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ABSTRACT

Australia's *National Strategy for Disaster Resilience* (Attorney-General's Department 2011) has a central principle of shared responsibility that has influenced the policies and practices of Australia's emergency management sector. However, the notion of 'shared responsibility' remains controversial. As part of a research project examining aspects of shared responsibility, seven international authorities in natural hazard mitigation policy were interviewed about their understandings of hazard threats, shared responsibility and community resilience in their own countries. The aims of this study were to analyse these international views to clarify what constitutes shared responsibility as a policy to develop resilience and to better understand how it might operate effectively. While there were differences in perspectives compared with the Australian policy, the centrality of the role of government agencies was acknowledged by all and the importance of community education was emphasised by some. Several aspects of shared responsibility were considered problematic, especially relationships between government agencies and community groups. Findings point to shared responsibility involving government and community organisations being viable if they are *collaborative* endeavours. A framework is suggested to assess the levels of collaboration in such endeavours.

Shared responsibility, community engagement and resilience: international perspectives

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Introduction

Following loss of life and property during the 2002–2003 Australian bushfire season, the Council of Australian Governments commissioned a national inquiry into bushfire mitigation and management. A major theme of the resulting report (Ellis, Kanowski & Whelan 2004) was that people had to learn to live with bushfire. One of eight recommended national bushfire principles was that of 'shared responsibility':

A philosophy of responsibility shared between communities and fire agencies underlies our approach to bushfire mitigation and management. Well-informed individuals and communities, with suitable levels of preparedness, complement the roles of fire agencies and offer the best way of minimising bushfire risks to lives, property and environmental assets'. (p.xix)

Severe natural hazard events involving loss of life and serious economic costs occurred in Australia over the following six years, including bushfires (South Australia in 2005, Victoria in 2006, Western Australia in 2007, Victoria in 2009), floods (New South Wales in 2007 and 2008; Queensland, New South Wales and Victoria in 2020) and cyclones (Queensland in 2006).

In November 2008, the Ministerial Council for Police and Emergency Management—Emergency Management had agreed that the future direction for Australian emergency management should be based on achieving community and organisational resilience. Subsequently, the *National Strategy for Disaster Resilience: building our nation's resilience to disasters* (Attorney-General's Department 2011) was published, the Forward noting that:

Application of a resilience-based approach is not solely the domain of emergency management agencies; rather, it is a shared responsibility between governments, communities, businesses and individuals...While the Strategy focuses on priority areas to build disaster resilient communities across Australia, it also recognises that disaster resilience is a shared responsibility for individuals, households, businesses and communities, as well as for governments'. (p.III)

The strategy gave impetus to fire and land management agencies in all states and territories to establish programs to enhance levels of natural hazard mitigation in at-risk communities. This involved communities implementing safety-related preparatory activities (e.g. Department of Environment, Land, Water and Planning 2017, 'Working together to protect community').

There has been widespread adoption of shared responsibility as a policy in the emergency management sector, especially by response agencies. However, 'shared responsibility' has been a contested concept in several respects (see Lukasiewicz, Dovers & Eburn 2017, McLennan & Eburn 2015), notably about what should constitute appropriate processes, or mechanisms, for sharing responsibility between government and community groups. McLennan and Handmer (2012) identified seven alternative categories of responsibility-sharing mechanisms (p.10). A theme emerging is that shared responsibility is intended to promote self-reliance in communities and involves collective action to achieve mutually agreed goals.

Criticisms of the shared-responsibility approach include:

- that it shifts responsibility away from government where, it can be argued, it rightfully belongs and onto individuals and social institutions, which may be ill-equipped to shoulder the responsibility (Cretney & Bond 2014, Tierney 2015, Welsh 2014)
- that it is not 'fit-for-purpose' in an increasingly complex world of social and ecological change driven by anthropogenic global warming and climate change (Ensor, Forrester & Matin 2018, Ingalls & Stedman 2016).

Ongoing discussion about how to realise shared responsibility in preparation for and following disaster events (e.g. Box *et al.* 2016, Cretney 2018) suggests that further discussion and analysis of what shared responsibility means and how it can best operate in practice is needed.

A joint study involving Australian university researchers, emergency services organisations and land management agencies commenced in 2015. This involved interviewing community members and response management personnel about shared-responsibility practices related to building community resilience. The study considered social construction of memory and place in locations where repeat disaster events occurred (Reid, Beilin & McLennan 2018). A component of the study involved asking a sample of overseas experts in the field of natural hazard risk mitigation policy and practice to describe their understandings of key natural hazard threats, shared responsibility and community engagement and resilience activities of their countries. This provided analysis of other experiences to help clarify what constitutes 'shared responsibility' as a policy to develop community resilience and to better understand how it might operate effectively. Responses are summarised in this paper and considered in relation to shared responsibility and community resilience issues being discussed in Australia.

