REMOTE INDIGENOUS COMMUNITIES

A STATEMENT ON RESEARCH PRIORITIES FOR
NATURAL HAZARDS EMERGENCY MANAGEMENT IN AUSTRALIA

Natural hazards have always been part of the Australian landscape. However, the rising costs of disasters have instigated policy documents, such as the Productivity Commission's report on natural disaster funding arrangements and the National Strategy for Disaster Resilience, that build on previous work and highlight the importance of mitigation and resilience activities.

Australian remote communities are more often defined by their vulnerabilities due to extreme economic, environmental and social disadvantage, including poverty, poor employment, health services and governance. Combined, these factors affect the resilience of remote communities in a traditional sense. However, some people in remote areas of Australia feel a cultural responsibility to understand and protect country and this connection to country contributes, at least in part, to build a different kind of internal resilience to natural hazards. In the event of a natural hazard, remote-living individuals and communities based on past experience will not necessarily expect a tailored emergency services response including warnings. In many cases communities and individuals have developed a series of adaptive response cues and behaviours that will enable them to withstand an emergency without external intervention.

Throughout 2015-2017, emergency service agencies around Australia participated in workshops hosted by the Bushfire and Natural Hazards CRC to consider the major issues in natural hazards emergency management.

This publication on remote Indigenous communities summarises the outcomes of one of these workshops and poses questions as a guide for a national research agenda in natural hazard emergency management.

BUILDING CAPACITY

Australian remote communities face multiple natural hazards such as bushfires, cyclones, floods, heatwaves and earthquakes. While individuals and communities may have developed adaptive response to hazard events, harsh economic, social and physical conditions make it difficult for remote communities to invest in the development of preparedness for natural hazards. Community engagement is a critical step in supporting communities to build their capacity for sustainable and liveable remote community.

It is those directly threatened by natural hazards that have the most to lose, and hence, the most to gain in managing risks. Community engagement activities that aim to promote communities and build community preparedness in the longer term are integral to the longevity of remote communities in Australia. These activities centre on the concepts of shared responsibility and community resilience and encourage active participation of individuals, businesses and communities in government processes and in this case emergency management and the preparedness for emergencies.

- **What does preparedness look like in remote communities?**
- **What levels of preparedness already exist in remote communities and how can we nurture and develop it further?**
- **What are the most effective community engagement tools for building preparedness?**

COMMUNITY EDUCATION

A better understanding of the environment and how it interacts with other factors enables deliberate action to increase resilience and provides tangible benefits for the community such as greater preparedness. There are a range of activities that can help to reduce vulnerability and aid in community and individual resilience before, during and after disasters and emergencies. These activities centre around the process of community education to develop resilience.

Access and equity are important issues in remote Australia. There are a number of existing natural hazard response training packages and materials, however only a small proportion have been written for remote Australian communities. It is important to note that in one remote region alone, there maybe 12 languages or dialects spoken. A cross-cultural natural hazard response program that explores any of the following, would be of significant help to remote communities:

- land management;
- burning on country and using fire tools;
- fire and flood risk;
- mitigation for fire, heatwave storm and flood.

- **What does an effective culturally sensitive education program look like?**
- **How can we encourage new partnerships and enhance existing partnerships between government and community to deliver change?**
- **How can culturally sensitive resilience education programs be targeted to both adults and children?**

Contemporary ideas around resilience understand the physical environment as a core component that interacts with other enabling and inhibiting factors such as mitigation measures, social capital and socio-economic status of the community.

Grassy weeds including, Spinifex and Buffel grass were introduced to Australia in the 19th and 20th century. They are aggressive colonisers, competing with the native flora. and often flourish after rain and a very hot fire. These grasses are difficult to control, as traditional strategies such as fire only serve to encourage their spread across the land. The hot burns these grasses create are also quite hostile to the native flora, used to the more traditional cool burns in the Australian landscape. Hence accompanying the spread of these grasses into remote areas is the loss of biodiversity and reduced habitats for hunting and foraging used by remote communities for food and medicines.

The onset of climate change could have implications for remote Australia. Coupled with climate change is the increased risk of more intense and extreme natural hazards. It is expected that as climate change continues, remote communities will experience harsher, more extreme conditions such as heatwaves and other severe weather. These extreme conditions will place pressure on infrastructure including roads, homes and community building, potentially inhibit access to water and food and lifestyles that include hunting and foraging. In addition, there are other potential impacts including exposure to fire, floods and storms that have the potential to cut access to existing vulnerable critical infrastructure, such as power and water.

The net effect of invasive grassyweeds and climate change is their potential to change and shape physical and social environments; making the lives of people living on country and managing land difficult, adding to the already complex socio-economic environment and potentially driving them to leave the land to go to regional or urban centres. Ultimately this has significant social and environmental consequences for remote Australia, as land becomes untenable and left to manage itself, further increasing land management issues (such as invasive flora and fauna).
Research that explores the physical environment, natural hazards and their relationship with land management will provide a greater understanding of how to support better outcomes for remote communities.

- **How can common environmental challenges such as grassy weeds management and climate change be used as an opportunity?**
  - **o to further develop and expand land management?**
  - **o to build mitigation activity?**
- **What strengths and vulnerabilities exist in the physical and social environment that can be repurposed to effect change?**

National research priorities for natural hazards emergency management

What are the most significant natural hazard emergency management issues Australia faces over the next 10 years?

This was the question posed to emergency service agencies around Australia in a series of workshops hosted by the Bushfire and Natural Hazards CRC throughout 2016.

This publication is an outcome of one of these workshops and part of a broader national research agenda in natural hazards emergency management being developed by the CRC.

The workshops provided an exploration of major issues that would benefit from the support of research at a national level. There was no attempt to solve any of the issues or problems raised nor was there any discussion on the details of specific research projects. The participants discussed the issues they believed were relevant to the specific topic under discussion, the relative importance of the issues and the reasons underpinning their relative importance.

This series of publications summarises the outcomes of the workshops conducted so far – more will take place in 2017. They provide a guide for future research activities by identifying national priorities across major themes. The workshop outcomes have also influenced the evolving research agenda of the CRC.

This statement has been developed with the assistance of the 10 Deserts Initiative which hosted this workshop, for remote community issues and natural hazards in Alice Springs on 17 August, 2016.

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