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Committee Secretary  
Senate Standing Committee on Environment and Communications  
PO Box 6100  
Parliament House  
CANBERRA ACT 2600

Dear Committee members

**Inquiry into recent trends and preparedness for extreme weather events**

This submission is made by a multi-disciplinary and inter-institutional academic team funded by the Victorian Centre for Climate Change Adaptation Research (VCCCAR). VCCCAR is a climate change adaptation research initiative funded by the State of Victoria. The views expressed in this submission do not necessarily reflect the views of the State of Victoria.

Our project, *Governance models for adaptation and natural disaster risk management: legal, regulatory, institutional and financial assessment*, maps and evaluates the laws and regulatory frameworks for managing the risks of extreme events and disasters in the State of Victoria. It addresses a number of the questions being considered by this Inquiry. The research team has expertise and experience in issues of climate change law and governance, disaster risk management and emergency response. The team is comprised of the following members:

Professor Lee Godden – Director, Centre for Resources, Energy and Environmental Law, Melbourne Law School, The University of Melbourne (Project Co-ordinator).

Ms Rachel Anne Carter, School of Law, La Trobe University and PhD Candidate Bushfire CRC.

Professor John Handmer, Centre for Risk and Community Safety, RMIT.

Professor Jacqueline Peel, University of Melbourne Law School.

Dr Francine Rochford, School of Law, La Trobe University.

Ms Jude Wallace, Senior Research Fellow, Melbourne School of Engineering.

We thank the Committee for the opportunity to make this submission.

Professor Lee Godden  
Project Co-ordinator

## Submission Overview

Managing the risks of extreme weather and climate events (**extreme events**) is a major challenge for effective adaptation to the impacts of climate change. The damage and disruption wrought by recent flooding and bushfire events throughout the country is testimony to the urgent case for bolstering our preparedness for future extreme events.

Despite some progress in recent years at federal, state and local levels of government – from the development of high-level strategies through to local adaptation plans – more effort will be required to ensure that we are adequately prepared for the consequences of extreme events.

A persistent, contentious but fundamental issue is the question of who is responsible for managing the risks associated with extreme events. This is not just a case of delineating responsibility between the three tiers of government (federal, state and local government); it is also relevant to the allocation of roles between departments and agencies within a single level of government, and across private and public sectors.

Critical to the delineation and allocation of roles is the adoption by the COAG Select Council on Climate Change in November 2012 of *Roles and responsibilities for climate change adaptation in Australia* as a 'statement of common understanding'.<sup>1</sup> The way in which responsibility is defined and delineated is relevant to the role for national coordination, private insurance and resourcing of emergency services sector, which we deal with in this submission.

## Key points in our Submission

### (e) Division of responsibility between different levels of government

1. *The Statement of Roles and Responsibilities is necessarily 'high level' and meant to provide general guidance, but implementation of the Statement needs to take account of the suitability of its approach for application in the many situations in which there is not a clear line between public and private and between local, state and federal jurisdictions, or where there are 'gaps' in the allocation of requisite authority.*
2. *The demographic reality in many of the most climate-vulnerable communities means that many households are incapable of managing their own risks without significant state or federal government assistance. In the absence of proactive and strategic assistance prior to an extreme event, it is likely that during and after an extreme event, state and federal governments will be called upon in an unmanaged manner, making effective coordination of response measures difficult and resource intensive.*
3. *Given the importance of accurate, contextually relevant, up-to-date and accessible information for effective risk management by all actors, the Commonwealth government should continue to play a coordinating and resourcing role to ensure state and territory governments have access to and can provide suitable and scalable information.*
4. *A forum to facilitate discussion between the states and territories and local government on best practice design of statutory immunities could be a timely measure to resolve the reluctance of government agencies, statutory authorities and local governments to make hazard information available and well targeted.*

### (f) National coordination of climate change response and risk management

5. *The national review of state planning laws for disaster resilience through the National Emergency Management Committee is a good example of a national coordinated initiative. Nevertheless, shortcomings in regard to matters requiring significant national coordination such as the Murray Darling Basin Plan, suggest that more work is needed in this area.*

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<sup>1</sup> COAG Select Council on Climate Change, Meeting Communiqué 16 November 2012, Canberra.

