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## Urban Climate

journal homepage: [www.elsevier.com/locate/uclim](http://www.elsevier.com/locate/uclim)

# Emergent processes of adaptive capacity building: Local government climate change alliances and networks in Melbourne

Susie Moloney\*, Hartmut Fünfgeld

School of Global Urban and Social Studies, RMIT University, GPO Box 2476, Melbourne, VIC 3001, Australia

## ARTICLE INFO

### Article history:

Received 4 December 2014

Revised 24 June 2015

Accepted 30 June 2015

Available online xxxx

### Keywords:

Adaptation planning

Adaptive governance

Network governance

Local government

Climate change responses

Adaptive capacity building

## ABSTRACT

This paper presents a critical review of multi-level climate governance and adaptive capacity building in the context of Melbourne, Australia. The role of local government is highlighted as significant within the Victorian Climate Change Adaptation Plan (2013) and it is recognised that the state government must work in partnership with local municipalities and communities to effectively respond to the impacts of climate change. This paper reflects on the characteristics of institutional responses to climate change and the extent to which local government 'climate change alliances' constitute an emergent and effective form of adaptive and integrative governance. The analysis draws on a review of recent literature and government reports focusing on local scale adaptation in Victoria as well as qualitative data from interviews with local government alliances. The traditionally weak institutional architecture at the local scale in Australia creates a significant challenge in adaptive governance for climate change. The research highlights the current and potential role of regional alliances to overcome structural, institutional and political obdurances as evidence of progress in building adaptive capacity at the local government and community scale.

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## 1. Introduction

Over recent decades climate change adaptation has become increasingly important as a policy issue with the policy agenda more recently shaped by the Intergovernmental Panel on Climate Change's (IPCC's) Fifth Assessment Report (IPCC, 2014a). The AR5 found that 'it is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century' (IPCC, 2013: 17) and that 'in recent decades, changes in climate have caused impacts on natural and human systems on all continents' (IPCC, 2014a: 4). Adaptation, considered a necessary strategy for managing the risks of climate change, has been defined as 'the process of adjustment to actual or expected climate and its effects', seeking to 'moderate or avoid harm or exploit beneficial opportunities' (IPCC, 2014b: 5). The IPCC goes on to propose a set of principles for effective adaptation, including that 'adaptation is place- and context-specific, with no single approach for reducing risks appropriate across all settings' and suggesting that 'adaptation planning and implementation can be enhanced through complementary action across levels, from individuals to governments' (IPCC, 2014c: 85). These two points frame some of the

\* Corresponding author.

E-mail address: [susie.moloney@rmit.edu.au](mailto:susie.moloney@rmit.edu.au) (S. Moloney).

key practical challenges of adapting to climate change in human systems: how can collaboration and coordination across scales and between individuals and organisations be supported whilst also being highly place- and context-specific?

In this paper, we explore this question using examples of emergent forms of networked local climate change governance in the form of regional local government alliances, that have demonstrated potential for facilitating learning and capacity building towards more effective adaptation. While the role of ‘cross border’ institutional and governing arrangements has been highlighted as important in addressing complex natural resource management issues, there is to date little research around how these arrangements are emerging to address climate adaptation (Steele et al., 2013: 700). We situate our analysis of local government alliances by reviewing theoretical literature on adaptive capacity development and multi-level and network governance to elaborate key characteristics of cross-scale adaptive governance. We then examine the role of selected state and non-state actors, operating at the local scale, in responding to climate change in the context of state level climate change adaptation policy. Based on a review of adaptation research and evidence of local practices of adaptation planning, we show how new forms of regional adaptive governance are contributing to building the capacities of local governments and communities to respond to climate change in the state of Victoria, Australia.

## 2. Learning institutions: What constitutes effective local adaptation governance?

In order to adapt, systems, institutions, or individuals need to develop their adaptive capacity, i.e. an ability to ‘adjust to potential damage, to take advantage of opportunities, or to respond to consequences’ of climate change (IPCC, 2014b: 5). For climate change responses to be effective, multi-level governance approaches with interactions across all levels of government from the national to state and local scales have been deemed important (Bauer and Steurer, 2014; Hanssen et al., 2013). There is widespread agreement that local scale institutions will bear the brunt of adaptation actions, and adaptation more so than climate change mitigation requires ‘understanding how things work locally’ (Barnett, 2010). However, in any governance context, adaptation decisions do not occur in isolation from other decisions but are enmeshed with ‘demographic, cultural and economic change, as well as transformations in information technologies, global governance, social conventions and the globalising flows of capital and [...] labour’ (Adger et al., 2005: 77). Climate change adaptation as a policy issue is cross-cutting, multi-disciplinary and multi-sector by necessity, requiring significant degrees of collaboration and cooperation in order to be successful. While a certain degree of such integration can be achieved by Type I multi-level governance (Hooghe and Marks, 2003), where a few levels of government agree to share decision-making power with regard to a policy domain (for example, in a federal political system), the problem nature of climate change adaptation is likely to engender a more messy Type II governance regime, where jurisdictions operate at numerous, often intersecting scales and with intersecting membership (Hooghe and Marks, 2003). Type II governance jurisdictions include task-specific citizen groups or alliances of local governments for example. Table 1 provides an overview of the characteristics of Type II governance, their linkages to, and opportunities for, building adaptive capacity.

Importantly, Type II governance regimes are inherently more flexible than more traditional Type I multi-level governance that draws its strength from durable structural governance arrangements across a system. Creating more resilient and adaptive governance systems will always need to involve changing existing institutions. Pelling and High (2005: 309) highlight the value of differentiating adaptation actions that ‘reinforce existing organisational or system stability and those that modify institutions to add resilience through flexibility’. Pahl-Wostl (2009) and others raise the importance of network governance and processes of social and societal learning as important features of adaptive governance necessary to respond to the complexities of current resource management and climate change challenges (see also Folke et al., 2005; Pahl-Wostl, 2007). Adaptive and integrative (Type II) governance modes move away from a ‘command and control’ paradigm to one that constitutes more active, deliberative involvement from a range of stakeholders in the design and management of policies and plans (Pahl-Wostl 2009: 354), acknowledging that any form of resource management is a political processes. While some of the public participation process may rely on formal institutions, informal ‘adaptive networks’ play an important role as ‘self-organising groups of policy makers’ who are influential in, and have knowledge about, different power networks but, importantly, “try to break away from the existing policies in those power networks and develop joint understanding about new, more effective policies in these informal adaptive networks” (Pahl-Wostl 2009: 361).

**Table 1**

Characteristics of Type II multi-level governance and their relevance for adaptive capacity building (based on Hooghe and Marks, 2003).

Characteristic	Description	Relevance for building adaptive capacity
Task-specific jurisdictions	Multiple, independent jurisdictions fulfil distinct functions	Ability to focus on mitigation and adaptation planning and implementation across jurisdictions
Intersecting membership	Overlapping and sometimes competing membership	Opportunity for building adaptive capacity through collaboration and reflexive learning
Many jurisdictional levels	Organised across existing levels of government	Opportunity for better vertical integration of adaptation decision-making
Flexible design	Intended to respond flexibly to changing functional requirements or preferences	Embracing adaptive management as an ongoing process

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