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Title: Engaging communities in preparedness for wildfire through identifying vulnerabilities and capacities.

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Engaging communities in preparedness for wildfire through identifying vulnerabilities and capacities.

Abstract

Communities differ in their perceptions of wildfire issues, their vulnerabilities to wildfire and their capacities to respond to wildfire. Fire service providers along with local governments have the ability to assist communities to identify their vulnerabilities and capacities in terms of wildfire issues. A framework has been developed to assist in this capacity building activity. This paper presents the rationale for the framework, how the framework was developed, the framework itself and potential uses of the framework.

Introduction

The research reported here is an outcome of the Understanding Communities Project with the Bushfire Co-operative Research Centre. The project was required to identify a methodology for assessing community vulnerability to wildfires. The project chose to extend that brief into identifying community capacity as well, because fire services, particularly in urban interface and rural areas are very reliant on community members to provide for their own safety.

The development of a framework for assessing community capacity, perceptions of the risk and vulnerability to wildfires is essentially about developing a method for fire service providers to better understand, at the local level, the communities they serve. Communities are highly varied and brigades need to have a clear understanding of *who lives in their community*, the best way to contact them, and how they can help with bushfire preparedness, response and mitigation.

Rationale for the framework

Key groups in the communities need to be identified so they can be contacted to identify special needs within communities, community groups can be an effective conduit for information, and can help identify people who have recently moved into the community. As well, demographic profiles and other information about community members can help identify shared interests or needs. Some groups need special types of information, for example commuters or families with young children, and ways of effectively contacting them and engaging with them need to be identified.

Communities with fly-in-fly-out labour forces may imply issues to do with preparedness, but may also imply a level of flexibility with regard to volunteering for fire mitigation and response.

There are a number of different ways to find out who lives in a community and the community profile component of the framework provides brigades with the framework to build a picture of their community. Knowing their community *is* important especially in areas which are new or changing on the outskirts of cities and rural towns; or areas with a high non English speaking population and different culture. Communities are not just the individuals who live there, but include the organizations to which they belong and the networks they have. Communicating with representatives of these groups and group members themselves creates the opportunity to contact a far wider range of people than can be achieved by individual contact. This results in a better picture of who holds what views about the risk.

When the community profile is combined with data to identify those at risk from wildfire and the resources brigades have to deal with that risk, fire service delivery will be enhanced and agency initiatives will be more effective. The end result is communities which are safer and more resilient to wildfires.

The basic assumption underlying the development of this framework is that perceptions of risk of wildfire, indeed any risk, are socially constructed (Gardner et al 1987, Halvorson 2002, Lupton 1999, Lupton and Tulloch 2002, Tulloch and Lupton 2003, Stallings 1995). That is, communities may not see the risk the same way as fire service providers. In a number of studies undertaken by the Understanding Communities Project it has been demonstrated that members of communities have priorities other than wildfires (eg Balcombe 2007, Bushnell et al 2007, Cottrell et al 2008, Glasgow 2006, Monaghan, 2007). In some cases, it is other natural hazards which occur more frequently such as floods and cyclones, or the day to day worries of financial security, personal safety or traffic related issues. By knowing their community better, fire service providers are better able to negotiate these differences in perceptions. In some cases it may be possible to build on other aspirations held by community members and groups.

Also, the project researchers have a background in community development approaches to social change, social impact assessment and disaster impact assessment. Consequently, participatory approaches which consider the local context and local people are considered to be very important. People in local communities are often considered by agencies to be ‘the problem’ whereas our research experience shows them to also be part of ‘the solution’.

Methods for developing the framework

An action research approach was undertaken to develop the framework (Karlson 1991, McNiff and Whitehead 2002, Reason and Bradbury 2001). This involved in depth interviews with fire agency personnel from senior management (deputy commissioner level) to volunteers at the local brigade level, to identify what was required of this ‘tool’ for identifying community vulnerability. It became quite clear that the various levels of the organisation viewed the ‘problem’ quite differently. Senior staff were more interested in more efficient delivery of services and identifying

where services needed to be delivered. Local fire brigade staff and volunteers were more interested in preventing fires at the local level and 'getting the community to do what they need to do'. It also became clear that local members had no formal mechanism for recording their local knowledge about fire history in their area or the communities they served. It is important not to be naive about local knowledge. In some cases brigades have a wide knowledge of their communities and effectively link with them, but are disadvantaged if a large event occurs and they require outside assistance. In this case local knowledge is often overridden by more senior outsiders. In other cases, the local brigade might only be a 'club' for a small group of people who effectively exclude a broader membership, and have very little understanding of the community they are servicing.