**(b)(i) Availability and affordability of private insurance**

- 6. Existing problems of lack of affordable insurance will be exacerbated under climate change conditions. The very availability of insurance may also be affected due to the increased likelihood of certain extreme events both in Australia and around the world that may stretch the capacity of the industry to continue to operate in some 'high risk' areas. A combination of regulatory responses to the insurance market as well as non-insurance measures to minimise vulnerability will be required.*

**(d) Resourcing of emergency services sector**

- 7. Resources spent on whole of society vulnerability reduction, continuity planning and household and community preparedness, are likely to have a much bigger payoff than further investment in fire and emergency services alone.*

## 1. **Roles and responsibilities for risk management (e)**

Two recent documents set out COAG's position on the delineation of roles and responsibilities for managing the risks of extreme events:

- National Strategy for Disaster Resilience (2011) (**NSDR**)
- Roles and Responsibilities for Climate Change Adaptation in Australia (2012) (**Statement of roles and responsibilities**)

These documents define responsibilities for different levels of governments and carve out respective roles for the public and private sector. The emphasis in current policy is on "shared responsibility" for disaster risk management and adaptation, involving business, households, industry and community organisations as well as government.<sup>2</sup>

McLennan and Handmer point out that "shared responsibility" imports an expectation that communities and households take greater responsibility for the risks they face and reduce their reliance on and expectations of emergency services personnel and on state assistance following disasters.<sup>3</sup>

We agree that there is a growing need for community resilience and adaptive capacity in response to the threat of more severe, frequent and unpredictable extreme events. This need, for the reasons identified in the NSDR, requires all Australians to take some level of responsibility to prepare themselves for such events. However, this does not negate the need for government involvement, especially in the areas of strategic planning, risk mitigation and provision of resources. In many cases government, particularly at a federal level, is more appropriately positioned to access and collate information, assess and broker insurance needs, and implement large scale or resource intensive risk mitigation measures. Further, some sections of the community are not in a position to mitigate risk, because of age, infirmity or poverty. This is an issue of particular note in regions at risk, such as in rural and remote areas and for highly vulnerable communities.

### **COAG's approach to assigning responsibility**

The approach to defining responsibilities adopted in the *Statement of roles and responsibilities* is underpinned by a reliance on 'markets' in a generic sense to convey information about risks through price signals to influence individual behaviour and decision-making. This approach sees the role for government at all levels as one primarily concerned with facilitating private adaptation, or risk management, through the provision of information about risk and removing regulatory barriers and market distortions. Risks to public assets and services remain, of course, the responsibility of the relevant level of government.

While we agree that households, businesses and industry must bear responsibility for certain types of risks, and we support the clarification of responsibilities, we are concerned about this means of defining roles and responsibilities for three reasons.

Firstly, this approach does not appreciate the complexity of many situations, where responsibility is indeed 'shared' or spread across scales and sectors, as the following examples in Text Box 1 demonstrate.

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<sup>2</sup> Victoria's *Emergency Management Reform White Paper* (December 2012) also adopts this approach p 2.

<sup>3</sup> B. McLennan and J. Handmer, 'Changing the rules of the game: mechanisms that shape responsibility sharing from beyond Australian fire and emergency management' (2012) 2 *The Australian Journal of Emergency Management* 7.

## Text Box 1. Shared responsibility

### Risk allocation in Public Private Partnerships (PPPs)

- PPPs are a contractual arrangement for the procurement and operation of major infrastructure and services. Victorian examples include the CityLink tollway and the Wonthaggi desalination plant in Victoria. The private party owns the infrastructure for a specified term and provides contracted services in return for payment from the government and/or consumers.
- The contractual arrangement allocates ownership of (or responsibility for) risk between the public and private parties. Extreme events may affect the construction of infrastructure, its operation and the timing or quality of services provided.
- The *National PPP Guidelines* set out detailed risk allocation principles and matrices. Given the nature of projects undertaken, contracts are highly sophisticated, and the distribution of risks between private and government parties is necessarily complex.