In February 2019, the New Zealand Ministry for Civil Defence and Emergency Management released a final draft *National Disaster Resilience Strategy*.¹ The document makes no mention of shared responsibility. However, the stated objectives include 'enabling and empowering individuals, households, organisations and businesses to build resilience; and cultivating an environment which promotes a culture of mutual help'.

Method

Informants

Identifying 'experts' inevitably involves a degree of subjective judgement. Potential participants were selected using the criteria that:

- they had presented at relevant international natural hazards research and policy forums, especially the International Symposium on Society and Resource Management and International Association of Wildland Fire conferences
- they had published technical reports and papers in relevant journals about natural hazards and the environment.

Advice from colleagues was sought and, during 2016, seven interviewees from a range of countries were invited to participate in interviews (with assurance of subsequent anonymity) via video link. There were four women and three men; four were university researchers, two were from government land management agencies and one was from a landscape consulting group. Countries included five European countries, the Republic of South Africa and the United States of America (USA). None of the seven countries represented had national policies for disaster management that emphasised shared responsibility between government and communities that resembled the policy outlined in Australia's national strategy document.

Interview guide

A semi-structured interview guide was prepared with introductory questions about the participant's organisation and the types of natural hazards they had been involved in. The guide included six questions about:

- a. the most significant natural hazards that had occurred in the country since 2005 and issues that potentially hindered responses to these events
- b. the most important lessons learnt
- c. policies and practices about shared responsibility and community involvement in natural hazard risk mitigation

¹ New Zealand Ministry for Civil Defence and Emergency Management 2019, *National Disaster Resilience Strategy*. At: www.parliament.nz/resource/en-NZ/PAP_84937/5f64afb39838f03b43f943b88cb5d397e199b422.

- d. effective means to involve communities through shared responsibility
- e. current policies for developing community resilience
- f. current indicators of community resilience.

Informants were invited to make any other clarifying comments they wished about involving communities to promote resilience.

Procedure

The research was approved by the University of Melbourne Human Research Ethics Committee, #154899.5. Informants were emailed a copy of the interview guide several days before their interview. Interviews were conducted via Skype and were audio recorded. Interviews took between 20 and 40 minutes. Relevant sections of the recordings were transcribed and themes were identified and summarised.

Results

The themes discussed by informants in response to the questions are summarised in Table 1. Informants described a range of hazards with wildfire being most mentioned followed by floods. Severe wildfire threats were described by the informants from Spain, Portugal and Greece as being relatively recent developments and they linked these to a lack of land management policies, exacerbated by climate change and lack of community awareness of wildfire risk.

The role of governments and their agencies in hazard management was commented on by all interviewees though perspectives differed. For the European informants, governments were viewed as having primary responsibility for protecting communities. However, governments were judged to be falling short of meeting these responsibilities due to absence of appropriate land management policies, inadequate response capabilities and failures to educate communities effectively about hazards. The informants from the Netherlands and the United Kingdom regarded their emergency management agencies as disempowering communities by promoting dependency on government services. The USA informant felt there was a paternalistic approach by government agencies that divided (rather than shared) wildfire safety responsibility. For example, landholders are responsible for their properties before a fire and authorities take over responsibility for evacuation of communities during a fire. The informant from South Africa indicated that government had largely abrogated its community safety responsibilities.

Accounts of existing policies to promote community involvement and shared responsibility were varied. Four informants (#1, #2, #3, #4) described provision of information to communities about risk and mitigation. Three informants (#4, #5, #7) were critical of policies that largely limited community involvement. These, together with the South African informant, indicated communities needed to be more actively involved in

their own protection with appropriate support from government agencies.

Responses to the questions about policies related to community resilience development and indicators of community resilience were varied and suggested, overall, that community resilience to natural hazard threats had not been a high priority in most of the countries represented. Four informants (#1, #2, #3, #4) viewed risk awareness as being imperative. Three informants (#2, #6, #7) described the need to adequately resource communities. Two informants (#3, #5) noted the importance of community protection plans. Two informants (#6, #7) regarded networks and self-organised groups as important with an implied need for these to be fostered by authorities.

Discussion

This study involved a select number of informants recruited as a relevant sample of convenience. The accounts about emergency management policies and practices, and shared responsibility and community resilience, in the countries represented should be regarded as suggestive rather than definitive.

A significant finding was the importance given to community education to raise levels of risk perception in at-risk communities. Response agencies in Australia also rely heavily on the provision of information. However, research suggests that simply providing residents with information about risk and ways to mitigate it is of limited effectiveness (e.g. Paton 2003). McLennan and colleagues (2015) discussed the need for emergency management agencies to continually evaluate and develop risk-related information in ways that engage communities and motivate them to take preparatory action.

