

## ABSTRACT

Critiques of current attempts to build resilience in remote communities in northern Australia have generally been criticised as top-down and failing to produce meaningful outcomes. A component of the project was scoping resilience in remote communities that highlighted the challenges with current government efforts to plan *for* rather than *with* communities. Living with hazards requires that government leave space for communities to define and articulate what it takes to build hazard-smart communities. What does it mean to be hazard-smart? Who should be responsible for building hazard-smart communities? Communities in central Arnhem Land are using participatory-action research tools to talk about what it would take to ensure the survival of people facing significant hazards. Based on experiences with Cyclone Lam, communities have identified and made suggestions for what an inclusive community-led process would look like as an emergency management framework. This paper identifies key elements providing direction on how communities and governments can work together.

## Special notice:

Aboriginal and Torres Strait Islander peoples are advised that a photo in this research paper contains images/makes reference to deceased persons.

# Hazard-smart remote communities in northern Australia: community-led preparedness

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## Introduction

Communities in Arnhem Land, Northern Territory, are talking about a need to 'get smart' to live with natural hazards (Sithole *et al.* 2017a, Paton 2006). Though 'getting smart' is yet to be defined, there is growing interest to effectively plan for and live with natural hazards. Paton (2006) argued that when confronting a hazard, adaptive mechanisms are established. According to Buckle (1998), communities are central to effective natural hazard management and have an expectation to be involved. According to Hossain (2013) participation that involves people in defining their own action is crucial to develop effective plans. Further, the Department of Fire and Emergency Services (2016) recognised the importance of communities as critical elements to develop resilience. However, Sithole and colleagues (2016) found that remote communities did not feel they were being given opportunities to participate. Distrust develops when engagement is limited or not clear. This leads to subsequent challenges to the authority of emergency services organisations and relevance of plans that are put in place. This paper explores the opportunities available for effective engagement by remote communities in Australia's top end to engage in hazard preparedness.

Existing research in northern Australia suggests there is limited opportunity for communities to be active under current emergency management frameworks (Morley *et al.* 2016, Sithole *et al.* 2017a). Ronan and Johnston (2005, p.12) found that despite the increase in funding and efforts to build community preparedness, communities are rarely prepared for events. While there is recognition of the value of community-led initiatives, the real value of cultural approaches to emergency management and recovery is rarely acknowledged (Kenney & Phibbs 2014).

Community-led response is aligned with the priorities and strategies for disaster risk reduction as outlined in the *Hyogo Framework for Action 2005–2015* (UNISDR 2005) and also supported in the 'Keeping Our Mob Safe' (Remote Indigenous Advisory Committee 2007) that emphasised better engagement and communications with remote communities. People in remote communities see themselves as central to effective local emergency management. They expect to have a say in the development of policies and programs that develop community-led approaches as real alternatives.

Reviews of existing emergency plans point to a limited involvement by communities and tend to focus on delivery of services. This is supported by extensive consultation undertaken with regional Northern Territory Emergency Service and with Aboriginal community partners across northern Australia. Therefore, one of the important elements of this project was to work with elders of these communities to identify what an effective emergency services-community partnership arrangement would be like, based on empowerment and enhanced understanding of governance structures. A key issue for emergency management in remote communities is to have customary governance structures involved to develop and articulate community priorities and needs. Currently, very little guidance is offered on how this can be achieved.

Generally, remote communities are at high risk to hazards (Green, Jackson & Morrison 2009, Centre for Appropriate Technology Ltd 2016). Green (2006) found that although regional populations adapt to local climate conditions via a range of responses (including physiological, behavioural, cultural and technological), extreme events can stress populations beyond adaptation limits. According to Bird and co-authors (2013), remote communities in northern Australia are exposed to several types of natural hazards. Predictions for the future warn that the frequency and intensity of hazards will increase. Thus, getting emergency management and service delivery in remote communities 'right' is a priority.