### Private ownership or operation of essential services

- Many assets and essential services formerly owned or provided by public entities are now privately owned or operated. This raises the question of whether the same principles of risk management apply to them as to other private actors, or whether they should be subject to higher standards.
- For example, as part of its Emergency Management Reform, the Victorian Government has proposed legislative amendments to require private owners or operators of 'essential services' (defined as transport, fuel, power, water, sewerage) to comply with an 'all-hazards' risk management planning and testing regime.<sup>4</sup> Ideally this would mean that owners and operators of essential services have effective "continuity plans" in place to ensure minimum disruption to lives and livelihoods.

Secondly, when defining roles and responsibilities for managing extreme event risks, there is a need to account for the existing duties, powers and obligations imposed by laws and regulations. In many situations there will be multiple government actors with overlapping responsibilities, including local governments, statutory authorities and relevant Ministers. They are guided and constrained by different laws – including state and Commonwealth legislation, as well as common law. How these laws interact to affect risk management practices is a critical consideration for the division and definition of responsibilities.

The competing obligations of Victorian water storage managers (a statutory authority) are one example of this. As part of their duties, water storage managers have an obligation to develop and implement strategies to mitigate flooding, where possible.<sup>5</sup> However, the overriding duty of water storage managers is to ensure that the dams hold sufficient water to meet the bulk water allocations reserved by private irrigators. This constrains the storage managers' capacity to pre-release water from dams as a flood mitigation measure. As such, the water storage managers are rarely, if ever, able to effectively mitigate even minor floods and can do even less for major incidents, as found by a recent Victorian Parliamentary Committee.<sup>6</sup>

***The Statement of Roles and Responsibilities is necessarily 'high level' and meant to provide general guidance, but we suggest that implementation of the Statement needs to take account of the suitability of its approach for application in the many situations in which there is not a clear line between public and private (including distinguishing between households and the commercial sector) and between local, state and federal jurisdictions, or where there are 'gaps' in the allocation of requisite authority.***

<sup>4</sup> Victorian Government, *Emergency Management White Paper* (December 2012) pp. 11 and 12; and Victorian Government *A Roadmap for Critical Infrastructure Resilience* (2012).

<sup>5</sup> *Water Act 1989* (Vic) s 122ZL(2)(d).

<sup>6</sup> Parliament of Victoria, Environment and Natural Resources Committee, *Inquiry into Flood Mitigation Infrastructure in Victoria* (Final Report), 2011, p. 159.

Thirdly, communities or individuals may not be capable of averting, or have resources to effectively mitigate risks. It appears inherent in the 'market' model to price some land uses out of the market where they are vulnerable to climate change – by, for instance, increasing insurance levies. Perversely, however, this may impact on low income groups who lack the resources to adapt-by-abandonment and cannot afford to insure. Vulnerable groups such as the elderly or mentally ill may not be in a position to understand or assess their risks. Even where risks are understood, there may be no appropriate and affordable mitigation solution for these groups, or they may lack the physical and institutional capacity to take steps to protect themselves and their property.<sup>7</sup>

Whilst building community resilience and adaptive capacity is a necessary goal, policy makers need to recognise that a combination of government actions and climate risks may leave some individuals and communities with few viable solutions. Recent fire events provide an example. Many individuals may live in rural regions because of low rental or cheap house prices. Their relative poverty may also mean that they are underinsured or not insured at all. They may not be able to take measures to reduce their exposure to bushfires because they do not possess the necessary resources, such as chainsaws, mowers, brush-cutters, tractors, diesel and water pumps, or, because of their age or physical condition, are unable to undertake the significant heavy manual work. As local governments are primarily reliant on local rates, poorer communities may be serviced by municipalities with fewer resources to manage risks to community infrastructure, build and maintain fire refuges and support vulnerable residents.

***In effect, the demographic reality in many of the most climate-vulnerable communities means that many households are incapable of managing their own risks without significant state or federal government assistance. In the absence of proactive and strategic assistance prior to extreme events, it is likely that during and after an extreme event, state and federal governments will be called upon in an unmanaged manner, making effective coordination of response measures difficult and resource intensive.***

### **Providing information about risks: a critical responsibility, but whose?**

Effective risk management requires that those persons upon whom the risk falls have access to, and are capable of understanding information about those risks. We support the identification in the *Statement of roles and responsibilities* of research into and provision of information about the risks of extreme events as a "public good" and a key role for government.

