HAZARD NOTE

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TOPICS IN THIS EDITION | DECISION-MAKING | POLICY | RISK MANAGEMENT

UNDERSTANDING WHAT RISK IS YOURS – AND WHAT TO DO ABOUT IT

ABOUT THIS PROJECT

This research was conducted as part of the *Mapping and understanding vulnerability and risks* project. The framework described in this *Hazard Note* is designed to support better identification of risk ownership and understanding of strategic decision making in the emergency management sector.

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Above: THIS RESEARCH HAS IDENTIFIED THREE DECISION MAKING AREAS ACROSS WHERE RISK OWNERSHIP CAN BE ASSESSED. PHOTO: DAVID BRUCE, BUSHFIRE AND NATURAL HAZARDS CRC.

SUMMARY

Australia is experiencing new risks from natural hazards, and with these increased risks comes greater financial costs. Ownership of these risks is at two levels - the ownership of values (assets) and the ownership of risk management activities related to natural hazards – and can be owned by individuals, groups or institutions. It can vary from a single owner, to shared ownership, to no owner at all.

This research has identified three decision making areas across where risk ownership can be assessed as part of strategic decision making. They cover the actual values at risk from natural hazards, the impacts, consequences and risks arising if those assets are affected, and strategic risk management actions.

Key findings show that there is currently an imbalance of risk ownership between public and private sectors. More coordination is required between different groups and institutions, with no long term policy, plans or strategies for environmental or social recovery from natural hazards identified. Significant gaps currently exist in knowledge for mapping and identifying risk and its consequences.

To assist the emergency management sector to best understand the risk they own, and what can be done to reduce it, a framework has been developed. This framework aims to enable risk practitioners and policy makers to act decisively and collaboratively in the present, whilst thinking and planning for the future.

CONTEXT

Risk ownership is a critical aspect of managing risk, especially systemic risks like natural hazards. If a risk is not owned, it is unlikely to be well managed, and may result in avoidable loss and damage.

BACKGROUND

Australia's institutions – its three levels of government, the community and business and industry – are well-positioned to respond to natural hazard events when they occur. They are less well positioned for the strategic management of the activities such as prevention, preparedness, resilience and recovery that surround these events.

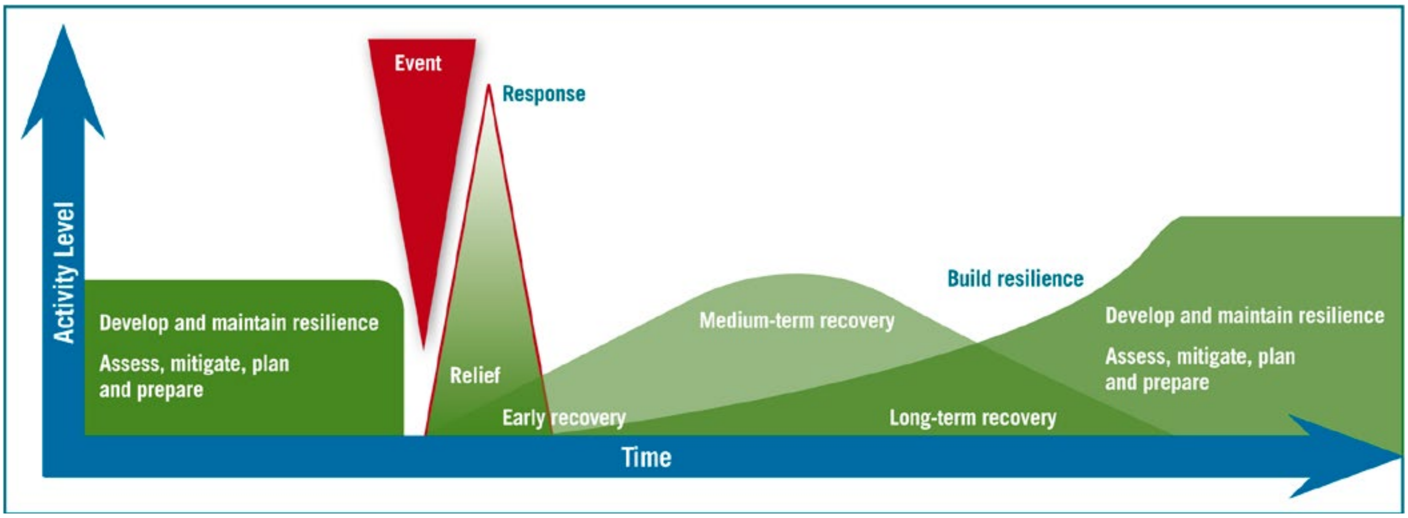
The frequency and intensity of natural hazards is increasing in response to social, environmental and economic drivers – in particular, climate change and changing demographics. As a result, Australia is experiencing new risks and greater costs associated with these events.

