather the skills, knowledge gained or networks broadened and relationships formed, assist those within a community to manage their risk of bushfire indirectly, but effectively. Examples could be increasing the number of people with chain saw licences; improving literacy rates; promoting or instigating communal events (e.g. festivals), promoting the dissemination of local history and environmental knowledge and building more communal BBQ areas, encouraging/supporting sporting activities and other arts based programs.

There are international examples of communal activities having wider impacts. In Bristol (UK), a group of parents were concerned about the low levels of physical activity undertaken by their children. Once a month, the parents arranged to restrict traffic by blocking off their street. Children then used the street for free-play. This scheme is being replicated in 30 other streets in Bristol (Rhodes 2012) and is also being implemented in other parts of the UK (Ferguson and Rose 2012).

El Sistema (social action for music), devised in Venezuela, is a scheme that allows children (mostly from poor socioeconomic backgrounds) to form orchestras by providing musical instruments and tuition. This scheme is now being replicated in a number of countries including Scotland (Allan 2010). Research by the Scottish Government suggests that Sistema Scotland had the potential to ‘achieve social transformation’ (Scottish Government 2011). In *Evaluation of Big Noise, Sistema Scotland*, a range of positive outcomes were identified including improvements in children’s self-esteem, confidence and social skills, having a positive impact on children’s learning, improved family relationships, parents developing more positive aspirations for their children’s futures, and changing the perception of the area where the scheme takes place (Scottish Government 2011: 60).

Both a variegated and integrated strategies could be developed within an all-hazards context, rather than an agency specific approach. These initiatives would involve closer working with a range of agencies, such as the Red Cross, SES, and Vinnies. Such an approach requires appropriate knowledge management and may represent a challenge to historical practices and policies (Von Lubitz *et al.* 2008).

Social-ecological model of health

Given the concerns raised by a recent evaluation of bushfire safety programs and initiatives (Rhodes *et al.* 2011), it is informative to locate bushfire education within a social- ecological model. Social-ecological models incorporate a view that people are often located within ‘larger social systems’ and so draw attention to the ‘interactive characteristics of individuals and environments that underlie health outcomes’ (Golden and Earp 2012: 364). In this way, the delivery of bushfire education could be positioned within a conceptual framework that acknowledges the level at which an intervention is operating.

According to Glass and McAtee (2006), behavioural interventions aimed at changing health outcomes do not appear to be particularly effective. There is a broad consensus that small changes in health behaviour are achievable with appropriately designed and theoretically based programs. However, the extent to which behaviour change is lasting or even aggregates up into improvements at a population level is unclear. A key criticism of such interventions is that they generally overlook the social and political contexts that influence behaviour (Mckinlay and Marceau 2000). Four main aspects of ecological models of health behaviour have been identified:

- There are multiple influences on specific health behaviours, including factors at the intrapersonal, interpersonal, organizational, community and public policy levels.
- Influences on behaviours interact across these different levels.
- Ecological models should be behaviour-specific, identifying the most relevant potential influences at each level.
- Multi-level interventions should be most effective in changing behaviour.

The concept of 'health literacy' has been developed out of the health promotion and public health literature. Nutbeam (2000), one of the main writers about health literacy, argues that it points to the relationship between education and empowerment. Nutbeam (2000) also outlines a model of health literacy consisting of three levels:

Level 1: Functional health literacy – this is based on dissemination factual information about health risks and how health systems operate;

Level 2: Interactive health literacy – this relates to the development of individual skills with the aim of increasing ability to respond to information effectively.

Level 3: Critical Health Literacy- refers to outcomes that are aimed at effective social and political action. One example of this level would be developing a community's capacity to address a health determinant.

Overall, health literacy is developed from a narrow focus on the ability to process health related information to a broader idea that incorporates empowerment. However, some have criticised the concept for simply being a repackaging of established principles within the health promotion and education literatures (Tones 2002). Nonetheless, this approach may have the advantage of enabling the elaboration of a notion of bushfire literacy.

Four major implications can be drawn from this literature in relation to education. First, interventions should be targeted and aimed at specific social groups, individuals, households, locality leaders, and local organisations and associations. Second, education products should be developed according to the sequencing of preparedness (long-term, medium term and short-term), events and the aftermath. Third, in developing educational products, consideration should be given to differing life stages. Fourth, researchers and agencies should work towards developing a theory of bushfire and natural hazards literacy. In these ways, an educational approach to bushfire could be further elaborated.

Summary

This review points to the way educational modes and approaches to bushfire and multi-hazard situations should build on the above analysis. This focus would draw attention to the localised context in which community education occurs. In this respect it is important to work *with* people's values, rather than against them, so as to achieve behavioural change. To explore this dimension, we consider the main concerns voiced by residents in our field research. Our approach is to outline the recurring themes and individual suggestions provided by respondents. In this way, we give voice to the concerns of residents and their perceptions of bushfire education campaigns.

The Data

The data analysed here is drawn from a series of interviews that formed part of the 'Effective Communication' project. Interviews were conducted by members of the research team in 2011

and 2012, and were carried out in 12 localities across four states (Victoria, New South Wales, Tasmania and Western Australia). In each state, three high-risk bushfire localities were chosen; one rural, one urban-rural interface, and one ‘tree change’/‘sea change’ or tourist destination.

Prior to visiting each locality, the research team contacted local volunteer fire brigades, community groups and organisations, as well as local government, to explain the research project and to generate interest in participation. A snowballing method was used, and the team conducted a number of interviews in each area on the basis of referrals from these contacts and other interviewees. The interviews were separated into those with residents, based on their experiences of bushfire communication, preparation and planning, and those with local authorities, focused on their aims with regard to communication and bushfire preparedness within the local community. Interviews were based around a standard set of open-ended and follow-up questions relating to community, communication and bushfire preparedness. Interviews were conducted face-to-face, most often in a resident’s home.

What Do Residents Want?

Research across the 12 localities, in all four states, revealed several recurring concerns, including:

- Need for timely information.
- Tension between preparation and evacuation (esp. re: police enforcement)
- Personal experience seen as over-riding official accounts / advice.
- Driveways lined with trees blocking access for brigades.
- Cost to clear land often prohibitive.
- Low literacy rates.

The following suggestions were made by interview participants. They are separated here to allow greater context, as there are some issues that vary between states.

Tasmania

- Education for children specifically on what to do during a bushfire.
- Managing the contradictory elements during a bushfire between what should happen and what actually happens.
- Residents’ dissatisfaction regarding council’s management of trees along roadsides and native vegetation, appeared contradictory in terms of bushfire safety.
- Promote awareness regarding dealing with longer term emotional effects of experiencing a bushfire.
- The focus on property loss needs to be balanced with considering those who did not lose property but still experienced trauma.
- Clearer guidelines about where to go to access information especially during a fire.
- Practical and localised solutions to official guidelines (e.g. having skips three times a year for clear-ups rather than forcing people to go to refuse dumps.)

- Clear guidelines regarding which agency is doing what (during and before a fire) and raising awareness regarding their day-to-day responsibilities.
- Information sent out with municipal rates notices.
- Provide financial incentives to prepare.
- The inspection of properties (for trees and truck access) prior to bushfire is seen positively.
- Agencies to demonstrate knowledge regarding burn-offs (environmental impact, effectiveness), incorporate conservationist views (e.g. on fire committees).
- Promote awareness of police procedures after bushfire especially relating to access to properties.