As the level of government at the 'frontline' of the impacts of extreme events and tasked with a range of administrative duties that affect people's day-to-day lives, local governments need to be well aware of the extreme event risks faced by their municipality and to be adequately resourced to meet the resultant challenges.

The Municipal Association of Victoria (MAV) concurred with the Productivity Commission's finding in its *Barriers to Effective Adaptation – draft report* that local governments often have 'insufficient financial and human capital resources' to incorporate information about climate risks into land use planning decisions.<sup>8</sup> Local governments are reliant on state or federal governments to undertake hazard mapping and translate this information for use in different contexts and over variable time periods by local government.<sup>9</sup> The establishment

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<sup>7</sup> See ACOSS report referred to in P. Hannam, 'Extreme weather deadly for the vulnerable' *The Age* 6 January 2013 (online).

<sup>8</sup> Productivity Commission, *Barriers to Effective Climate Change Adaptation – draft report*, p 138.

<sup>9</sup> Municipal Association of Victoria, Response: Productivity Commission – Barriers to Effective Climate Change Adaptation – Draft Report, June 2012, p 7.

and funding of the National Climate Change Adaptation Research Facility (NCCARF) may meet some of the high level information needs and provide a good model for research and information dissemination, but the suitability of that information for utilisation at scale level must be continually assessed.

***Given the importance of accurate, contextually relevant, up-to-date and accessible information for effective risk management by all actors, the Commonwealth government should continue to play a coordinating and resourcing role to ensure state and territory governments have access to and can provide suitable and scalable information.***

Concerns about the accuracy and currency of information about the risks of extreme events and the potential for property devaluation in light of that information mean that there are legal and political risks associated with the provision of relevant information.<sup>10</sup> These factors may make local government reluctant to disclose such information due to liability concerns.<sup>11</sup>

Conversely information provided conditionally to councils, (such as comprehensive catchment flood modelling held by catchment management authorities) may put local government in the position where they are aware of risks to potentially affected property owners but may not legally disclose them.

These issues are difficult to resolve. The ALGA has endorsed a scheme similar to that in New South Wales where local governments cannot be sued for certain advice, actions or decisions made in relation to coastal, flood- or bushfire-prone land as long as they have been made in good faith.<sup>12</sup> However, an arrangement to exempt certain decision-makers from liability in particular circumstances (for example, where they are providing information about the risks of extreme events) could result in those decision-makers engaging in irresponsible risk-taking. Accordingly, careful design of any such arrangement is important.

***A forum to facilitate discussion between the states and territories and local government on best practice design of statutory immunities could be a timely measure to resolve some of these issues. This may be best achieved through a COAG council process with inclusion of a wide range of interested stakeholders.***

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<sup>10</sup> For example, the City of Greater Geelong was criticised in the media for rejecting a development proposal on the basis of climate change modelling, which the land owner claimed reduced the value of his property by \$200,000: cited in the Comrie Review of the 2010-11 Victorian floods (2011), p 196.

<sup>11</sup> Ibid; Australian Local Government of Australia, Submission to the Productivity Commission Draft Report, July 2012 p 3.

<sup>12</sup> Australian Local Government of Australia, Submission to the Productivity Commission Draft Report, July 2012 p 5.

## **2. Progress on national coordination of climate change risk management (f and g)**

Local governments have a critical role to play in climate change adaptation. The impacts of climate change are local and contextual. Further, often local government has the best knowledge of the local circumstances and is most closely in contact with those who will bear the costs and benefits of climate change impacts. Thus, it is the most appropriate level of government for many adaptation actions. The Commonwealth government has repeatedly endorsed this approach.<sup>13</sup>

Thus, while national co-ordination may be relevant in relation to some adaptation and extreme event management matters, it is neither necessary nor desirable in all situations.