Natural hazards and the risks they trigger are a systemic issue, impacting on environmental, social and economic systems simultaneously. These systems are interconnected. Reactions in one part of the system can impact another and can continue into the longer term. These risks often cannot be mitigated fully and require the building of resilience to aid short to long-term recovery (Figure 1, page 2). Systemic risks are generally poorly understood and sit outside conventional risk assessment frameworks and processes.

BUSHFIRE AND NATURAL HAZARDS CRC RESEARCH

What is risk ownership?

Risk ownership can be understood from two perspectives – the ownership of



▲ **Figure 1:** TIMELINES FOR STRATEGIC PLANNING AND RESOURCE REQUIREMENTS FOR EFFECTIVE INTEGRATED NATURAL HAZARD RISK MANAGEMENT

▲ **Figure 2:** AREAS OF DECISION MAKING FOR RISK OWNERSHIP

values (assets) and the ownership of risk management activities related to natural hazards. Ownership can be identified through three tiers of owners: individuals, groups, and institutions. These tiers cover local, state and federal government, the community, and business and industry. The broad spectrum of social, environmental and economic values includes both tangible (monetary – e.g., buildings and income) and intangible values (non-monetary – e.g., amenity and community connectedness). Risk ownership can vary from a single owner, to shared ownership, to no owner at all.

The research team have identified three decision making areas across where risk ownership can be assessed as part of strategic decision making. They cover the actual values at risk from natural hazards, the impacts, consequences and risks arising if those assets are affected, and strategic risk management actions as in Figure 2 (above).

There exists a wide range of formal instruments through which risk ownership is currently allocated (Figure 3, page 3). Informal arrangements, such as social contracts, also play a key role in risk ownership, particularly in relation to resilience activities at a community level. This means risk ownership is often a negotiated process, which requires collaboration and meaningful engagement to achieve fruitful outcomes.

Ownership can also be allocated in relation to hazard, where specific authorities and agencies are charged with managing a specific area of risk – for example, bushfire or flood mitigation. This can be problematic for emerging hazards such as heatwaves, where understanding

END-USER STATEMENT

The risk ownership framework for emergency management policy and practice (the framework) has been developed through comprehensive research. It includes a companion process to identify risk owners and enhance emergency risk management activities, including treatments. The framework supports a collaborative approach for prioritising resource allocation (investment) for emergency mitigation, focusing on a broad range of stakeholders with responsibilities for managing emergency risks. It is also applicable to all types of emergencies and therefore consistent with the 'all communities/all emergencies' model.

Importantly, the framework provides clarity for shared responsibility, which is an important element of managing emergency risks. It not only makes sense of the dynamic nature of risk ownership for emergencies, it provides a method for identifying disparate risk owners at different stages. The companion process identifies risk owners beyond the agencies that have traditional emergency management roles. The outputs of this activity have the potential to guide priority projects and programs for mitigation and enhance community resilience.

Key elements of the framework's risk ownership process have been mapped to the risk assessment process in the National Emergency Risk Assessment Guidelines. Even though this provides important linkages to the guidelines process, greater application of the risk ownership process is expected if the key concepts are integrated into guidelines. Accordingly, future revision of these guidelines should incorporate the risk ownership process.

I recommend the framework to anyone involved in emergency risk management. It makes sense of the complexity of risk ownership and has the potential to significantly improve the outcomes of emergency risk assessments, and enhance community resilience.