New South Wales

- Agencies' roles and responsibilities should be made more explicit.
- Promote co-operation, rather than 'interests'.
- For those living near bush the message / education should be about accepting responsibilities and risks.
- There are social and economic barriers to engaging with bushfire education (e.g. changing farming practices and management with bigger farms, farm managers).
- Settings approach, that bushfire education could be better integrated with work-places and schools, for example.
- For some people, who are concerned with bushfire preparedness, it is not the lack of information or that they do not understand it, rather it is other circumstances / conditions such as road infrastructure or residential developments which are perceived as being problematic to bushfire safety.

Western Australia

- Education not a one off. Needs to be seen as an ongoing and slow process, with no quick fixes available.
- Those with knowledge about bushfire preparedness identified other risks (e.g. infrastructure, or neighbours not clearing their property).
- Proactive Bushfire Ready Action Groups (BRAG) seen as key to effective education.
- The need to take a holistic view or focus on the 'bigger picture' (e.g. not just *my* property).
- Integrate other perspectives (e.g. bush care/environmental burning).
- Why is it left to volunteers? It was seen that the government should provide more relevant essential services in the area of bushfire safety/education.
- Need rangers to be more knowledgeable regarding ecology.
- Recognising the role of informal education (e.g. friends talking with friends).

- Regarding evacuations, people need options for destinations or else they will not leave. Many felt that possible destinations were either not explicit, or not feasible.
- Information needs to be simple and succinct (some complaints about ‘information overload’ – e.g. lengthy booklets with dense text).
- The integrated nature of bushfire safety in relation to other infrastructure, communications and agencies.
- Importance of fostering trust between public and agencies and local government.
- Agencies viewed as being responsive to the concerns of the public.
- Some stressed the importance of educating children.

Using Residents’ Feedback Constructively

Many of the suggestions are already consistent with the approach of bushfire agencies, while some residents provided suggestions and criticisms that run counter to existing programs. This section thus aims to bring together concepts from existing literature on education campaigns generally, as well as what is known regarding bushfire safety education campaigns specifically, and ties this together with understanding residents’ suggestions and concerns.

Efficacy of educational interventions

A range of research addresses educational interventions and community engagement, assuming that a ‘community’ is made of different social groups, organisations and other forms of association. Although community engagement approaches to improving health are common in national strategies aimed at developing awareness and understanding, little work has been done to assess the evidence of the effect of such initiatives (Milton *et al.* 2012).

Initial data analysis from the ‘Effective Communication’ project highlighted the difficulty fire agencies have regarding knowing what happens at a local level in terms of community education and engagement. For example, participants admitted that it was very difficult to know which volunteer brigades had filled the community engagement officer role, let alone being able to adequately assess whether or not the associated activities were effective in improving community-level bushfire safety. However, we recognise that fire agencies face a clear challenge in ensuring that brigades have a volunteer specifically responsible for community engagement. In addition, placing further reporting responsibilities onto volunteers may also be resisted or difficult to enforce. One implication, with lessons for bushfire education is: ‘Ideally, future evaluations should compare communities undergoing an initiative with those that are not, and could also collect longitudinal data’ (Milton *et al.* 2012: 17).

A recent paper examined wildfire mitigation communication strategies in Alberta, Canada (Christianson *et al.* 2011). The authors summarise findings from ten studies relating to different communication strategies around wildfire risk reduction. The paper asks if these attempts increase resident’s awareness of wildfire mitigation initiatives and the uptake of mitigation

actions. The authors cite other research that confirms simply increasing knowledge about wildfire risk does not translate into adopting mitigation measures. The article then focuses on two communication strategies: social marketing and risk communication. These authors then conclude that programs focussing on risk communication are more likely to be effective. This finding suggests that consideration should be given to the actual strategy of communication and that education packages should be developed accordingly.

From audience segmentation to targeted message

From a public health context in the UK, the National Institute for Health and Clinical Effectiveness (NICE) published guidelines for behaviour change interventions (NICE 2007). In terms of planning and intervention design it is important to be specific about its content; clearly state what is to be done, to whom, in what social and economic context and in what way; have a clear theoretical underpinning that states the main causal links between actions and outcomes.

- Adapting to a bushfire context the following questions could be used as a guide:
- Whose bushfire preparedness are you trying to improve?
- What preparedness behaviour are you trying to change?
- What contextual factors need to be considered (barriers, opportunities)?
- How will you know if you have successfully changed bushfire preparedness behaviour?
- Which social factors may impact on bushfire preparedness behaviour and can they be addressed?
- What assumptions have been made about the theoretical links between the intervention and outcome?

Questioning agency assumptions

In relation to bushfire events, there is a complex relationship between the theory and practice of community education. Rhodes and colleagues (2011) stress the need for future initiatives to reflect or account for people's actual behaviours (see also: McLennan and Elliott 2012). That is, there is little point in developing programs that imagine ideal behaviour rather than acknowledge real-world behaviour (which is often not ideal). The reluctance to adapt programs in this way, to meet existing behavioural norms and patterns, may stem in part from 'top-down', command and control emergency management practices. According to some commentators, such practices feature two elements. First, there is a fundamental distrust in the public in relation to complex issues at a national and global level. Second, there is an assumption that personnel in the agencies will reach appropriate decisions and will be able to communicate them to an 'irrational public' and thereby achieve appropriate responses (Dynes 1994, Hoppe 2011).

Criticisms of formal arrangements and structures have been made. Such distrust in the public can often hamper efforts to draw together resources and to use other elements in society that can be directed at meeting urgent needs (Engel and Engel 2012). It has also been shown that during disaster events formal arrangements can often be ineffectual or fail to deliver assistance in a timely manner (Engel and Engel 2012). Rodríguez and colleagues (2006:99)

examining behaviour after Hurricane Katrina found that those most affected by the disaster were often engaged in effective ‘emergent and prosocial behaviours’.

Bridging the divide

One major finding from the ‘Effective Communication’ study is that the ‘community,’ or the intended audience for bushfire safety education, are not necessarily homogenous or cohesive. Rather, within the intended audiences for safety messages and within the localities targeted for behaviour change, the population may be diverse and hold varied views and understandings. As Scruton (2012: 3), a conservative philosopher argues, the state has a role in helping to overcome these differences so that grass-roots action can thrive:

Environmental problems must be addressed by all of us in our everyday circumstances, and should not be confiscated by the state. Their solution is possible only if people are motivated to confront them, and the task of government is to create the conditions in which the right kind of motive can emerge and solidify.

This excerpt from Scruton is informative for two reasons. First, it draws our attention to the local context; a key component in this section, which will be further illustrated by research findings. Second, Scruton demonstrates how to engage with a significant problem despite holding views that would not usually be associated with a concern for environmental policy. However, he attempts to reclaim the debate for those with conservative views by introducing the idea of ‘stewardship’ and promoting localised, non-state based initiatives to tackle climate change. This problem of engaging people who hold inherently differing views is discussed further below.

A key observation and finding from the ‘Effective Communication’ research conducted in the localities across New South Wales, Tasmania, Victoria and Western Australia was the polarized nature of participants’ responses concerning how they managed their bushfire risk. The views of people from different backgrounds; were heard; some were passionate about protecting biodiversity and some were volunteers in groups who campaigned against logging in certain forest habitats. Other groups of participants were equally passionate about their support for the local environment. However, they also argued that the influence of so called ‘greenies’ had ultimately prevented them from carrying mitigation measures such as removing certain trees and other vegetation near their properties. Despite this clear division, both groups gave the clear impression of enjoying the natural environment/bush.