At several points along the research process, senior, regional and local fires service personnel were provided copies of the framework in order that feedback be obtained. In some cases a copy of the framework was sent to people for comment, workshops were held at a national fire conference (2007), a national community fire education conference (2007) and with brigades in Western Australia.

The response has varied, and at different points the framework has been refined as a consequence of comments. The main issue for end-users was the identification of methods of engaging with various groups, and this has been addressed in the most recent version of the framework.

Some brigades have responded very positively to the framework as an effective mechanism for them to plan both brigade resourcing and community liaison activities. Other brigades (smaller) see it as a burden, particularly if it were to be forced upon them. Community education providers have responded very positively and see the framework as potentially very useful for providing better targeted education campaigns.

Framework composition

There are four main sections to the framework: community profile; fire risk assessment; brigade resources; and community consultation methods.

The *community profiling* part of the framework identifies demographic characteristics, demographic changes, vulnerable groups identified by councils and other organizations, transient populations - either seasonal workers or tourists, any planned development in the area, and critical social infrastructure. The types of *community engagement and/or participation* that might be possible can be identified through regular community activities, community meetings, advice to groups identified in the community profile, regulatory requirements, enquiries and requests from the public. *Reviewing community profiles and engagement* on an ongoing basis is essential so that a contemporaneous understanding of the community which is also informed by local history can develop over time.

Risk assessment is essential. In this case it is important to identify not only the potential exposure to wildfire in the area, but other natural hazards that the community might see as more important. Depending on the community, other risks

such as traffic hazards and economic security might be seen as much more salient than a wildfire that may or may not happen.

An understanding of the *local fire brigade resources* is also important, in order that a realistic appraisal of potential service delivery can be made. Potential conflicts between the various layers of government planning ordinances and fire service also needs to be understood.

A clear history of fire incidents, mapping of fire risk and the history of large fires in the area also need to be maintained. This should also include local knowledge about fire behaviour in the area providing it can be substantiated.

Community expectations of fire service delivery may or may not coincide with that available from the local brigade or at a more regional level. Understanding community expectation through regular conversations community representatives and community groups should keep service providers in touch with those expectations. These need to be recorded and updated regularly.

Methods for identifying community capacity and vulnerability that can easily be used at the local or regional level can include: interviews with community group leaders – religious, women's, scouting, sporting, schools, employers, local government; speaking at meetings which have been organised by volunteer groups and agencies; calling a forum for community leaders; speaking at schools; reviewing local newspapers and so on. Many of these techniques are already used by some service agencies, the framework is a mechanism for reminding people what is possible.

Potential uses

The framework that has been developed to identify community perceptions of, vulnerability to and capacity for dealing with wildfire risk can be applied at all phases of the emergency management cycle. Preparedness – identifying who lives in a community is an essential part of determining their information and resource needs in the context of wildfire. Community education activities are included at this point. Knowing who lives in the community helps to decide what information they need and how best to get it to them.

Response – the framework is also a mechanism for contacting potential volunteers as well as identifying key people for communicating with the various community groups. Knowing in advance the potential vulnerabilities and capacities in a community helps identify in advance the needs for a community when responding to a fire event and the types of recovery services that may be warranted.

Limitations

From the perspective of fire services the use of the framework may be constrained by the willingness of agencies or parts of agencies to participate in community engagement. At the local level, brigades and volunteers may see it negatively as a mechanism for accountability. The information identified by using the framework needs to be updated regularly, and this may be seen as consumptive of time. The types of volunteers and staff who collect the information suggested by the framework, may need to be separate from those involved in response activities. Certainly, in many

remote regions, the types of people who volunteer do not seem to welcome any more form filling than is necessary. This framework might be best suited to a limited range of local staff or volunteers. In one region where we ran a workshop, a volunteer who could no longer serve in response, welcomed another role that the framework offered.

The framework needs to be fully evaluated to determine utility at various levels. To some extent this has commenced as part of the action research cycle, but needs to be continued when implemented. The types of issues to be considered in an evaluation include: is the framework appropriate at local, regional and broader scales; how easy is the framework to use for a range of different types of users; does the use vary in utility between states; is the framework best in paper, digital or combined format; does the framework sit comfortably with existing data collection methods and operation manuals; and how easy is it to manage privacy matters.

Conclusion

This framework for identifying community vulnerabilities and capacities in the context for wildfire hazards has developed out of an action research approach with end users in mind. The underlying principles guiding the development have been those of social construction of risk, community development approaches to community engagement, social impact assessment and disaster impact assessment. The outcome has been a framework which is applicable at particularly local and regional areas, and can be effectively used by volunteers and paid staff. The framework can be adapted for other kinds of fire risk as well as other kinds of hazards.

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