

FIRE NOTE

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COMMUNITY VULNERABILITY TESTED IN 2003 BUSHFIRES

The vulnerability of people and communities to bushfires is an area of little research. Some people appear to be more vulnerable to natural events such as bushfires..

In simple terms, 'vulnerability' refers to situations where people experience heightened exposure to hazards and a diminished capacity to cope and adapt to possible impacts (Whittaker 2008; see also, Pelling 2003; Adger 2006).

RESEARCH BACKGROUND

The Wulgulmerang district is a remote farming settlement situated between the Alpine and Snowy River National Parks in East Gippsland, Victoria. It takes in the settlements of Gelantipy, Seldom Seen, Wulgulmerang, Black Mountain and Suggan Buggan. With a small population of around 75 people, the local economy is sustained by cattle and sheep farming, which are the major private land uses in the district. The area is one of the few parts of Victoria that is classified as 'remote' under the Accessibility/Remoteness Index of Australia (ARIA) due to the very

restricted accessibility of goods, services and opportunities for social interaction.

The 2003 bushfires burned 1.12 million hectares in Victoria's north-east and East Gippsland. The severity and longevity of the 2003 bushfires was partly due to the severe climatic conditions of the summer of 2002/03. Daytime maximum temperatures were 2 to 3°C above average in most parts of eastern Victoria. 30 January saw some of the most extreme fire behaviour of 2003, with large fire runs and extensive spotting occurring throughout north-east Victoria and East Gippsland (Taylor and Webb 2005; Wareing and Flinn 2003).

In the Wulgulmerang district, bushfires on 30 January destroyed six homes, the local service station and a sports pavilion. Thousands of sheep and cattle were killed, while farm buildings and thousands of kilometres of fences were damaged or destroyed. Many graziers were forced to further reduce livestock numbers or take on the extra costs of buying feed or agistment. The fires adversely affected the health, livelihoods and social lives of many local people.

SUMMARY

What makes communities vulnerable to bushfires? How do socio-economic factors like economic well-being, access to resources and participation in social networks contribute to bushfire resilience?

Focusing on the 2003 bushfires in East Gippsland, the research examined how social and economic factors shape the capacities of communities and individuals to adequately prepare for, respond to and recover from major bushfires.

Specifically, the research investigated people's exposure to hazards during the fires and their capacities for coping with subsequent impacts.

By understanding the factors that make communities vulnerable to fire, the research aims to increase community self-sufficiency for fire safety.

▶ RIGHT: A BURNT OUT NATIONAL PARK SIGN ON THE WAY TO MOUNT SELDOM SEEN.



ABOUT THIS PROJECT

Josh Whittaker is the holder of a Bushfire CRC postgraduate scholarship, working within Program C: Community Self-Sufficiency for Fire Safety.

'Vulnerability to bushfires in south-eastern Australia: a case study from East Gippsland, Victoria' is Josh's PhD thesis at RMIT University.

OBJECTIVES

- Help fire agencies better understand how small, rural communities prepare for, respond to and recover from bushfires.
- Equip fire agencies with information that enables them to develop policies and programs that reduce community vulnerability to bushfires and build resilience.

FURTHER READING

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- Taylor J. and R. Webb. 2005. Meteorological aspects of the January 2003 southeastern Australian bushfire outbreak. *Australian Forestry* 68: 94-103.
- Wareing, K. and D. Flinn. 2003. *The Victorian Alpine Fires: January – March 2003*. East Melbourne: Department of Sustainability and Environment, State Government of Victoria.
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▲ ABOVE: FARMLAND BURNS IN EAST GIPPSLAND DURING THE JANUARY 2003 FIRES.

From a vulnerability perspective, it is important to understand the social and economic context in which the 2003 bushfires occurred. Like many rural communities, the Wulgulmerang district was grappling with a range of challenges associated with social and environmental change. These included: drought; rising costs of production; declining farm incomes; farm amalgamations and enlargements; and the increasing inaccessibility of goods and essential services.

An outbreak of Ovine Johnes Disease in 1998 decimated the local sheep industry, leading to greater dependence on cattle farming. This has reduced local economic diversity, which is a vital component of community resilience.

However, changes in the local population were the local community's most pressing concern. The local population had aged and decreased. The number of active volunteers with the local CFA brigade had declined significantly and many of those who remained were aged over 60.

The closure of the local primary school in 2001 was viewed as a major barrier to the repopulation and revitalisation of the district.

RESEARCH IDENTIFIES VULNERABILITIES

The research identified a range of factors that shaped people's vulnerability to the 30 January fires.

Many of these were associated with changes to the nature of agricultural livelihoods, which had profoundly transformed the social and economic foundations of the district. Since the 1970s, declining terms of trade and

increasing competition had forced widespread restructuring in the agricultural sector. To achieve greater productivity and efficiency, farmers increased the size of their properties and reduced production costs, typically by cutting jobs and limiting spending on agricultural inputs.

The local economic dependence on agriculture meant that the local community was severely affected by these changes. Increasingly, the social and economic viability of the district was undermined as people left in search of work, local economic activity contracted and, with reduced demand, public services were 'rationalised' and withdrawn. As noted, prior to the 2003 fires, the local population was greatly decreased and aged, and many households were experiencing financial strain associated with agricultural downturn and drought.

FARMS UNDER-INSURED

The research identified important differences in agricultural and non-agricultural landholders' capacities to cope and adapt. A major finding was that while most residents had their homes and contents insured, many farmers were under-insured for damage to their livelihood assets. The cost of premiums was identified as the principal barrier to greater insurance of these assets, with longstanding drought and other financial pressures on farm households leading to reduced expenditure on business risk management. The shift to larger, asset-laden farms was also a driver of under-insurance, as farmers had greatly increased their asset bases but did not necessarily have the resources to insure them.

END USER STATEMENT

The capacity of a community to prepare for, respond to and recover from bushfires is a critical factor in dealing with the bushfire risk. The Community Safety approach is based on a partnership between agencies and the communities in dealing with the risk. If certain factors diminish the community capacity then the partnership approach is significantly undermined.

Josh Whittaker's research highlights the complex array of factors that can influence a community's ability to deal with the bushfire threat. Agencies need to understand how these factors affect capacity in particular communities in order to build effective partnerships. A sound understanding of the factors affecting communities enables agencies to better meet local needs, tailor programs to address local issues and build a stronger relationship based on trust and shared understanding.

Josh's work provides an in depth and compelling case study that also highlights the factors affecting community resilience, and also provides a model that could guide agencies work in developing better understanding of community capacity to deal with bushfires.

– Alan Rhodes, Manager, Research and Evaluation, CFA

Fortunately, after the fires most people were well supported by social networks and were able to access some government assistance, enabling them to begin to cope and adapt to the impacts of the fires.

FUTURE DIRECTIONS

Future research will need to consider how to reduce community vulnerability and build resilience in fire-prone regions throughout Australia. Climate change projections suggest there will be an increased risk of successive droughts, bushfires and floods in relatively short periods of time (DSE 2004), which may exceed the capacity of farm households to cope and adapt. The financial pressures on farm households may also increase the risks associated with under-insurance.

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AFAC is the peak representative body for fire, emergency services and land management agencies in the Australasia region. It was established in 1993 and has 26 full and 10 affiliate members.