These differences in perspective illustrate a clear problem for fire management personnel and brigade volunteers involved in community engagement and as bushfire safety educationalists. The work of Kahan (2012) regarding the cultural cognition of risk offers a key insight. Kahan demonstrates that individuals hold cultural predispositions toward risk. Culture, in this context, refers to particular world views. This idea developed from cultural theory and includes categorisations such as ‘individualist – communitarian’ on one axis and ‘hierarchical – egalitarian’ on another axis. Kahan goes on to argue that some risk claims are viewed more favourably than

others based on latent characteristics as shown by values individuals share with others. This, Kahan, suggests influences the way in which people not only seek information but also how they process evidence about particular risk issues. In other words, individuals seek information that supports their predisposed position and reject information that challenges this stance.

Kahan (2012) suggests two strategies to address the influence of this tendency to a cultural predisposition to risk. First, information should be presented so that it simultaneously appeals to a diverse range of groups. The following quote, from a state-level participant in the ‘Effective Communication’ project, shows how this ‘tailoring’ might be done:

Because you get some of the old crusty ones...that just turn around and say this community engagement comment stuff is all just a bunch of pamphlet chucking, tree hugging rubbish. If you start talking to them about pre-incident planning and go out and speak to their community, you know you need to find where your water is, you need to find where your community is, how vulnerable they are blah, blah, blah, blah, blah. You change the language to something that is more operationally orientated then it's a lot more accepted

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Second, Kahan (2012) recommends that efforts should be made to avoid the so-called ‘trip wires’ of an individual’s reliance on culture. What is suggested here, is that when information does not threaten the beliefs that predominate in a group, it can be assessed in a different and in a more open way. Kahan acknowledges that while this may not cause individuals to agree on one set of factual beliefs regarding risk and risk mitigation, it may avoid the move towards forming culturally based divisions, as seen from the interviews conducted as part of the ‘Effective Communication: Communities and Bushfire’ project.

Agencies at work

Although this chapter highlights how people may respond to information based on their cultural predisposition, it is worth thinking about this in another way. Cultural values are also present and expressed *within* agencies. For example, a tendency to favour ‘command and control’ based hierarchical structures and technical responses and have a broadly conservative outlook were some of the comments made by agency personnel. The issue here is not that these values are wrong or should be changed but rather that it is helpful to be aware of a set of values that may conflict with those outside of that organisation. The following quotes illustrate differences in how fire agencies should and actually do engage with the public:

However, emergency services, more broadly, still have that emphasis on community service but it's a very responsive, reactive, something happens we go and fix it. There's a real kind of concrete and immediate approach to risks and hazards and incidents. So – and I think it's gradually changing and I think the CRC has contributed a lot to that because it's given us – those of working in the area some evidence and some support to try and explain

the different culture we come from and the different approach that we take. But I guess, historically, there's been a 'oh this group is at risk, you have to go to their fair and give them brochures because if they've got brochures with all the information in it then that will resolve the problem'. It's like, obviously, our approach is 'well no it won't resolve the problem'. They may have brochures, they may use them to start the fire, they may or may not read them. If they read them they may or may not understand them. They may or may not take the message on and even if their attitudes change and their beliefs change converting that into an actual change in behaviour is a huge leap.

CRCTASST 07

This agency staff recognizes the changes that have taken place over community education. This person also acknowledges the gap between beliefs and behavior.

[I]t is still largely an operationally driven organisation. That's where all the emphasis goes ... things like our open days or a school visit they will capture as community engagement. When they're not really that – they're a public relations activity. So there's a very low awareness in the organisation of the difference between public relations and community engagements. We have members of our executive saying frequently that when you're on the back of a truck and you wave to the community, you're engaging.

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The above statements suggest a distinct difference between how community engagement is understood within different parts of a fire agency. This may have an impact on the efficacy and efficiency education programs. Such tensions create additional difficulty for communications professionals working within bushfire agencies if they also have to overcome resistance to their work, within their own organisations, before working to engage residents. Understanding, accounting for, and addressing these differences and divides *within* agencies is therefore an important aim as well.

Summary

Evidence supports the need for bushfire education, although this 'need' is problematic. First, there is a clear mismatch between the desired behavioural change promoted by fire agencies and the (non)-response of the public to these educational efforts. Second, fire agencies face the challenge of trying to adapt their educational initiatives to reflect how people actually behave, rather than prescribe how they 'should' behave.

Bushfire education is seen as a part of emergency management. The current context for emergency management is expressed as a set of conditions: there are moves away from a specific hazard towards a range of disasters (the 'multi-hazards' approach); governments have limited resources to address disasters; the threat of disasters will not diminish, especially as weather patterns are less predictable and more extreme; the impact of disasters on integrated and interdependent economic arrangements and infrastructures mean that managing the risk of

disasters is important for governments and populations. Therefore communities are called upon by state agencies to become more resilient and more prepared for disasters. Bushfire education must be understood within this context.

This chapter also highlights the point that in order to improve strategies for bushfire education in Australia, there is much to be learned from public education campaigns internationally, and from outside the realm of emergency management, in particular, public health. The broader literature on engagement and education around risk and behavioural change offers several important insights. First, is the possibilities offered by integrated and variegated approaches to communication and education. Second, is the need to recognise diversity within and between communities and localities. Understanding these differences will assist in the development of tailored messaging which is more likely to be engaged with by target populations. Third, is the need to recognise the material and social contexts that constrain and enable action. That is, people may engage with the messages sent by agencies but simply do not have the means to act in the desired manner. Finally, if fire agencies wish to retain a community engagement strategy for promoting bushfire safety, then significant resources need to be committed to support staff and volunteers.

Implications

1. While there have been a significant number of reports that deal, at least in part, with bushfire safety and preparedness education in Australia, efficacy remains a central problem.
2. There is a growing recognition that new approaches to bushfire education are needed, and potential approaches should be considered from outside the realm of bushfire research and could include areas of literature such as public health and community development.
3. Agencies designing and enacting bushfire education programs need to account for behavioural norms (and understand structural, cultural, social and economic barriers to change) among residents rather than assuming ideal behaviours.
4. There are significant differences and divides among residents who are 'target audiences' for bushfire education, this highlights the importance of tailoring education programs to specific groups.
5. There are significant differences and divides within and between agencies dealing with bushfire education. These must be acknowledged and the areas of resistance to community engagement and bushfire education should be addressed.

Directions for future research

1. Further research is needed into understanding how and why there are divides within agencies dealing with bushfire safety and preparedness education, and if these divides affect the ability of educators and communications professionals to design and roll-out programs.
2. While the issue of a gap between information supplied by agencies and (a lack of) behavioural change among residents has been noted in several reports already, more research is needed into understanding the dynamics of agencies' interactions with residents and how they may help to either exacerbate or ameliorate this gap.
3. There is a need to bring lessons from more varied areas of academic research on public education campaigns in other areas (for example, public health) within easy reach of educators and communications professionals working specifically in the areas of bushfire safety and preparation.

