

# Climate Change Adaptation Research Grants Program

## - Emergency Management Projects

### **Project title:**

The Right Tool for the Job: Achieving climate change adaptation outcomes through improved disaster management policies, planning and risk management strategies.

**Principal investigators:** Dr Michael Howes

**Lead organisation:** Griffith University

### **Objectives:**

This project is designed to produce tangible outcomes that can be used by policymakers, planners and risk managers across the public sector and is strongly supported by our partner organisations. Effective responses to climate change adaptation in Australia have been hamstrung by growing antipathy from sections of the general public and government uncertainty about the most appropriate policies, plans and decision making tools. This is despite the fact that proposed climate change adaptation actions are based on the best available science and have followed rational decision-making processes that include significant public consultation. While climate change is forecast to have substantial long term impacts on many natural disasters in Australia, there is considerable uncertainty about when and how to undertake adaptation and the level of priority to be assigned compared to other problems.

Recent catastrophic natural disasters at the extremes of recorded climate variability have reinforced the idea that climate change is already occurring. Disaster management organisations, however, are not certain whether they should include climate change in current risk assessments, increase their efforts to prevent the Impacts of climate change, increase preparation measures, or increase response and recovery measures. The link between building resilience to natural disasters and climate change adaptation is also not always clear. Given stakeholder and public concerns, existing rational decision-making tools and process may not be sufficient. Natural disaster decision-makers need an improved approach to policymaking, planning and risk management.

The objective of this project is to develop a nationally consistent approach supported by a set of risk-context analysis tools that will enable government disaster management organisations and decision-makers to:

- Better understand the relative significance and timing for actions to address climate change;
- Analyse the social, political, economic and environmental context of communities at risk from natural hazards that will be exacerbated by climate change at national, state and local scales;
- Identify potential barriers to achieving context-appropriate climate change adaptation outcomes; and,
- Facilitate the effective incorporation of climate change adaptation outcomes into existing disaster management and resilience building initiatives in ways that avoid or minimise impediments. This may include, for example, proposed refinements to the existing National Emergency Management Risk Assessment Guidelines.

### **Project design and methods:**

The overall research design is for a comparative case study to be completed within one year. Two of the most significant impacts of climate change on Australia relevant to the Disaster Management sector are more frequent and intense floods and bushfires. These kinds of impacts are generally managed at the state, territory and local level of government. This project will therefore undertake a comparison of the following key case studies:

- 1) The 2010-11 Queensland floods and the results of the Commission of Inquiry, due to be delivered in February 2012;
- 2) The 2009 Victorian Bushfires and the results of the subsequent Royal Commission;
- 3) The 2011 Perth Hills Bushfire Inquiry; and,
- 4) The state-wide risk profiles developed for Queensland, Victoria, New South Wales, Western Australia, and the ACT in accordance with the National Emergency Management Risk Assessment Guidelines (NERAG) and how they deal with climate change.

This project goes beyond what has been done in the inquiries to be investigated in several ways. First, each inquiry has been limited to a specific event within a specific jurisdiction. Our project broadens the scope to all extreme weather events and generalises the results so that they are applicable nationally and internationally. Second, our research adds climate change adaptation to the analysis, something that has not been a major focus for the inquiries. Third, we are developing risk-context management tools that are far beyond all the inquiries' terms of reference. Finally, we are adding a theoretical framework of network governance that will be of both practical use and academic value.

The aim is to learn from the successes and failures with respect to disaster management and climate change adaptation. Data will be collected in the first stage from the respective inquiries, associated submissions and relevant reports. This will be supplemented by a search of the relevant academic literature and other documents from the partner organisations. The second stage of data collection consists of consultations with partner organisations and key stakeholders in government, business and community organisations supplemented by targeted semi-structured interviews. The data produced in stage one will be analysed to identify the potential social, political and economic factors that may give rise to conflicts or barriers to effective policymaking and implementation. It will also highlight opportunities and problems with current approaches to decision making under uncertainty. These will then be used to frame consultations that will flesh out the detail and fill in the gaps in stage two. A network governance framework will be developed to identify where engagement with key stakeholders could facilitate better policy, planning and risk management.