## Methodology

Participatory-action research provides a useful approach to understand community issues and ideas about local action and to encourage grassroots participation. It allows communities to be meaningfully involved with the

active participation of members in defining their own solutions. Recognising the complexity of Indigenous communities and related belief systems it was important to identify the right group and the right people who have connections to places and stories and have capacity to undertake risk and response planning. This was possible by the involvement of Aboriginal people living within the community as researchers for the project. The study was undertaken by Aboriginal researchers who were trained to use participatory methods from the ARPNet Dilly Bag (Sithole 2012). They also spent extended periods in the community and gained detailed insights from a large group of people in the Ngukurr and Gunbalanya communities (Sithole *et al.* 2017a). This paper considers results of that work, which is supported by the Bushfire and Natural Hazards CRC. This project included scoping the resilience of remote communities in northern Australia, which was undertaken between 2014 and 2016 and involved consultations with communities within Arnhem Land. Results of discussions with target groups drew on the scoping study and are the basis to identify real and practical actions communities could put in place to ensure they start 'living smart' with hazards.

In each of the communities, focus group discussions and flow diagrams were the primary tools used to get people talking about their ideas for action. Consultations included groups of women, men, young people and older people. The group discussions considered two fundamental questions.

- What do you want to see happen when there is a disaster; what should the *community* do?
- What do you want to see happen when there is a disaster; what do you want to see the *government* do? ('government' means both the Northern Territory Government and the Australian Government).



Elders of the communities are eager to participate in the research to improve preparedness and resilience to local hazardous events. Note: Aboriginal and Torres Strait Islander peoples are advised that this photo contains images/makes reference to deceased persons

Image: Bevline Sithole

To facilitate discussion, community members wrote answers and ideas on cardboard. The results were clustered according to ideas and themes. Once the clusters were made, groups were asked to add more information or highlight important points with the use of probing questions. Once there was agreement, the diagram was copied to butchers paper. The resulting diagram was presented to some of the groups to check for accuracy in capturing ideas and opinions. Community members could consider the diagram and move the actions around and add more issues into the boxes. These ideas for action are presented in this paper and are the basis for developing a comprehensive community-led approach that aligns and links to the existing emergency management framework.

## Developing a comprehensive community-led program

Community elders asked the vital question, 'What we gotta do to survive them fires and cyclones?' that led to communities discussing practical actions and ideas. Other related comments were, 'We gotta be smart; start thinking and acting smart for our people'. Aboriginal people consider themselves to be very resilient. However, there was acknowledgment that community coping abilities have been weakened over the years but that people had a tremendous capacity to cope with harsh situations. Discussions revealed that the perception is that 'resilience' was regarded as something the government can do for people more than what people can do for themselves. Consequently, people want to change the perception to get others involved in actions to strengthen resilience.

There was also uncertainty about government assistance offered during emergency events. One elder in Ngukurr stated, '...we don't know what government is thinking, we don't know if the government would evacuate us?' (group discussion). Another person suggested that the government must loosen its grip on emergency management arrangements to enable meaningful community engagement.

*...the Government should not be taking more responsibility. We know our people and we know our land. We blackfellas mob should make our own plan for our people. Family still strong and we would look out for our people.*  
(Interviewee)

Frustrations with the current emergency management framework were evident. For example, '...we don't want them [government] to intervene; we gotta look after ourselves' (interviewee). Calls for communities to be more involved are growing especially because recent cyclone events have made people more aware and more fearful. Comments about the existing emergency planning framework suggest a need to improve the levels of local engagement.

*..... I have seen that emergency plan. They can't have meetings about it and just go away. Who are we meeting for, for people here? We have to talk to them. If plan for the people then they must talk to people, must have training for young fellas to do some of the emergency work, not just for picking rubbish. What outcome is that, who knows? There is no transparency.*  
(Interviewee)

The community's call to action is not new. There are several initiatives where government and non-government organisations are working with communities to achieve improved engagement. However, this requires government to shift from 'delivery' to 'participation' in a genuinely collaborative way. One respondent explained, '...emergency planning needs to have decisions by clan leaders front and centre when they are putting plan together; they should plan for whole country' (including outstations) (group discussion).