References

- Allan, J. 2010. Arts and the Inclusive Imagination: Socially engaged arts practices and Sistema Scotland *Journal of Social Inclusion*, 1(2): 111-122.
- Arendt, H. 1958. *The Human Condition*, The University of Chicago Press: Chicago.
- Christianson, A., McGee, T. and Jardine, C. 2011. Canadian Wildfire Communication Strategies. *The Australian Journal of Emergency Management*, 26(3): 40-51.
- COAG. 2009. *National Disaster Resilience Statement*. COAG: Brisbane.
- Dynes, R. 1994. Community Emergency Planning: False Assumptions and Inappropriate Analogies. *International Journal of Mass Emergencies and Disasters*, 12(2): 141-58.
- Eburn, M. and Dovers, S. 2012. Mainstreaming Fire and Emergency Management Across Legal and Policy Sectors. *Australian Journal of Emergency Management*, 27(2): 488-97.
- Ellis, S. 2004. *Council of Australian Governments National Inquiry into Bushfire Mitigation and Management*. Commonwealth of Australia: Canberra.
- Ellis, S. 2011. *Major Incident Review: Lake Clifton, Red Hill and Roleystone Fires*. Leading Emergency Services: Perth.
- Elsworth, G., Gilbert, J., Stevens, K., Robinson, P. and Rowe, C. 2010. *Guidelines for the Development of Community Education, Awareness and Engagement Programs*. Commonwealth of Australia: Canberra.
- Engel, K.E. and Engel, P.G.H. 2012. Building Resilient Communities: Where disaster management and facilitating innovation meet. In Wals, A. E. J. and Corcoran, P. B. (eds) *Learning for Sustainability in Times of Accelerating Change*, Wageningen Academic Publishers: Wageningen.
- Eversole, R. 2012. Remaking Participation: Challenges for community development practice. *Community Development Journal*, 47(1): 29-41.
- Ferguson, A. and Rose, A. 2012 Playing Out News. <http://playingout.net/inspiration-ideas-and-links/inspiring-news/>
- FSC. 2011. *Bushfire Safety Policy Framework, September 2011*. FSC: Melbourne.
- Glass, T. A. and McAtee, M. J. 2006. Behavioral Science at the Crossroads in Public Health: Extending horizons, envisioning the future. *Social Science and Medicine*, 62(7): 1650-1671.

- Golden, S. D. and Earp, J. A. L. 2012. Social Ecological Approaches to Individuals and Their Contexts: Twenty years of health education and behavior health promotion interventions. *Health Education and Behavior*, 39(3): 364-372.
- Hoppe, R. 2011. *The Governance of Problems: Puzzling, Powering, Participation*. Policy Press: Bristol.
- Kahan, D. M. 2012. Cultural Cognition as a Conception of the Cultural Theory of Risk. In Roeser, S., Hillerbrand, R., Sandin, P. and Peterson, M. (eds) *Handbook of Risk Theory: Epistemology, decision theory, ethics, and social implications of risk*. Springer: Dordrecht.
- Keelty, M. 2011. *A Shared Responsibility: the Report of the Perth Hills Bushfire February 2011 Review*. Government of Western Australia: Perth.
- McKinlay, J. B. and Marceau, L. D. 2000. Upstream Healthy Public Policy: Lesson from the battle of tobacco. *International Journal of Health Services*, 30(1): 49-69.
- McLennan, J. and Elliott, G. 2012. Wait and See: The elephant in the community bushfire safety room? Paper presented at AFAC 12 Diverse country, Common ground. Perth Convention and Exhibition Centre, AFAC, Western Australia.
- McLeod, R. 2003. *Inquiry into the Operational Response to the January 2003 Bushfires in the ACT*, Australian Capital Territory: Canberra.
- Milton, B., Attree, P., French, B., Povall, S., Whitehead, M. and Popay, J. 2012. The Impact of Community Engagement on Health and Social Outcomes: A systematic review. *Community Development Journal*, 47(3): 316-34.
- Milton, P. 1984. *Bushfires and the Australian Environment*. Commonwealth of Australia: Canberra.
- Ministerial Council for Police and Emergency Management. 2008. Emergency Management Meeting: Communiqué. 6 November.
http://www.em.gov.au/Documents/COMMUNIQUE_C3_89%20-%20Ministerial%20Council%20for%20Police%20and%20Emergency%20Management%20-%202006%20November%202008.pdf
- National Institute for Health and Clinical Excellence (NICE). 2007. Behaviour Change at Population, Community and Individual Levels. *NICE public health guidance*. National Institute for Health and Clinical Excellence: London.
- Nutbeam, D. 2000. Health Literacy as a Public Health Goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15(3): 259-67.
- Paton, D. and Johnston, D. 2001. Disasters and Communities: Vulnerability, resilience and preparedness. *Disaster Prevention and Management*, 10(4): 270-77.

Pucher, J. and Buehler, R. 2008. Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany. *Transport Reviews*, 28(4):495-528.

Pucher, J. and Buehler, R. 2009. Integrating Bicycling and Public Transport in North America. *Journal of Public Transportation*, 12(3): 79-104.

Rhodes, A., Gilbert, J., Nelsson, C. and Preece, E. 2011. *Evaluation Report 2010-2011 C2.10B Evaluation and Effectiveness Project*. CFA: Melbourne.

Rhodes, G. 2012. Reclaiming the Streets for the Kids. *The Guardian*. 23 June.
<http://www.guardian.co.uk/lifeandstyle/2012/jun/23/reclaiming-the-streets-for-kids>

Rodríguez, H., Trainor, J. and Quarantelli, E.L. 2006. Rising to the Challenges of a Catastrophe: The emergent and prosocial behavior following Hurricane Katrina. *The ANNALS of the American Academy of Political and Social Science*, 604(1): 82-101.

Rose, N. 1999. *Powers of Freedom: Reframing political thought*. Cambridge University Press: Cambridge.

Scottish Government. 2011. *Evaluation of Big Noise, Sistema Scotland*. Queens Printers of Scotland: Edinburgh. <http://www.scotland.gov.uk/Resource/Doc/345409/0114922.pdf>

Scruton, R. 2012. *How to Think Seriously About the Planet: The case for an environmental conservatism*, Oxford University Press: Oxford.

Sennett, R. 2012. *Together: The rituals, pleasures and politics of cooperation*. Penguin: London.

Stewart, J. 2011. *The Two Canberras: Essays on public policy*. Ginninderra Press: Adelaide.

Teague, B., McLeod, R., Pascoe, S. 2010. *2009 Victorian Bushfires Royal Commission: Final Report*. Government Printer: State of Victoria: Melbourne.

The Big Noise. 2011. BBC Radio Scotland. 3 January.
<http://www.bbc.co.uk/programs/b00sqkqi>

Tones, K. 2002. Health Literacy: New wine in old bottles? *Health Education Research*, 17(3): 287-290.

Von Lubitz, D.K.J.E., Beakley, J.E. and Patricelli, F. 2008. All Hazards Approach to Disaster Management: The role of information and knowledge management, Boyd's OODA Loop, and network-centricity. *Disasters*, 32(4): 561-585

Chapter 12: Recommendations and Next Steps

Effective public communication acknowledges and understands the target audiences, in this case, populations in localities at risk of grass and bushfires. As noted in Chapter 4, the key elements of effective communication are: (1) the objectives of the message is clearly stated and the process of communication is disciplined and focused; (2) the target audience itself must be heard, and play its part in the process; and (3) the process is on-going and interactive.

On the first point, message formulators and senders should underwrite clarity, consistency and focus, whether as warnings during an event, the awareness and preparedness messages and communication strategies associated with potential disaster events, and the more long-term and practical actions associated with social network building and education.

On the second point, the target audience, an in-depth understanding of cultural differences and the segmentation of audiences by demographics is required in order to reach all groups, the minority groups, or simply groups who do not share the dominant culture of the message sender, as well as those groups who do indeed share the prevailing culture. But, and critical to an effective strategy, processes should be in place to ensure that the process is informed by the target audiences.