This study showed that none of the seven countries had national policies for disaster management that emphasised shared responsibility between government and communities as a basis for developing community resilience. However, several of the issues associated with shared responsibility that have figured prominently in critical discussions of the policy were raised as potentially problematic by some informants (Lukasiewicz, Dovers & Eburn 2017, McLennan & Eburn 2015, McLennan & Handmer 2012, Singh-Peterson *et al.* 2015). The most notable of these issues was the contradiction inherent in disaster management policies that made government agencies legally responsible for public safety, alongside expectations that communities take responsibility to mitigate their own risks. Another issue was that government agencies were the custodians and dispensers of knowledge, funds and resources necessary for effective disaster management. A third issue was the doubt that government agencies were capable of effectively protecting communities that were not involved in hazard mitigation in the face of increasing threat from extreme weather events associated with climate change. Overall, four of the informants (#1, #5, #6, #7) expressed the need for mechanisms or processes by which agencies and communities could act jointly in order for communities to be protected

Table 1: International informants' opinions about natural hazard issues, shared responsibility, community engagement and resilience.

Global Region/ Country	(a) Serious natural hazard events, 2005-2016; Issues hindering response	(b) Important lessons learnt	(c) Community involvement and shared-responsibility policies and practice	(d) Effective means to involve communities in shared responsibility	(e) Current policies for developing community resilience	(f) Indicators of community resilience
Europe - Spain (#1)	Wildfires 2005 and 2016, earthquake 2011, flooding 2012. Community lack of risk awareness and preparation, and inappropriate land use planning.	The need to have better inter-agency and community cooperation, preparation by response agencies, and community education.	Insufficient at the national level. There are some good local practices involving vegetation management.	Provided through legislation, grants and subsidies.	Community awareness of natural hazard risk is very low. Agencies are aware of the problem. Some municipalities are addressing this for flood risk.	None especially evident. Overall, the community resilience level is very low.
Europe - Portugal (#2)	Wildfires 2003, also flash floods. Lack of preventive action: absence of management of uncultivated land.	The current policies are not working in relation to wildfire. They need to be changed to reduce the flammable biomass.	Provision of education in schools from as early as possible as well as about fuel management practices for at-risk communities.	Provided through education programs about mitigation, preparation and responding.	Supporting environment and civil protection policies. Allocating adequate firefighting resources to communities.	A community that is educated about its risks and is ready to act to mitigate the effects of a possible disaster event.
Europe - Greece (#3)	Wildfires in 2007 and 2009. National authorities and rural communities were not prepared for such events. Unprotected interface zones (forest/urban) had been allowed to develop.	Need to harmonise terminology and national fire danger databases. Need for public awareness campaigns about fire risk. Need to commit to adequate budgets as well as to harmonise conflicting policies; clarifying agency responsibilities.	Provision of documented information to communities about the practical steps they can take to protect people.	Provided via community awareness campaigns and education about fire danger and mitigation.	Provide information to local communities about effective wildfire prevention, protection and preparedness.	Development of community fire-protection plans with active participation by residents, which take account of past fire history and emerging risks.
Europe - Netherlands (#4)	Wildfires 2014, floods 2014 and 2016. 'Short-termism': during recovery, inattention to mitigation of future threats. Lack of risk awareness at the community level.	There is insufficient attention to the spatial components of natural hazard risk, especially flooding. There is a need for more green spaces as there is too much paved areas.	The government is responsible for civil protection. Householders are responsible only for being prepared to evacuate with their 'emergency packs'.	Provided through information to vulnerable groups. Communities rely too much on government agencies to tell them when to evacuate.	Provide people with information about local risks.	Information is readily available about likely damage from hazards at the local level.