– Greg Christopher, Senior Officer Emergency Risk, Emergency Management Victoria

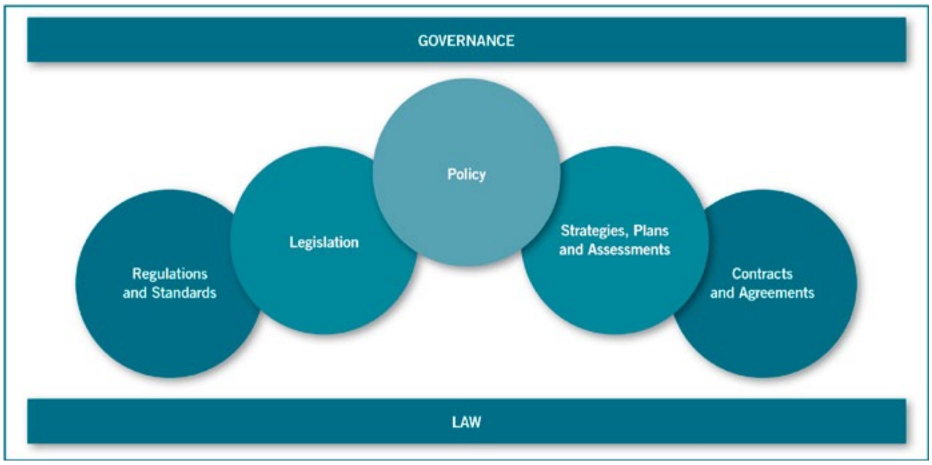


Figure 3: INSTRUMENTS FOR ALLOCATING RISK OWNERSHIP

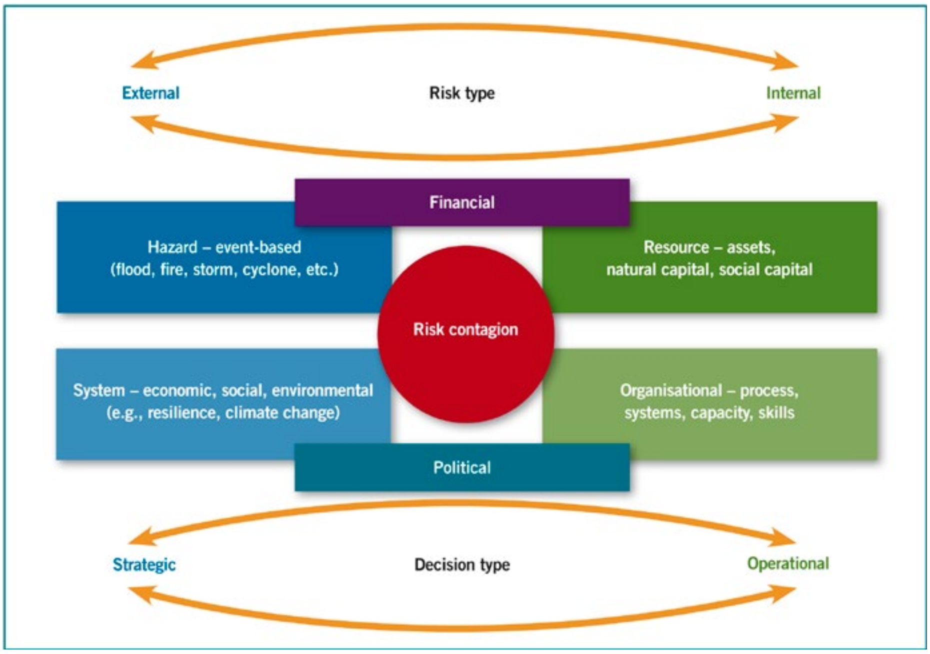


Figure 4: RISK SYSTEMS WITH INTERNAL AND EXTERNAL COMPONENTS

and management strategies are still being developed.

Applying ownership to strategic decision making

Risk ownership of natural hazards is highly dynamic and can change abruptly as impacts and consequences cascade through a system. Two of the key ways this can happen are as a result of either risk contagion or exceedance of capacity thresholds. This broadens the focus of assessment from natural hazards themselves, to the internal and external risks that may be affected as a result. It is important to consider the 'system' of risks (Figure 4, above) to identify where interactions between different areas of risk may result. This can also help identify what type of decision making is most appropriate for specific contexts, and where actions are likely to be most effective.

The allocation of risk ownership is challenging, particularly in areas of shared ownership of complex values such as social cohesion and healthy environments that support a community. Such values are critical for future resilience. Ownership in these areas can often be unclear or unacknowledged, resulting in greater vulnerability to natural hazard impacts. As the ability to fulfil the obligations of ownership is critical to its effectiveness, it is also important to align expectations with current capacities and capabilities of risk owners.

RESEARCH FINDINGS

Through a series of studies, workshops and interviews, this project mapped the patterns of risk ownership at the institutional scale and decision making preferences at the organisational level. This research was then used as a basis for the development of the framework. Key findings included:

- **Risk ownership was found to show an imbalance between the public and private sectors, which is potentially unsustainable (Figure 5, page 4).** In particular, allocation for state and local government was considerably higher for risk and consequences and risk actions than was for the ownership of values at risk.
- **Coordination between contributing agencies and agendas is needed to clarify ownership and support more effective management of activities and use of resources.** Risk ownership in areas contributing to resilience and risk reduction were found across multiple agencies and agendas. This was particularly the case in agencies who work with regional and community development and climate change adaptation. Coordination between contributing agencies and agendas is needed to clarify ownership and support more effective allocation and use of resources.
- **Risk ownership relevant to strategic decision making is ill-defined, particularly for longer term activities focusing on recovery and resilience building.** No long-term (two or more years) policy, plans or strategies for environmental or social recovery to natural hazards were found.
- **Knowledge gaps were found across long-term strategic horizons (two or more years)** in relation to mapping and identifying ownership of risks and consequences, and resilience and recovery activities – particularly for flood and heatwave hazards, and for social and environmental values.