The third point refers to the dynamic bases of effective communication strategies. There needs to be both an understanding of, and an interactive responsiveness to, target audiences. Indeed, rather than defining a local population as a target, there needs to be an on-going and interactive exchange, otherwise the local population becomes an object, rather than as an participant in the process of developing and building the relations that result in effective communication strategies. This process necessitates working with *audiences* in relation to their current behaviours and attitudes. The result is a communication process that becomes effective in either raising awareness or motivating behavioural change.

The starting point of many bushfire agencies in designing campaign materials does still seem to reflect elements of a transmission model which is essentially linear and one way (see Chapter 3). A transmission model does not take into account the full complexities of human communication. The argument here is that for an effective communications strategy, the starting point is the acknowledgement that communication is a two-way process.

An Overview

There are three sets of recommendations that are critical and crucial for the development and recognition of effective communication strategies in relation to bushfire, and hazards in general.

First, the complex composition of localities as communities should be addressed as a matter of high priority and urgency. Further research must be undertaken to understand how communities are constructed, and the forces of cohesion and division that mark all communities. In so doing relationships including gender, race and ethnicity, age and class must be considered. The research here addressed the question of gender, although it was not a key focus at the outset. During the course of the research, the research team came to understand the complexity of gender relations and have addressed it both in the final report and in a series of reports and publications during the project. While central in its own right, it is also important to locate the complexity of gender relations as one set of relations, along with age, race and ethnicity, poverty and wealth, and the ability to act. Our communities as localities are frequently characterised by these relations; an effective communications strategy begins with an understanding of these relations and their implications in the context of bushfire disaster and preparedness.

Second, communities as localities are locked into relations with emergency and disaster agencies in complex and often misunderstood ways, with negative implications for effective communication. Too often agencies are organised in complex ways, despite the seeming clarity of relations indicated by the militaristic model that characterises most emergency organisations internationally. The problem is that such organisational models lend themselves to linear and non-interactive approaches to communication. While expertise is paramount in the design, development and dissemination of messages, it also requires an open-minded and comprehensive involvement with so-called *audiences*, in particular the populations that comprise the communities in localities in bushfire-prone areas. Here the onus is on the agencies to be responsive, pro-active and engaged. Of course, there are examples of such practice, such as the ‘strategic conversations’ by the Department of Sustainability and Environment in Victoria or the self-organised locality groups, such as ‘Fiery Women’ in South Australia. In these cases, the mark of organisation is engagement as a mutually interactive practice.

Third, the development and promotion of effective strategies rests on a complex set of development strategies to ensure that these relations are operative. Central to this process over time are social network building and educational practice. Of course, many agencies have taken steps in these directions, exemplified by the various Community Fireguard initiatives as well as BRAG in Western Australia. But, such initiatives require serious and systematic planning, resourcing and promotion – a challenge for all.

The Detail

Each set of recommendations raises inter-related concerns.

The localities

1. *Agencies should consider ways of transforming their approach to communication from a transmission model to an interactive, mutually reciprocal one.* Drawing on the social marketing literature, and developing these approaches so that the specificity of bushfire events is at the fore. The implication of such a shift is that attention must be given to the characteristic of audiences, their socio-

demographic features, how they live and work, and the perceptions that they may have of agencies and others within and beyond the locality. At the same time, such a methodology allows the voice of local populations not only to be heard, in their complexity, variety and specificity of experience, but also to become part of and to shape the agreed approach.

2. *Evaluation processes should be implemented.* One of the striking features of current practice is either the lack of evaluation processes in relation to current practice, or inadequate approaches in this respect. The lack of evaluation processes reported by some participants should be a serious concern for organisations involved in producing bushfire preparedness and safety messages, as without proper evaluation, campaigns may be a waste of resources. More than the resource implications, the absence of formal evaluation procedures means that the opportunities for on-going and cumulative learning, from both past and current experience, are limited. It means that some of the repetition of recommendations seen in successive enquiries after disaster events becomes part of the problem rather than the solution. It also means that governments of the day make pyrrhic announcements about lessons learnt.
3. *Consideration should be given to the development and implementation of audience-centred forms and modes of communication.* Building on the observations in Recommendation 1, an audience-centred approach to developing campaign messaging may help to increase the effectiveness of campaigns. Such campaigns would be grounded on the specificity of audiences, as indicated by socio-demographic measures and related analyses about the ways that communities cohere and overcome the disparities of experience and involvement in localities. These approaches could be developed via a series of pilot case studies where different approaches are trialled and evaluated, with the aim of developing a practical tool-box approach for communications practitioners in a range of agencies and different states.
4. *The bases of segmentation and cohesiveness in ideal-type communities should be mapped periodically and inform policy development in relation to communications.* A periodic mapping exercise, based on ideal typical representations, such as rural, peri-urban and sea/tree-change localities will allow the voices of these populations to be heard, and policy and practice to be developed in informed ways. One aspect that should also be taken into account in such mapping exercises is to understand and acknowledge the varied arrangements and practices that are evident in different states. It is imperative that all communications practitioners in the area of bushfire safety are aware of the varieties of audience segmentation and understand that diversity needs to be taken into account with message design and dissemination.
5. *The particularity of gender must be recognised and acknowledged, and agencies should structure their internal practices as well as the texture and focus of policies, with questions relating to gender at the forefront.* The evidence shows that recognition of gender relations is critical and long overdue. Issues around gender show up in relation to firefighting practices as well as in relation to how households address the prospect of disaster events. Moreover, there is evidence that these relations impact

on responses during a bushfire event. It is important, for example, that bushfire agencies are aware of the substantial gender differences in evacuation preference and how this can create difficulties in reaching an agreed bushfire plan (or plans) within a household.

6. *Awareness materials, and the development of these resources, should be explicitly and systematically informed by an acknowledgement of the complexity and sequencing of decisions to be made in preparation for bushfire events.* Most of the supporting documents available from the relevant fire agency websites (CFA in Victoria, FESA – now Department of Fire and Emergency Services - in Western Australia and RFS in New South Wales) on developing bushfire plans separate out plans to ‘stay and defend’ from plans to ‘evacuate’ relatively early on in the material. There is much less content available on actually determining which one of these decisions is appropriate. There is also little or no acknowledgement that there may be disagreement within the household as to the best course of action and the importance of resolving any disagreement. While noting that such complexity will be seen by many as challenging, and for some even an inappropriate topic for public discourse, neglect of this issue has two impacts. First, households are left without advice about the pro and the contra of preparation and response. Evidence suggests that these cannot only be troublesome discussions but in some cases fatal. Second, it would seem to be obligatory that agencies provide the fullest of advice to those that face the prospect of disaster events.
7. *Agencies should be encouraged to note the complexity of household decision-making in relation to bushfire events.* This may assist in making bushfire safety communication from agencies more effective if the possibility of disagreement within the household was openly acknowledged in the available support materials for residents in bushfire prone areas. As noted, these decisions can be momentous and consequential. Given the variety of households and the range of decision-making processes that are evident from the locality studies, it is advisable that these households can express concerns and that agencies can develop appropriate advice accordingly.
8. *Agencies should be encouraged to build into their communication strategies, recognition of ‘time’ demands that members of localities face, in relation to preparation, active involvement in bushfire related events and the ability to participate in general.* When developing strategies in relation to bushfire preparedness and response it is important to take into account the specificities of locality, such as peri-urban, sea/tree change and like features. One particular aspect that should be taken into account is the tension between everyday life and having time for local involvement and engagement, a feature that may be difficult where households live in two houses. These dimensions are evident in other settings, where people may work outside a locality, but live in a bushfire-prone area. It may also be the case that there is a disaggregation of such localities, in terms of work and employment, household engagement, and length or residency. These features are demanding and elicit varied ways to engagement; where agencies do not recognise such dimensions or do not make them an explicit reference, then ineffective communication strategies are likely to result.