Global Region/ Country	(a) Serious natural hazard events, 2005-2016; Issues hindering response	(b) Important lessons learnt	(c) Community involvement and shared-responsibility policies and practice	(d) Effective means to involve communities in shared responsibility	(e) Current policies for developing community resilience	(f) Indicators of community resilience
Europe - United Kingdom (#5)	Wildfires 2003, 2010, 2011 and 2015. Serious flooding 2013–14. The lack of a standard incident management system across emergency services agencies.	The need to involve and empower local communities. People doubt they can do anything and so expects emergency services personnel to do everything. There is a culture of dependency on government.	Very limited. The UK Cabinet Office is responsible for civil protection. Regional councils and Parish councils are required to have an action plan for regional and local communities.	Provided by finding someone who cares about hazard preparedness—a ‘champion’. Without one, nothing will happen.	Present community action plans to interest groups in the community. The major obstacle is cultural where local government is expected to provide services; communities don’t want to take on responsibilities.	The community has a plan, there are robust networks among stakeholders to communicate with emergency services organisations; businesses have disaster plans.
Africa - Republic of South Africa (#6)	Frequent droughts and floods and lack of water storage capacity. The limited capability of local weather forecasting. Stakeholders being in ‘silos’. Elected officials may be corrupt and lack knowledge of local issues.	The importance of detailed and comprehensive post-event data for future planning. Poorer communities struggle with day-to-day survival issues.	At present, it is top-down, limited mostly to the distribution of leaflets and conducting a few workshops.	Allowing communities to identify their risks in relation to everyday issues. Supporting community initiatives and providing experts to show how to reduce flood risks.	There is the <i>National Disaster Management Act 2002</i> and framework for national, provincial and municipal levels. But municipalities may not receive the necessary funds to do mitigation activities.	Evidence of self-organising groups engaged in actions such as clearing-out storm water drains.
North America - USA (#7)	California wildfires 2007. The short-term focus is on quick suppression of fires under moderate condition. This increases the long-term risk of severe fires in extreme weather conditions.	Community views must be taken into account. Incident management teams brought in from elsewhere may not be able to make use of local networks and knowledge.	At present, instead of shared responsibility, there is divided responsibility. Before a fire, the public is expected to be responsible for their landscape. During a fire, authorities are expected to be responsible for evacuation.	Provided by talking to members of communities and listening. Emphasising the ‘sharing’ of shared responsibility; ‘we are all in this together’. It is important to support communities by providing resources.	It is essential to provide communities with the resources to support capacities that underlies resilience. The ‘information deficit theory’ is false.	Conversations among landholders, organisations and agencies. Processes for making decisions about safety, taking into account the interests of stakeholders for vegetation management.

more effectively, rather than have a situation in which members of communities were expected to do as they were told by authorities.

In their analysis of shared responsibility, Lukasiewicz and co-authors (2017) discussed the tension inherent in the central role given to government alongside the emphasis on community empowerment. Their conclusion: '...orients disaster resilience towards partnership and collaboration between and within governments, businesses and community organisations' (p.311). As noted, a theme of collaboration as a desirable process for sharing responsibility between government and communities was suggested by the international informants.

There is also extensive literature in the area of public administration and civic engagement discussing issues of collaboration between government and citizens (e.g. Boxelaar, Paine & Beilin 2006, Johnston 2010, O'Flynn & Wanna 2008). However, relatively little attention has been given to what characterises collaborative relationships between government and community groups within the emergency management research, with notable exception of work by McLennan (2018).

It appears that the majority of community protection endeavours in Australia involving shared responsibility have arisen in large part from initiatives by government. It is important for the parties to understand the nature

and level of collaboration involved in any notional shared responsibility agency-community group collective action. Thomson and colleagues (Thomson & Perry 2006, Thomson, Perry & Miller 2007) proposed a five-dimensional framework for characterising the level of collaboration involved between organisational partners (see Table 2). Their research involved community-based organisations and the framework shows that a government agency will usually be the more powerful partner in a relationship by virtue of its access to information and material resources. The framework also tests a principle that both parties should ensure that their own interests are respected and advanced jointly.

Conclusion

It is important that parties involved in a shared-responsibility endeavour to collaborate in order to promote community disaster resilience. They may benefit from using the framework outlined in Table 2 to 'take the temperature' of their (presumed) collaborative relationship. A representative survey of views held by emergency management policy makers and practitioners within Australia about shared responsibility and agency-community collaboration would make an interesting contribution to further discussions.

Table 2: Suggested collaborative shared-responsibility relationship indicators.

Dimension	Indicator
1. Joint decision-making	Agency and community organisation take each other's opinions seriously when decisions are made about collaboration activities.
	Agency and community organisation brainstorm together to develop solutions to mission-relevant problems facing the collaboration.
2. Administration	Agency and community organisation understand each other's roles and responsibilities in the collaboration.
	Agency and community organisation meetings accomplish what is necessary for the collaboration to function well.
	Agency and community organisation agree about the goals of the collaboration.
	Agency and community organisation tasks are well coordinated.
3. Autonomy	The collaboration does not hinder either party from fulfilling its own mission.
	Neither party's independence is affected by having to work with the other on activities related to the collaboration.
	Neither party feels conflicted about trying to meet their own, as well as the collaboration, expectations.
4. Mutuality	Both parties have combined and used each other's resources so both benefit from the collaboration.
	Both parties share information that will strengthen their operations and programs.
	Both parties feel that what they bring to the collaboration is appreciated and respected by the other.
	Both parties believe that their own goals are achieved better working with the other rather than going it alone.
	Both parties work through differences to achieve win-win solutions.
5. Trust	The representatives of both parties believe that the representatives of the other party are trustworthy.
	Each party can count on the other to meet its obligations in the collaboration.
	Both parties believe that it is worthwhile to stay and work with the other rather than terminate the collaboration.

Source: Thomson, Perry & Miller 2008, Table 6.1, p.101.

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