

# FIRE NOTE

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## COMMUNITY BUSHFIRE PREPAREDNESS: WHAT DRIVES OUR DECISIONS?



▲ Figure 1: A street-based community meeting is held to discuss bushfire risk management.

### CONTEXT

Developing effective risk communication requires an understanding of how people interpret their circumstances, the information available and their relationship with community safety agencies. Identifying the interpretive processes provides the foundation for developing practical risk communication recommendations.

### BACKGROUND

A core objective of bushfire risk management is to help individuals and communities to regain the capacity to function again after a bushfire. An important part of this capacity is how prepared people are to deal with their exposure to the adverse consequences of a hazard. With respect to bushfire, this requires having a well-rehearsed fire plan and preparing one's property, whether the fire plan is to prepare, stay and defend or to leave early.

Encouraging people to prepare for bushfires (e.g. creating a defensible space, taking steps to prevent ember entering roof spaces) is a significant public policy issue in Australia (McLeod, 2003). The Victorian Black Saturday bushfires on 7 February 2009 further highlighted the importance of understanding community members' decision-making about bushfire preparedness.

While a 100 percent compliance rate is not practical, fire agencies can (through a better understanding of the psychology of risk perception) tailor risk communication strategies to combat the reasons why some people choose not to prepare for bushfire risk.

### BUSHFIRE CRC RESEARCH

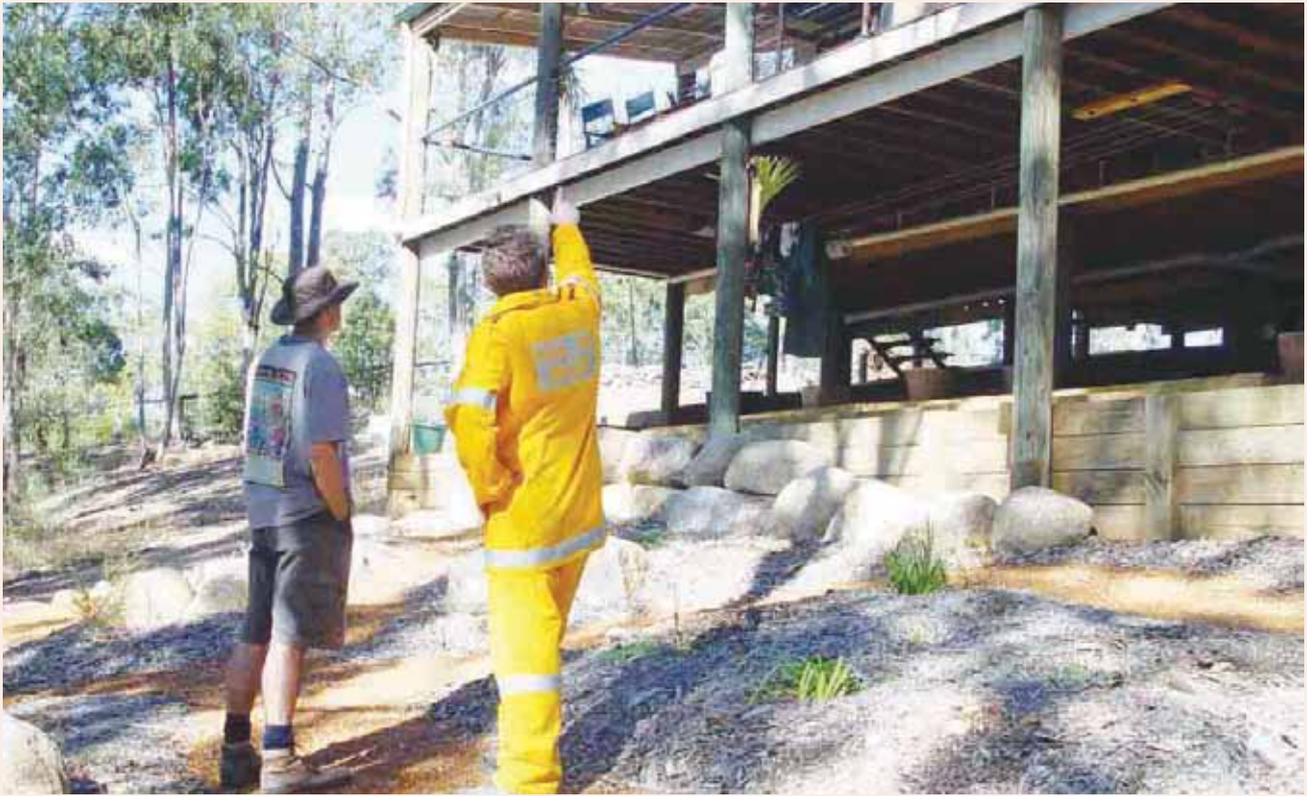
The Effective Risk Communication project has investigated the factors that increase or decrease the likelihood that individuals and communities would prepare for a bushfire. Data from surveys and interviews with residents living in high bushfire risk areas in Hobart (in 2005 and 2007) and Canberra (in 2004) were used to construct a bushfire preparedness model (Paton, et al, 2006; Paton et al; 2008; Paton & Wright, 2008).