### **Building codes and land use planning**

Building codes and standards and land use planning laws have been identified as critical mechanisms for minimising risks to the built environment. Given the variation in climate across the country and the different risk profiles of various regions and locations, determining when harmonised standards are appropriate must precede a decision on the content of and processes for mandating uniform standards. A consistent *approach* or *process* to developing and implementing building standards, land use controls and regional plans may well be most appropriate (as has occurred with some bushfire-related building code provisions). However uniform standards should not be set without allowing adequate flexibility to accommodate variable local conditions. Thus, there is a role for national coordination. As part of the 'reducing risks in the built environment' priority under the NSDR, a review of state-based land use planning rules is underway to assess their 'disaster resilience', identify gaps and measures for improvement.<sup>14</sup> It is critical that a broadly based, integrated and strategic approach be instigated through planning laws to meet the challenges of managing extreme events over long time frames and across varying scales. Planning laws and associated measures have long been a vehicle to plan for events such as flood and bushfire but a more proactive, coordinated and prioritised approach is now necessary due to enhanced risks.

The Land Use Planning and Building Codes Taskforce is to undertake later work to scope out ways in which jurisdictions can collaborate and develop best practice. This nationally coordinated initiative will assist states and territories to develop and implement changes to their land use planning rules to enhance the resilience of the built environment to extreme events. State and local government planning representatives have been involved in the process so far. This is an important and useful initiative. It is important that the review involve careful assessment of whether planning systems and implementing laws have sufficiently robust processes to deal with events that may fall outside known data ranges. For example much weight is given in floodplain management to the '1 in 100 year' design event even where historical information as to what such an event would look like is incomplete and the impact of climate change is uncertain. It is critical to reassess the usefulness of this datum and many others which are current components of strategic planning approaches to extreme events.

### **Murray Darling Basin Plan**

Water management in the Murray Darling Basin, where actions in one state have an impact on how well extreme events such as drought and flooding are managed elsewhere, is another area where national coordination is appropriate.

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<sup>13</sup> Australian Government's 2010 position paper *Adapting to Climate Change in Australia*; DCCEE, Submission to the Productivity Commission (p 3); COAG roles and responsibilities (p 1).

<sup>14</sup> PlanDev Business Solutions, *Enhancing Disaster Resilience in the Built Environment Roadmap* (June 2012), prepared for the Land Use Planning and Building Codes Taskforce, National Emergency Management Committee.

The recently adopted Murray Darling Basin Plan (**MDB Plan**) introduces new complexities in management of the risk of flood and water scarcity in the Murray Darling Basin.

Firstly, the MDB Plan is framed with emphasis on addressing risks to continued availability (water security) or quality of water, with less emphasis on dealing with increased flood risk. Risks associated with delivering environmental water have received correspondingly less attention, particularly in relation to infrastructure on rivers and private land subject to inundation. The respective roles of the Environmental Water Holders in each jurisdiction needs consideration as part of flood management processes, particularly in relation to the management of air space in reservoirs (whether water should be conserved or spilled) and the relative positions of irrigators and Environmental Water Holders in relation to spilled water. The risk of reservoirs overtopping as a result of the retention of environmental water, the introduction of carry-over water and the increasing reliance by urban water authorities on Basin water resources are all elements which must be considered, as they encourage conservation of water in reservoirs over more conservative spill regimes.

Secondly, although the allocation of risks for long term water resource assessment under the *Water Act 2007* is designed to provide certainty for those reliant on water resources, it allocates risk according to whether the relevant reduction is due to climate shift or policy change. This could be an unhelpful distraction when managing for highly variable climate and associated extreme events.<sup>15</sup> Also, it potentially discourages individuals from undertaking adaptation through normal commercial mechanisms such as water trading.

***The national review of state planning laws for disaster resilience through the National Emergency Management Committee is a good example of a national coordinated initiative. Nevertheless, shortcomings in regard to matters requiring significant national coordination such as the Murray Darling Basin Plan, suggest that more work is needed in this area.***

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<sup>15</sup> R. Kundis Craig, 'Stationarity is dead – long live transformation: five principles for climate change adaptation law' (2010) 34 *Harvard Law Review* 9, 38.