9. *Alongside mapping activity, agencies should conduct or commission periodic ethnographic studies to portray the multi-faceted ways that people learn and develop understandings of bushfire events.* The populations that inhabit and are part of the locality-based communities, learn about bushfire events in a variety of ways. These processes include the formal (organised information sessions often led by emergency agency staff and members) and the informal (social media such as Twitter, Facebook, YouTube and more). Of note, given the importance of informal interactions and conversations in relation to locality awareness, it is important that agencies take these matters into account when developing awareness strategies. These dimensions of awareness development were evident in related research that came out of the project.
10. *Overall, awareness strategies should be grounded in relation to the detail and the socio-demographics of communities as localities.* When developing awareness strategies for these types of communities the socio-demographics often associated with vulnerability should be taken into account, such as age, language differences, lifestyle and financial well-being.

Agencies

1. *Consideration should be given by agencies from all states and territories to the ways in which a sense of 'community' may be generated and promoted by formal awareness workshops.* The implication of the above analysis is that a communication strategy that does not take into account the way a sense of 'community' or 'communities' is promoted will be inherently flawed and, at a minimum, under-developed. One way in which Agencies have done this is by a planned approach via workshops and the like. Such events and activities allow the exchange of experience among participants, the provision of information by both Agencies and participants, and the deliberative development of agreed understandings, provide the foundation awareness development.
2. *In preparing awareness materials agencies, and self-organised groups in localities, should map divisions that often characterise community populations and then develop strategies which take divisions into account in positive ways.* One of the conditions for effective awareness materials is an understanding of the 'community' populations in question. Building on the comprehensive maps, socio-demographic patterns that characterise locality populations may provide the bases for developing focused and targeted communication strategies. While not sufficient alone, such steps do enable such strategies to be formulated in informed and grounded ways.
3. *Where tensions are evident within localities, for example between newcomers and long term residents over environmental policies, then it is incumbent on those concerned with awareness development in relation to bushfires to explore ways that populations can be encouraged to deliberate on these questions in positive ways.* As illustrated and documented in the report, communities as localities are socially constructed. In this process it is important to identify potential lines of division and misunderstanding; once done the task facing agencies is to promote practices that enable

reflection and discussion about different experiences and understandings as well as agreement, whether reflective or not. This measure may open up challenging questions for network building and education and communication (dealt with below).

4. *Agencies and their volunteers should consider how they influence social divisions.* As noted emergency agencies, in the bushfire space are made up of professional and volunteer staff. In the main, the volunteer staff are drawn from the localities which are bushfire prone. These volunteer brigade members often have a particular role and status in communities, as emergency service citizens. This identification can place them in positions of influence and authority, especially when they have long-standing identifications with the locality.
5. *Steps should be taken by agencies to develop uniformity in the practice of communication.* The lack of uniformity in approach to bushfire preparedness and safety campaigns across fire agencies and government departments may lead to fragmented and inconsistent messaging. In turn this means that steps should also be taken to encourage greater collaboration between agencies and across states and territories.
6. *Agencies should actively explore the development of a knowledge management systems as mechanisms for monitoring and evaluating the quality of generation, production, content, and dissemination of communication materials.* One way in which uniformity, accountability and consistency can be promoted is via knowledge management systems. Too often there is evidence of repetition in any one campaign and from event to event, without learning the lessons of earlier events. Too often there is limited evaluation and reflection on what works and why. Too often old materials, out of date items, are stored and used when no longer salient. Exploring how knowledge management systems can be developed for particular agencies as well as across agencies and states, is an urgent next step in the development of effective communication strategies.
7. *Agencies should introduce formal and comprehensive feedback mechanisms to evaluate and then adapt communication procedures.* Current arrangements are largely ad hoc and where formalised, confined to adding to existing systems of publication development, rather than relating to the proactive development and improvement of such processes. As noted above, one of the marks of an effective communication strategy is that it is multi-directional and interactive. One step in realising this condition is that feedback mechanisms from one event to another, and from one campaign to the next, are systematically introduced and carried out. Only then will comprehensive understandings of effectiveness and outcomes be gained. Anything short of this step relies on second guessing and supposition.
8. *Agencies should review and update their material production and dissemination in conjunction with the development of formal knowledge management processes and practices.* Knowledge management can lead to an enhanced ability to manage knowledge-based resources. As noted, there is a

need to address the consistency and currency of bushfire communication material, with measures put in place to ensure that at the local level, via brigades and so forth that are up to date. At present, many brigades store out-dated material a situation that is compounded by the absence of version identification. Moreover, many agencies lack adequate systems of housekeeping, indexes of products and their uses and so forth. Research in bushfire communication needs to consider the broader context of knowledge management including the technological, cultural and operational infrastructures of agencies and other relevant organisations.

9. *Agencies should develop targeted and organised ways of disseminating material.* At present, agencies are governed by a transmission view of communication. The outcome is that the texture and complexity of localities is overlooked, with the consequences that communication strategies are deficient.
10. *Consideration should be given to how agency personnel understand their roles and organisations.* Without such reflections it is difficult to see how such personnel can move forward to address the complexity of shared responsibility or take steps to shape expectations in realistic ways. Obviously, steps are taken in this direction in most agencies; the point here is that in the main these encouraged reviews and reflections are not built into the life of the agency in regular (at least twice a year), well-resourced with comprehensive follow-up mechanisms that allow staff to acquire the skills to work with locality populations in their variety. Whereas such a practice will be routine and comprehensive when working with new technology, it is less likely to occur in relation to an understanding of the complexity of social relationships.
11. *Agencies should be encouraged to develop holistic frameworks of understanding of communities as localities.* One such way forward, and a suggestion for consideration is to encourage the adoption of the Resilience, Authority, Responsibility, Expectations (RARE) framework of understanding (see Chapter 5). The RARE framework provides a way of beginning to understand perceptions and understandings of emergency services and related activity. This approach enables an assessment of the extent to which the concerns of agency personnel are reflected by those living in bushfire-prone communities across Australia.

Promoting awareness

1. *Agencies and related bodies, such as municipal councils should take steps to encourage social network building around bushfire events.* Social network building is one way that the cross-cutting linkages that make up communities can be addressed in positive ways. By encouraging networks targeted on bushfire preparedness and response, populations can be encouraged and are likely to be able to deliberate on the steps necessary to address bushfire events. It is important that the framework of bonding, bridging and linking is extended via a series

of pilots to understand the construction of social networks and overcome the lack of clarity on ‘strong’ networks or generic descriptions of ‘community’.