The experience of Cyclone Lam in February 2015 played an important role in making people reassess their vulnerability. People who previously felt comfortable think they are not as safe as they thought.

Focus group discussions, key interviews and flow charting activities identified the actions that the community felt were important to effectively respond to hazards. Different diagrams compiled by the groups were merged into a composite model for a 'hazard-smart' emergency management framework (see Figure 1).

Some groups prioritised certain actions more than others depending on their interest and experience. Community relief was a significant issue for women, especially access to food, while elders and men were concerned about the adequacy of infrastructure. This was relevant because what infrastructure is in place does not really consider the cultural requirements that affect groups when they congregate or the conflicts that may exist between clans.

### Hazard warning system

Aboriginal clans have intimate knowledge of country and of the hazards they face. However, this knowledge is not always publicly known nor uniformly available. Elders indicated that knowledge about hazards and the signs to help predict natural events exists and that some communities still use and depend on this knowledge. However, young people tend to discount this knowledge.

Community participants, especially the elders, felt that local knowledge of hazards is undervalued and underused. Clan groups need to consult and agree on what information should be shared and who should be identified as the holders of this information.

A hazard warning calendar can be produced that shows the signs in the environment to look for, when people should start looking for the signs and how to read and understand what the signs mean. Signs include the strength of the wind, changes in birdsong, clouds, plants especially fruiting and flowering patterns and



Figure 1: Model of a community-led emergency management framework for hazard-smart communities.

the behaviour of animals and their movements. Elders indicated they could smell changes in the air. Developing a community hazard calendar would complement existing methods of communicating hazardous events.

### Rapid response capability

At times when communities need to respond to a dangerous event, there is a feeling that local organisations and governments step in and take over. One participant stated, 'they leave us in the dust'. Aboriginal people felt they lacked access to the tools and facilities they need to use, '...we don't get to hold that key'. It was apparent that there is 'not much trust between us'; between communities and service providers. In addition, some people took offence to the allocation of menial tasks to skilled local people, '...don't let us just pick the rubbish; we can do more'. Frustrations with the current emergency management framework were evident in most communities. Participants stressed the importance of government to appreciate and acknowledge capabilities within communities. In each remote community there are individuals who help out and these individuals and the rangers should be seen as a basis for constituting overall community capability. There was a suggestion to create a database of skills available in the community so that local capacity is visible. It would also identify skills gaps as areas for development. Suggestions to go further and create a properly resourced response group complete with equipment and training were repeated.

First responders in communities are crucial during hazard events to help people, especially the vulnerable and those who are suffering from addiction who may

be under extreme stress. Plans for pet care is another important consideration given the high levels of pet ownership. Several groups exist that could be involved in this role, including ranger groups. At the workshop in Ngukurr, communities suggested that capability, if developed, could be a resourced through payments made by the Northern Territory Government. This proposal could be considered against existing arrangements for volunteers that has been the favoured method of delivery to date. In Ngukurr and Gunbalanya, volunteer groups were not functioning.

### Inventory of infrastructure

An inventory of suitable infrastructure including houses is an important part of knowing local capacity. The notion that shelters are adequate is problematic as some people are constrained by inter-clan conflicts and cultural relationships and may not have access. Existing policies relating to shelters assume the community to be a harmonious unit. This ignores the fact that some communities are highly fractured and it is difficult for people to share common spaces. In those situations, families stay at home rather than go to shelters. Many people also live in multiple households as part of their family 'obligation to help out'. These people face situations of overcrowding and the stresses of living in multiple households. In addition, outstation and homeland families anticipating a hazardous situation may move into communities with other families, which means the period of the emergency event is longer than is generally recognised by government planners. Issues with overcrowding and accommodation need to be part of a rapid response, including that clan leaders

and elders have information about where things are and what facilities and resources exist. Currently, where such information exists, it has been inaccessible to the community or people in outstations. The study by the Centre for Appropriate Technology Ltd (2016) provides a detailed assessment of this situation in relation to outstations and homelands in the Northern Territory.