### SUMMARY

This Fire Note shows how links between research and practice can help the fire community to improve risk communication and community safety. In order to further enhance community safety programs, a thorough understanding of the reasons (and underlying psychological processes) as to why people choose to either prepare or not prepare for bushfire risk is essential. This Fire Note comments on both the research findings of the Effective Risk Communication project, and the Bushfire Royal Commission witness statement of Professor Douglas Paton, focusing on recommendations for community bushfire preparedness with regard to risk communication strategies. It discusses the Community Bushfire Preparedness Program, a pilot risk communication program currently being trialled by the Tasmania Fire Service, and the expected positive outcomes for the communities involved.

### ABOUT THIS PROJECT

This research is part of the Engaging Communities and Risk Communication Project within Bushfire CRC Program C: Community Self-Sufficiency for Fire Safety. The authors: Douglas Paton and Mai Frandsen are both at the University of Tasmania, where Professor Paton is a Project Leader of the Risk Communication Project and Mai is a PhD candidate.



▲ Figure 2: Identification of preparation strategies on a more personalised level is being tested in Tasmania and New South Wales.

Semi-structured interviews were conducted with a sample drawn from those who completed the survey to further identify the motivators behind decisions to prepare or not prepare for bushfire risk.

## RESEARCH OUTCOMES

Analyses of the data identified how the type of intention people form predicts whether they prepare. People who formed intent to prepare generally followed up with actual bushfire preparation. Alternatively, people who formed intent to seek information were unlikely to prepare.

Follow-up telephone surveys shed further light on the reasons people decided to prepare or not prepare. Knowledge of these factors helps to develop risk communication information that reinforces reasons for preparing and counteracts reasons for not preparing.

Important factors influencing people's decisions are outlined below.

People who reported increased levels of bushfire preparedness had:

- formed an 'intent to prepare'
- positive outcome expectancy, believing their actions would effectively mitigate the bushfire hazard
- a sense of community; they reported talking with and observing other community members preparing for bushfire, or talked about a sense of

## END USER STATEMENT

Why do people choose to either prepare or not prepare for the risk of bushfire? Unless we explore the possible answers to this key question, we cannot design effective risk communication and community bushfire safety programs. This research identifies this essential need to understand the psychological motivations and other reasons behind an individual's decision to act or not act, sometimes despite their best intentions.

Tasmania Fire Service is deeply committed to helping to trial and evaluate a new evidence-based intervention we've called the Community Bushfire Preparedness Program, which capitalises on the emerging research outputs. As the program is fully evaluated, we expect to see the results of this Bushfire CRC research applied more widely, enhancing the capacities of communities across Australia to prepare for and recover from bushfires.

– **Damien Killalea**  
**Director, Community Fire Safety**  
**Tasmania Fire Service**

- social responsibility to their community
- a sense of place; they were strongly attached to their property and its location.

People who reported decreased preparedness

gave as reasons not to prepare:

- lack of time, competing demands and monetary cost of preparations as significant barriers to preparing
- inadequate resources, including a lack of practical how-to information
- negative outcome expectancy – they lacked confidence in the effectiveness of any bushfire preparedness
- anxiety – the emotional or affective consequences of thinking about fire and its consequences reduced the likelihood they would prepare.

As a result of the current research and the wider literature on risk perception and communication, a number of recommendations for effective bushfire risk communication can be generated. A more complete list of recommendations can be found in Paton and Wright (2008); however, the key recommendations are summarised:

- Strategies to increase bushfire preparedness are more effective if transmitted through community networks that take a 'bottom up' approach which develops community networks focusing on bushfire risk and preparedness.
- Embedding discussions about bushfire risk in existing community groups is more effective than holding public meetings specifically to discuss bushfire risk and preparation.

## HOW THE RESEARCH IS BEING USED

### Tasmania Fire Service's Community Bushfire Preparedness Program

Although similar work is being conducted in fire agencies across Australia, the following will focus on a program that Tasmania Fire Service has begun in close conjunction with the Bushfire CRC research teams working on Engaging Communities, and Effective Risk Communication.

#### Background

In late 2008 Tasmania Fire Service (TFS) management made a commitment to trial a new approach to community bushfire safety. On the back of its Bushfire: Prepare to Survive DVD campaign, independent research has found that the awareness of risk, preparatory activity and intent to prepare has risen. Despite this, a minority of people do not adequately prepare for the bushfire risk.