2. *Networks should be encouraged to facilitate their internal operation and their public profile.* One challenge for network building is to develop programs that recognise the ways in which particular individuals, their characteristics and interactions, are critical for bushfire preparation. Another challenge is to promote networks so that they have continuity as well as a profile for the locality. Clearly given the socio-demographic complexity of many locality populations it may be necessary to encourage a range of networks.
3. *Agencies and related bodies should consider the ways that social capital can be strengthened through various supportive systems, informal meeting places and resources.* The encouragement of social networks must involve the recognition of different capacities of a network population. It may also be necessary to facilitate capacities by providing support (e.g. information sessions, meetings with volunteer and professional agency staff), places to meet (e.g. homes, sports facilities, schools) and resources (e.g. finance, printed material). The important point to note is that network building is not likely to happen in the absence of such support.
4. *Network building should be encouraged and publicised within agencies.* It will be important to promote practical methods to end-users to adopt a social network approach to engage communities in bushfire preparedness. Some agencies have already taken steps in this direction (e.g. the strategic conversations promoted by the Department of Sustainability and Environment in Victoria). In this respect agencies can learn from each other.
5. *Agencies should initiate and promote educational programs about bushfire events.* Many Agencies have a long history of such engagement (e.g. Community Fireguard programs in a number of states). There are two considerations here: how to extend such programs and how to ensure that such programs can best reflect the risk perspectives of those considered at risk. The result is likely to be a well-rounded and grounded approach.
6. *Agencies should give consideration to the experience and characteristics of populations in different localities.* Building on the first set of recommendations, it is axiomatic that effective education programs as part of an effective communication strategy meet the expectations of the student populations. Educationalists should ask whether or not the changes being asked of people or communities can be made. They should also account for physical, economic and cultural barriers.
7. *Agencies should recognise that locations vary and that focused approaches will be necessary* Specific communication practices as education strategies may be required in each location. While not an expectation that education practices are infinitely open-ended and varied, it is to

acknowledge that localities can be grouped by both experience (bushfire prone) and type (rural, peri-urban and sea/tree-change).

8. *In developing education programs, consideration should be given to the touch points for engagement.* Populations have a range of concerns and trigger points for engagement. Language, for example, is used in particular ways and consideration should be given to this aspect. It may be the case that when, for example, incorporating home-owners' values in mitigation and education strategies they are more likely to be taken up.

Future Research

In view of the themes addressed and the recommendations addressed, we identify twelve research needs across six subject areas.

1. Communities:

- a. *Research should be commissioned to review and consider the ways of working with groups with different and conflicting interests can be brought together to address contentious issues.* These measures may involve and exploration of strategic conversations and forms of deliberative democracy. Related to this focus, it will be important to explore whether the processes of mediation and conflict resolution have a part to play in the development of positive 'community' sentiment and understanding.
- b. *Research is urgently needed into audience segmentation among populations living in bushfire-prone areas of Australia.* This could help to inform more targeted campaigns in the future and may improve the effectiveness of bushfire preparedness and safety messages. Related, more independent research is needed into the current development and effectiveness of bushfire safety campaigns and how communications professionals in this area can be better supported by their organisations. Thus further investigation into the changing remit of bushfire agencies and their approaches to communication may be valuable in understanding organisational and cultural hurdles to developing better community engagement programs. One focus of value may be to draw on insights from research into public health programs (which are currently the dominant focus in social marketing literature) should be of use in bushfire preparedness and safety campaigns. Further research on this comparison could help to integrate international best practice into the area of bushfire safety.
- c. *One related area of neglect in relation to understanding communities is in relation to households; little is known about household organisation, composition, activity and resources.* Too often research focuses on individuals to the neglect of households as such, with the result that there is a gap in our knowledge. When preparing for and responding to bushfire events we respond not only as individuals, but also as members of households.

- d. *Little is known of the ways in which informal relations, involving conversation, local meeting places and related social practices, and the ways they may have a bearing on bushfire preparedness and response; these social features may take on particular forms in peri-urban and sea/tree change localities.*

2. Communication

- a. *Further research should be undertaken to understand and leverage the benefits of knowledge management in this context.* Communication in relation to bushfire is based on a range of relatively informal procedures which over time have been developed in to relatively well-established procedures for basic production and dissemination of materials. Application of knowledge management theories and practices could enhance the ability of agencies to manage their knowledge-based resources and processes, including those surrounding bushfire communication materials.
- b. *Research on social capital-focused understanding should be undertaken, to understand and develop procedures in relation communication and bushfires.* This research should focus on the social; relations within and between communities and the relevant agencies.

3. Agencies

- a. In view of the complex relations defining emergency bushfire services, it is necessary to develop a theory of authority that fits with current brigade practices both at a state and regional level, including volunteer brigade. *As part of this focus, there should be an exploration of the idea of the resilient citizen and what implications this might have for disaster preparation and response.*

4. Gender

- a. *More critical assessment is needed into the gendered dynamics of household decision making and communication around bushfire safety.* Further surveys on evacuation preference by gender in the Australian context would be valuable, as would in-depth qualitative research on why some heterosexual couples disagree on bushfire preparedness and response and how others have overcome disagreement. There needs to be more research addressing the social construction of gender in the context of bushfire, particularly the associations between dominant concepts of masculinities and ‘staying to defend.’

5. Social networks

- a. *There is a pressing need to extend the understandings of social network building into a fully developed research program*, so that the insights to date can be consolidated, extended in relation to strategies for development and the recognition of network building as central to effective communication. At present, there is a limited base relating to the roles that particular individuals play in the construction of networks, particularly in relation to bushfire preparation. This should be the subject of an extensive research project.

6. Education

- a. *It would be valuable to commission research into the ways in which education can open up and embed social practices in relation to community engagement.* Education as communication is a novel and relatively unexplored concept. Such research may want to draw upon approaches associated with deliberative practices and the ways these can help focus on educational programs within localities.

Appendices

Appendix 1:

Practical Applications of Social Networks for Emergency Management Agencies

This Appendix illustrates the benefit of the use of ‘visualisation tools’ to understand social networks in building bushfire preparedness. In partnership with the Australian Emergency Management Institute that offer a course called ‘Community in Emergency Management’, the social network research findings and visual methodology are used as a teaching tool to foster a ground- up dialogue for community-based engagement.

Various service agency staff participates in this course from local government, community development, fire services, State Emergency Services, police, ambulance and council staff from various parts of Australia. During the 2-hour workshop the participants are exposed to bushfire research that highlights the effectiveness of developing a strategy for knowledge-sharing among local residents that is specific and applicable to their own contexts. The social network research emphasises the critical role it can play in building resilience. The participants are then divided in pairs and introduced to Playful Triggers to map each other’s social networks, scaffolding a dialogue between them to understand their relation to others in their own ‘community of place’. By bringing attention to their own relationships, circumstances and experiences, the workshop attempts to reinforce the notion that the community is diverse and resourceful because of its networks and they can harness its latent capacity in an emergency. Echoing similar questions raised in this social network research, discussion on trust, reciprocity, advice and emotional support takes place, enabling the staff to see that their own relationships with people are important in fostering and building social capital.