HOW IS THIS RESEARCH BEING USED?

An outcome of this research is the Risk Ownership Framework for Emergency Management Policy and Practice, which has been developed in collaboration with key project end-users to support better allocation of risk ownership as part of strategic planning and risk assessment activities.

The framework offers a companion process that differs from conventional processes as it uses a values-based approach, which includes negotiation

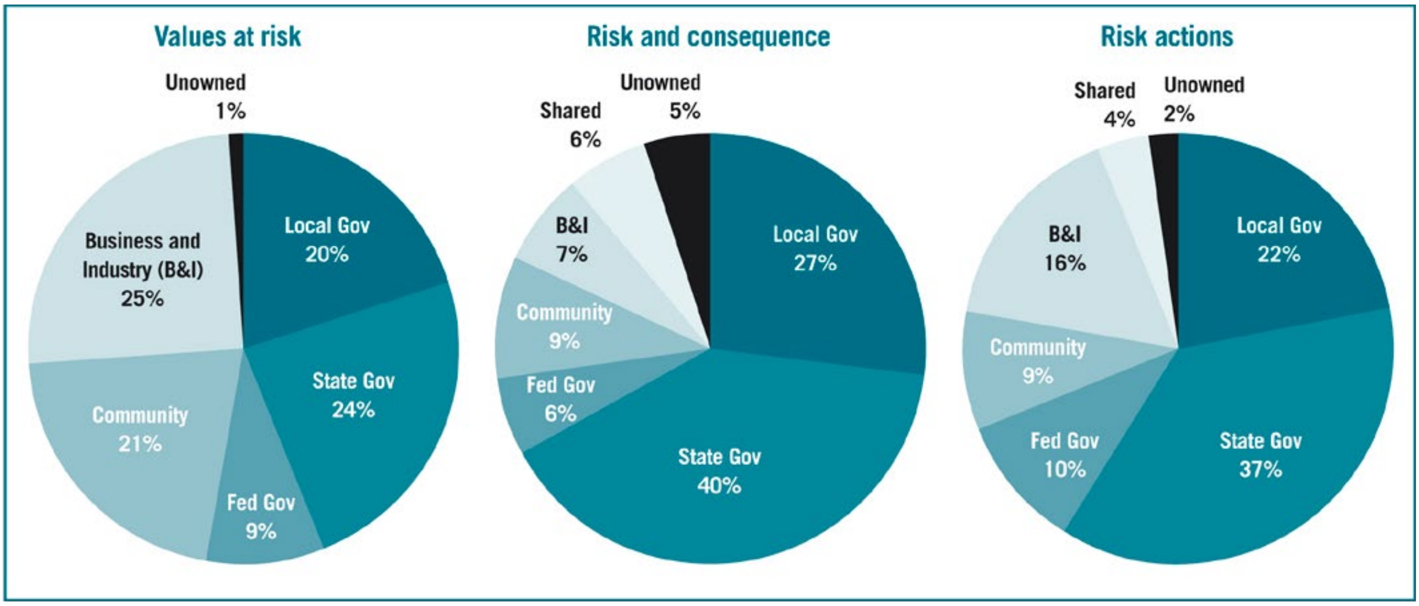


Figure 5: ALLOCATION OF INSTITUTIONAL OWNERSHIP ACROSS KEY DECISION-MAKING AREAS.

and consensus. It is designed to be aligned with the National Emergency Risk Assessment Management Guidelines (Australian Institute of Disaster Resilience, 2015). The framework provides a starting point for understanding and clarifying risk ownership as part of strategic risk planning and assessment activities. It provides:

- Descriptions of what risk ownership is and how strategic risk works.
- The concepts that underpin the risk ownership process framework. These need to be understood to work in longer term strategic timeframes and to determine risk ownership across dynamic geographical and temporal landscapes.
- A companion process outlining the core components that can be integrated into current planning processes to develop emergency management plans by government agencies, communities and organisations.
- Key questions and tools to assist practitioners with the process.

Achieving effective risk ownership requires a common understanding of how risks are changing and consensus and acceptance around who owns these risks and how they own them. This moves beyond simple linear approaches, to a more adaptive and flexible approach focused on what values are identified as most important by risk owners. Strategic decision making based upon key values provides the bridge between the present and the future. Risk ownership is the one constant in a highly dynamic system where external risks such as natural hazards can affect that system in unpredictable ways. The risk ownership framework aims to enable risk practitioners and policy makers to act decisively and collaboratively in the present, whilst thinking and planning for the future.

FURTHER READING

Jones RN, Young CK and Symons J (2015), *Mapping values at risk from natural hazards at geographic and institutional scales: framework development,* Bushfire and Natural Hazards CRC.

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