## Community relief effort

Participants discussed ideas to develop a relief fund that could be created out of contributions from royalties or other funds the community can access. Women suggested making a list of individuals who can donate resources like food and other necessities. This could be distributed to clans and the community kitchen. The availability and adequacy of food remained a considerable issue. During times of turmoil, food can be scarce and is more expensive and families cannot supplement supply with traditional hunting and collecting. Some respondents mentioned that Yugul Mangi Corporation had a good model for supporting the community and that it could be an example for others.

## Rapid damage assessment group

Communities want to be able to do rapid assessment of their vulnerabilities and needs. Respondents stressed the importance of recognising and, where necessary, developing research capability where groups like the Aboriginal Research Practitioners' Network (ARPN) or Yalu Researchers (Galiwinku) are present. This would involve simple participatory tools and training some of the researchers to conduct rapid assessments. Quick assessments would inform timely decision-making through leadership levels in the communities as well as in command centres for disaster management.

## Protections through ceremony

Aboriginal people see a connection between natural hazards and their occurrence. Culturally based behaviour related to caring for country includes conducting ceremonies related to the occurrence and intensity of hazards (Buergelt *et al.* 2017). Thus, there is a belief that current conception of 'caring for country', as defined by governments, researchers and others, is too restricted. There must be recognition of ceremony as a management tool and that the continued presence of Aboriginal people on country is itself an effective tool to manage hazards (Sithole *et al.* 2017a).

In some remote Indigenous groups there is loss of knowledge about how to respond, 'sing' and control events. A disrupted connection to country has weakened the relationship with the land and produced an imbalance that causes such events to happen. In some places, Indigenous groups do not look after country. Respondents indicated they felt a deep sense of responsibility that the size or severity of hazards is related to their failure to meet their obligation on country and to manage it so it is healthy. There was general

acknowledgment that there is limited awareness of 'old ways' and 'old knowledge', but there is a desire for 'old ways' to be revived to create strong communities that are resilient.

*...we don't know the old ways, we are confused and we panic. Old people don't know anymore. My grandparents used to stay in Wuyagiba, when cyclone come they knew what to do, where to run, they would go to that sandy hill and mangroves, also they had songs and they would sing and that river [would] go down. People used to try and get them to come to Numbulwar, but they said no they needed to control that wind with song, and they did it. We were taken away, separated. We were not allowed to speak in language or go with our parents. I didn't learn anything from my people because the missionaries were strict. They forced you to eat fermented yeast if you spoke language.*

(Interviewee)

Aboriginal people feel that government and 'outsiders' do not have a deep understanding of their connection to country and how the strength of that connection affects the way nature behaves (Buergelt *et al.* 2017). Consequently, it is important to acknowledge the roles of ceremony as a pathway to preparedness.

## Family and community bonds

Disasters affect people to varying degrees. Families supporting other families is crucial during difficult times. Interviews revealed that people felt family structures were weak but, during emergency events, the family support system still worked to some degree. However, the lack of or limited knowledge of relationships and cultural ties makes this a challenge. For example, a respondent described the situation:

*...family structure is weak, but it is still there, it's a big question mark there because we have young people on ganja, nobody is interested, but they are not helping, they can a bit but they are not strong. We have to share our food, but the bonds between families very weak. When the community was small, it [relationships] was controllable, but now the community has gone bigger and is out of hand, there is no respect for elders.*

(Group discussion)

While the scoping study found that disasters bring families and Indigenous groups together, many—especially older people—observe a general decline in the strength of relationships within and between families and within the community. Consequently, obligation to family, kin and community is not as strong as it used to be. Ceremony was regarded as a key component to connect families and clans, but many people do not attend. There is despair about the state of families and their value in building resilience. Respondents felt the Northern Territory Government could create conditions where Aboriginal people can build and consolidate their families.