### 3. Access to and affordability of insurance (b)(i)<sup>16</sup>

Expectations about the degree to which the 'private' (i.e. commercial business and industry) sector and household/community sector are responsible for managing risks has a bearing on the role of private insurance and the degree to which it is to be relied on as a risk management mechanism. The emphasis in the *Statement of roles and responsibilities* on private adaptation and risk management suggests there is an expectation that private insurance will have a significant and substantial role.

This in turn draws attention to the availability of insurance and the adequacy of the current insurance and regulatory regime for covering extreme events. Of many significant issues, access to *affordable* insurance coverage has emerged as a major problem in many jurisdictions.<sup>17</sup> Even when insurance is available, the events of the last few years have shown a trajectory of increasing costs involved in obtaining insurance coverage.

Although domestic and international market competition generally works sufficiently well to moderate the insurance market for ordinary contingencies (e.g.: household theft, household fires etc.) the risks posed by catastrophic events<sup>18</sup> and likely outcomes of global warming pose unique set of challenges, including:

- An increase in the number of individuals with inadequate insurance coverage, leaving a significant shortfall between the cost of coverage and the potential cost of rebuilding;
- Post-disaster burden shifting to government as a result of underinsurance or lack of insurance cover, community expectation that governments will step in as 'insurer as last resort' and a failure of governments to implement anticipatory measures to avoid these situations;
- The need to consider amendments to the current legislative framework which allows insurers to decline to provide coverage in certain high risk areas;
- The difficulty in achieving accurate insurance pricing under climate conditions. The uncertainty posed by climate change renders traditional probabilistic modelling and actuarially-sound methods for determining the price of insurance policies inappropriate for calculating risks caused by future climate variability;
- A reduction in the risk appetite of the international reinsurance market, upon which Australia currently heavily relies, due to increasing incidence of extreme events across the globe as a result of climate change.

***Existing problems of lack of affordable insurance will be exacerbated under climate change conditions. The very availability of insurance may also be affected due to the increased likelihood of certain extreme events both in Australia and around the world that may stretch the capacity of the industry to continue to operate in some 'high risk areas. A combination of regulatory responses to the insurance market as well as non-insurance measures to minimise vulnerability will be required.***

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<sup>16</sup> Please note this section is drawn from the separate submission by Rachel Anne Carter to this Inquiry.

<sup>17</sup> R. A. Carter, 'Bushfire Losses Reignite Debate about Insurance Reform' *The Conversation* (Australia) 14 January 2013 <<http://theconversation.edu.au/bushfire-losses-reignite-debate-about-insurance-reform-11512>>

<sup>18</sup> Professor D. Mendelson and R. A. Carter, 'Catastrophic Loss and the Law: A Comparison between the Black Saturday Fires and the 2011 Queensland Floods and Cyclone Yasi' (2012) 31 (2) *University of Tasmania Law Review* 32, 32 – 53.

#### **4. Preparedness and resourcing of the emergency services sector (d)**

In emergency situations, where extreme events have the potential to become disasters, there is a clear role for government in coordinating immediate preparation and response measures. The NSDR identifies the support of emergency services personnel as a priority outcome as part of its national priority to 'support capabilities for disaster resilience'.

Emergency preparedness is a key role of government and is one of the few roles for government identified by the recent Productivity Commission Report into climate change adaptation. However, contemporary emergency planning and management is a "whole of society" rather than a "whole of government" activity. Governments are expected to lead this task, and have the information, resources, expertise and structures, to do so. Ensuring that all sectors of society are engaged is a major challenge. If they are not engaged dependence on government for all aspects of emergency management will grow.

This suggests that emergency management groups should be well resourced to take the leadership role and to bring others along with them. But it also suggests that emergency management organisations should not be the sole location of emergency preparedness. Almost all emergency management related funding goes to these official groups. To achieve the aims of the NSDR and to help make the leadership role effective, funds need to be dedicated to 'whole of society' preparedness.

***Resources spent on whole of society vulnerability reduction, continuity planning and household and community preparedness, are likely to have a much bigger payoff than further investment in fire and emergency services alone.***