As identified earlier in this Fire Note, simply giving or distributing information about what to do is not enough to motivate everyone in the community to prepare for hazards, particularly infrequent hazards such as bushfires.

Based on this and recognising that each community is unique, the TFS engaged a community development officer to work directly with four identified communities to support them to develop local strategies for bushfire risk.

#### Aims

The aims of the new TFS Community Bushfire Preparedness program are to trial and evaluate a community development bushfire preparedness program in four communities in Tasmania over a two-year period.

Out of an initial shortlist of 30, four communities were identified for the implementation of the two-year bushfire preparedness trial. The communities were selected according to:

- 1) geographical location – a range of geographical locations were sought, from southern and northern rural, to an urban fringe community;
- 2) general bushfire risk factors such as types of vegetation, history of bushfire occurrence; and
- 3) recent bushfire occurrence, to investigate how this affects community preparedness.

#### Processes

The process for community engagement is based on bushfire research conducted both



▲ Figure 3: The manner in which people are informed about fire risk is central to how they will prepare.

- Negative outcome expectancies can be modified by various means. This includes inviting people to consider what can be done for more vulnerable members of the community and by helping people to differentiate between uncontrollable events (fire) and controllable consequences (e.g., a defensible space mitigates the effects of radiant heat). The objective is to encourage re-framing of beliefs by presenting information that creates a new set of beliefs (i.e. that bushfire preparedness is positive, effective and facilitated by personal actions).
- Information should be provided regularly and tailored to people's specific circumstances and phases of preparation, in everyday language.

Households should be encouraged to first adopt the cheapest or most generally useful protective actions (i.e., actions useful for reasons other than responding to bushfires) accompanied by specific explanations of why additional measures are required and why they are effective.

- Information needs to be presented in smaller segments which explains the relationship between the hazard (e.g., flame) and its mitigation

(e.g., defensible space reduces risk by increasing the distance between hazard and house).

The Effective Risk Communication project focused on identifying factors that systematically influence how people interpret risk and what they should do to manage their risk.

Other research (Slovic, et. al., 2004) identified how 'affect' (i.e. how 'good' or 'bad' something feels) influences preparedness.

The Effective Risk Communication project identified how anxiety associated with bushfires reduced the likelihood that some people would prepare (Paton et al., 2008). The approach adopted in the risk communication project is also consistent with the recommendations of Slovic and colleagues because it advocates moving away from providing detailed and probability-based information – such as the percentage chance of a strategy reducing risk – to focus instead on developing an understanding of hazards and their consequences.

This is consistent with evidence which indicates that systematically increasing people's understanding of hazards and practical risk management reduces their fatalism and anxiety (Paton et al., 2006).



▲ Figure 4 Residents are assisted with fire preparation measures.

in the Risk Communication project and the Engaging Communities project. The first step was to form partnerships with other agencies such as local government, Parks & Wildlife Service and Forestry Tasmania. This ensured that these agencies also had the opportunity to engage the communities about their role in bushfire preparedness and to allow the communities to voice any concerns.

Volunteer fire brigades of the four communities were approached to seek their support and participation. The involvement of local brigades is critical as often the communities' first contact with fire agencies is through their local brigade. As well, much of the grass-roots level work can be done through the volunteer brigades. For this community involvement to work, local brigades need to take ownership of these

schemes and they need higher level support via adequate resources and training. It is also important for agencies to acknowledge and work with the different capacity levels of the various volunteer brigades.

Initial work within the four communities has begun and involves:

- consulting community leaders so they can spread the message
- organising community forums for which participants receive personally addressed invitations
- meeting local neighbourhoods to identify their bushfire concerns and hear what potential solutions they might have
- presenting on-site specific information to neighbourhoods on preparedness issues.

## Outcomes

The program is at an early stage, making discussion of specific outcomes premature. The expected outcomes of the project are:

- local communities would have an increased awareness of bushfire risk
- localised strategies would be developed for bushfire risk mitigation
- sustainable systems for engaging communities in bushfire risk preparedness
- increased awareness and sustained implementation of national and state bushfire risk mitigation policies by target communities
- enhanced community networks and resilience.

## FUTURE DIRECTIONS

An integral part of community-based research is to assess the effectiveness of any intervention strategies. Future research focusing on the effectiveness of risk communication strategies and preparedness programs such as the TFS Community Bushfire Preparedness program is needed.

Comparison of data from Tasmania and New South Wales suggested that social and cultural factors influence the relative importance of other factors, such as lifestyle versus economic factors, in influencing preparedness decisions. Identifying these contingent influences requires more work. Other issues requiring more attention include identifying factors that influence the relationship between community members and fire agencies (particularly in the post-fire environment) and how environmental factors influence actions.

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