## Decision-making pathways

Following workshops at Yellow Water in Ngukurr, the ARPNet worked with senior men from Arnhem Land to understand traditional leadership and decision-making (see Sithole *et al.* 2017b). At a focus group in Darwin, 15 elders from central and west Arnhem Land agreed that the responsibility for management and decision-making rests in shared responsibility between traditional owners, Mingiringiri, Djungkayi, clan groups, land managers and rangers. However, there was a variance between communities in terms of institutional roles, interactions and dynamics. According to Sithole and colleagues (2017b), emergent ranger groups have become proxies for interaction between agencies and communities and, in some instances, have become a 'de facto community'. This raises questions about identifying the most effective way to engage with communities in disaster situations. Is it clan and family groups or ceremony groups, or all groups? Consequently, it is possible that there are multiple decision-making pathways for different issues. Aboriginal people are required to fulfil complex interactions in specific roles related to decision-making. When the elders and knowledge holders described the system, it was clear there is a disconnect between Aboriginal communities and conventional emergency management systems. It was also clear that the presence of a formal emergency management framework has not always intersected positively with traditional frameworks.

## Discussion

Building community-led emergency management is not new (Gil-Rivas & Kilmer 2016). However, there is no clear directions for people at the grassroots level on how engagement should be done. Paton and colleagues (2013) underscore the importance of bringing together the complementary capabilities of communities with those of other actors. Consequently, it opens the way for parallel development of ideas to improve the safety of communities; where one can talk about mainstream approaches and community-led approaches separately and unconnected. Yet there is scope for connecting the two. The model outlined in this paper presents ideas on where collaboration between the two can occur and what form that collaboration can take. For example, the rapid response capability is aligned with the existing provision to create volunteer groups in communities, while the leadership group can be linked with decision-makers in the current plan. While there is scope for collaboration and possible integration of the two plans, 'being smart' will get a plan in place to keep the community safe and create relationships with government so that parallel plans can be integrated and emergency management strengthened.

The challenge remains about how to get government to cede control for planning and executing emergency arrangements enough to allow communities to be involved. Aspects like strengthening family bonds or

conducting ceremony are regarded as essential pillars to build long-term resilience at community level but fall outside the remit of emergency management. Getting government to the table means working hard to transform mindsets and to embrace a broader, more sustainable approach to emergency management; one that has bigger outcomes in the long term. The Remote Focus initiative of Desert Knowledge Australia (DKA) (2008) suggests that government faces significant challenges in remote Australia, with implications for resource industries, environmental management and Indigenous issues (DKA 2008, McRae-Williams & Gerritsen 2010). DKA recommended that utmost importance should be placed on better engagement with, and empowerment of local communities in determining their own future, while structuring this within multiple tiers of government. The push by communities wanting a shift from the traditional service model of government is growing stronger. Within the framework of this project, there is scope to see if the elements identified can develop a comprehensive integrated model.

This paper has drawn on work already undertaken by the Bushfire and Natural Hazards CRC and related studies to highlight and discuss potential elements of the community defined framework for hazard preparedness. This new approach advocates for a 'more nuanced community-led approach'. The scoping study showed that current engagement models barely address the expectations and needs for deeper and effective engagement. Planning processes that local involvement often become dominated by technical experts like professional planners, engineers and biologists (Berke & Campanella 2006). As a result, plans that do not draw on or benefit from local knowledge may be inconsistent with local values, needs and customs. Twigg (2007) argues to focus on what communities can do for themselves and how to strengthen their capacities, rather than concentrating on their vulnerabilities or their needs in an emergency.

## Conclusion

No community can ever be completely safe from natural and man-made hazards. This paper suggests that communities do not seek to be completely safe; they seek to be disaster smart. Frameworks where community competence is used, where decisions are informed by quick assessment tools and where communities feel they can respond to situations is being disaster smart. Crucially, awareness about current management frameworks can incorporate latent Aboriginal governance structures and lore. Approaches are worth exploring that respect protocols and practices, where 'message sticks' are passed on from one stakeholder group to the next and the whole community acts in concert and draws on each other's strengths. The importance of linking a community-led framework with existing emergency management frameworks is a significant step. While alignment with emergency management systems is possible, it requires investment

in building trust and understanding of how Aboriginal communities work and are structured. What is clear is that such an approach would need to be accompanied by changes in the way governments interact and deliver emergency management practices.

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