Figure 10 – A workshop with emergency management agency staff, AEMI

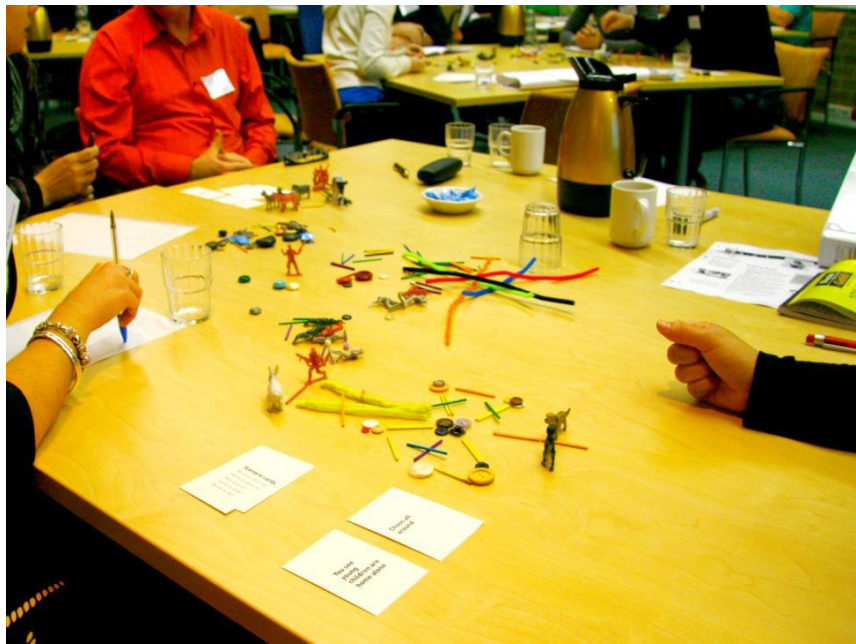


Figure 11 – ‘What if’ scenario card being used with social network mapping using Playful Triggers



In conjunction with the social network mapping exercise using Playful Triggers, the participants are also introduced to *‘What if’* scenario cards that are designed to help them think about unexpected incidents that could occur in sudden bushfire. Again, this approach reinforces the idea that a life-threatening emergency such as a fire forces a different kind of interaction that is outside the normative, every-day interaction. The personal network visualization transforms based on imagining what ‘could happen’ – interactions that lie in the future – in an emergency. This can reveal various qualities of people and their social capital that are valuable. In a scenario

of an on-coming fire, ‘who you trust’ or ‘who you will rely on’, inevitably changes according to contextual, emergent and processual factors.

As discussed already in the research methodology section, scenarios are an effective approach used in fields of design, business and health to stimulate the imagination and visualize the future (see Schwartz 1996; Manzini and Jégou 2004). Wack (1985) explains that when scenarios work, it comes alive, obliging people to question their assumptions, reorganise their inner models of reality that leads them to change. In the context of bushfire preparedness, it reduces the temptation for insular thinking, ‘...it can’t happen to me’, which is one of the key obstacles to bushfire preparation. Instead, triggering people’s imagination is viewed as a critical mechanism for anticipating the threat of fire (Goodman *et al.* 2009). The scenarios were generated from various interviews and case studies of past bushfire survivors in Australia, highlighting common accidents, unexpected occurrences and lack of planning that lead to increased risks. Trigger cards with unforeseen occurrences, such as a fallen tree blocking access or poor visibility, are randomly selected from a stack of cards. They prompt the pair to develop alternative plans to circumnavigate such occurrences in relation to their social networks.

The scenario cards emphasised the importance of having alternative plans in case there were unexpected circumstances that hindered them from leaving earlier. Cards that prompted people to consider ‘you are unable to reach your friend’, or ‘the car breaks down’ forced them to re-think who else they needed to contact, or seek help from (Figure 11). It also highlighted that some plans were ill considered, for example, the person you trust and relied upon may not be contactable, or live too far away. This exercise guided the participants to think through their plans more thoroughly.

The workshop is open-ended, scaffolded in a way to enable the conversation to take its natural course. Visualizing each person’s understanding prompted numerous location-specific, bushfire related conversations, driven by the participants themselves. What was most striking to observe is how motivated and willing all participants were in taking part in the activities, due to its playful, game-like design. In participating in this workshop, they were experiencing, first-hand, the enjoyment and effectiveness of being engaged in a generative, bottom-up process for disaster mitigation, a stark contrast to a top-down management practices. The evaluation sheets demonstrate that most participants have gained a great deal from attending this workshop.

An emergency management municipal officer commented that it was:

[A] good informal process that could help local communities to identify vulnerable groups and social networks that one didn’t know exists! ... It alerts people to understand their social network, which I think is often different to what they actually believe. Scenario cards... were an eye opener.

A disaster advisor for local government said that it introduced them to:

[E]xcellent tools for engaging community members. The Playful Triggers is fun and adaptable for all age groups and literacy levels. Excellent way to map social networks and determine vulnerability. Also liked the cards as opportunity to think how you may deal with scenarios.

Reports on the application of this approach in other areas of Australia are beginning to be reported. Figure 12 shows an image of a workshop, led by Ku-ring-gai Council, where a box of Lego was used as Playful Triggers in conjunction with a detailed, geographical map to locate people's houses and resources. Using these objects, vulnerable households, potential hazards and resources were mapped, facilitating discussion and knowledge exchange among the group. The scenario cards were re-designed specific to their community, identifying the risks associated with the Sydney urban interface and their proximity to a large national park. Feedback from the facilitator, the Ku-ring-gai council worker who had trialled three different workshop groups, indicated that the approach was successful in raising awareness of specific risks to the local area. This demonstrates the facilitator's confidence in making the methods their own, exemplifying their grasp of an open-ended scaffolded process and their ability to adapt the approach to their specific contexts. The aim is to continue the research partnership with various emergency agencies to evaluate how the approach develops and evolves through people's hands, thereby demonstrating the iterative, participatory, design-led research approach that characterises this research.

Figure 12 – Application of this approach in Ku-ring-gai, NSW



By placing attention on social networks, which creates social capital, this research approach in turn brings people together to reinforce their connection to others and to emphasize that the greatest resource in an emergency is the reciprocal assistance that people can provide for one

another. The approach scaffolds human-to-human engagement, interaction and conversation, enabling individuals to ‘make-sense’ of the complex issues and challenges related to bushfire preparedness in their own words, view and contexts. Scaffolding this community-centred engagement can create and build social bonds where learning and transformation of behaviour can take place among a supportive group, leading to sustainable change and well-being.

References

Goodman, H., Stevens, K., and Rowe, C. 2009. *Mt Bold Case Study*: Bushfire CRC report for the Country Fire Service Community Education Unit. RMIT University: Melbourne.

Manzini, E., and Jegou, F. 2004. Sustainable Everyday: Scenarios of Urban Life.
http://sustainable-everyday.net/scenarios/?page_id=28

Schwartz, P. 2002. *The Art of the Long View: Planning for the future in an uncertain world*. Richmond: Sydney.

Wack, P. 1985. Scenarios: Shooting the rapids. *Harvard Business Review*, 63 (6), 139-150.

Appendix 2: Locality reports

The following locality reports were prepared during the program:

State-level reports

New South Wales	Richard Phillips and Keith Toh
Tasmania	Richard Phillips and Keith Toh
Victoria	Keith Toh
Western Australia	Richard Phillips and Keith Toh

New South Wales

Deniliquin	Richard Phillips and Benjamin Reynolds
Ku-ring-gai	Susan Chaplin
Shoalhaven	Richard Phillips

Tasmania

St Helens	Keith Toh, Susan Chaplin and Richard Phillips
Scottsdale / Derby	Richard Phillips, Susan Chaplin and Keith Toh
Kingston / Kingsborough	Susan Chaplin
Huon Valley	Susan Chaplin

Victoria

Anglesea	Keith Toh, Julie Stratford, Alison Hart and Richard Phillips
St Arnaud	Richard Phillips, Alison Hart, Julie Stratford, Keith Toh and Susan Chaplin
Selby / Belgrave	Keith Toh, Julie Stratford, Alison Hart and Susan Chaplin

Western Australia

Bedfordale	Keith Toh
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Bridgetown

Richard Phillips and Keith Toh

Dunsborough

Keith Toh

Selected locality reports are available at: <http://www.rmit.edu.au/research/csow>