

The contemporary policy approach to major disasters and emergencies needs to evolve from the traditional focus on investments in response and recovery to investments in mitigation activity. This change is encouraged by policy enablers such as the National Strategy for Disaster Resilience and the Productivity Commission inquiry into natural disaster funding arrangements. As the Productivity Commission observes,

“Current government natural disaster funding arrangements are not efficient, equitable or sustainable... Governments over-invest in post-disaster reconstruction and under-invest in mitigation that would limit the impact of natural disasters in the first place. As such, natural disaster costs have become a growing, unfunded liability for governments.”

Under current arrangements, government funding for natural disasters favours disaster response and recovery. There is broad agreement that the existing approach is no longer adequate or sustainable given the frequency, intensity and consequences of significant events. Furthermore, the frequency and intensity of such events is likely to change, potentially resulting in greater impacts and higher demands on the emergency management sector.

Rebalancing government investment across disaster mitigation and recovery supports increased mitigation activity, strengthens community resilience and helps to reduce the impact of disasters on Australian communities. Investment in mitigation strategies could include:

- activities that physically protect communities and/or harden infrastructure
- land use planning and the built environment
- understanding future risk and resilience posed by trends in demographics, population and climate change
- development of resilience and vulnerability indicators and the ability to measure changes in resilience
- risk communication and warnings
- resilience education and research.

However, there are barriers to increased focus on mitigation activity. As noted in the Productivity Commission report:

“... government action is not always in the best interests of the community (government failure). Research shows that natural disaster policy is beset by political opportunism and short sightedness (myopia), which biases how funding is allocated to natural disaster risk management. To create incentives for better risk management, natural disaster policy and funding arrangements need to clearly define roles and responsibilities (and how these relate to private and public risks), and have strong, transparent and credible commitment mechanisms so that governments avoid ad hoc policy responses, myopic policy settings and disincentives for private risk management.”

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 economics and policy summarises the outcomes of one of these workshops and poses questions as a guide for a national research agenda in natural hazard emergency management.



INVESTING IN LONG-TERM BEHAVIOURAL CHANGE

Developing a better understanding of the economic costs of disasters and their risks, and the risk-reducing benefits of treatments will build a more compelling case that improves the likelihood of risk treatments being appropriately resourced and implemented.

Furthermore, a better understanding of the economic and policy environment within which decisions are made, and improved understanding of how risk information is perceived and understood by decision-making bodies, will allow risk-reduction proposals to be presented in a more compelling manner. In turn, this will increase the likelihood of resourcing and implementation support.

Key questions that support the understanding of the value of mitigation investment are:

- **How can we quantify the long-term costs and benefits of mitigation investments across hazards?**
- **How can emergency events and climate change be used as an opportunity**
 - **to further develop and expand the emergency management narrative when there is a heightened level of interest, to government, business and community, to prepare for and mitigate disasters?**
 - **to build mitigation activity directly into recovery processes?**
- **How does investment in changing behaviour at different levels, including political, government agencies, business, community and individual support improving disaster resilience?**
- **How can we encourage new partnerships and enhance existing partnerships between government, business and community to deliver change?**

Australian communities face multiple natural hazards, such as bushfires, cyclones, floods, heatwaves and earthquakes. Under current climate change forecasts the hazard risk profiles of all areas are expected to change in both frequency and intensity. Understanding the hazard potential and risk is critical to the resilience of communities, businesses and government and a key feature of the shared responsibility policy platform in the National Strategy for Disaster Resilience. A clear understanding of exposure to hazards and the likelihood and potential consequences informs all mitigation activities be they community, government or businesses.

- **How can hazard information be better communicated to inform mitigation activity at personal, community and government levels?**
- **How can technology be used to present multiple, diverse sources of data together in a coherent fashion and sensibly presented to stakeholders?**
- **How can advanced data analytics be used to support targeted communication to promote personal and community risk mitigation activities?**
- **How can we capitalise on the experience of emergency events to heighten interest in government, community and business to prepare for and mitigate natural hazards?**

Applying a resilience-based approach should not be the sole domain of emergency management agencies. Many of the actions needed to improve Australia's disaster resilience sit well outside the emergency management sector. The ability to prepare for, respond to, and recover from disasters relies on capabilities and policies across a range of sectors and across all levels of community, business and government. To 'mainstream' emergency management, then, is to consider how all sectors interact in order to enhance disaster resilience support existing and developing capability in this area.

Key questions that support emergency management objectives to influence whole of government priorities include:

- **What should be the ultimate objectives of emergency management policy and how can they be measured?**
- **How can emergency management sector priorities be moved into whole of government decision making for resource allocation, rather than focussed on agency specific responsibilities?**
- **What are the tools needed to demonstrate the benefits and costs of investment in emergency management as part of whole of government decision making?**



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 from 2015-2017.

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 Australia and New Zealand Emergency Management Committee (ANZEMC) RAAMS Sub-committee. The RAAMS hosted a workshop with key natural hazard stakeholders in Canberra and by video conference in all other Australian states on 8 March 2016.



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