

ASSESSING THE ADAPTIVE CAPACITY OF LOCAL GOVERNMENTS IN SOUTH AUSTRALIA

INTRODUCTION:

Governments and organisations at all levels are now responding to the challenge of climate change and, after an initial focus on mitigation, are now also focusing on adaptation to deal with the inevitable effects of climate change (Betsill & Bulkeley 2007, Measham et al. 2011). Adaptation is essentially local because both the impacts of climate change, and the actions that are available for adaptation, will be highly context-specific and occur within communities (Adger 2003, Armitage & Plummer 2010). While local government (LG) will play a key role, effective adaptation requires a concerted approach, both across all levels of government, and across multiple scales (Bulkeley & Betsill 2005, Cash et al. 2006).

Since the first Australian LG jurisdiction was established in 1840 the sector's role has transformed considerably from providing core services (roads, rates, rubbish) to encompass a far wider range of functions associated with delivering broader social, economic and environmental outcomes (ALGA 2012b, Dollery, Wallis & Allen 2006). LG faces numerous challenges in coping with its greater workload, including a lack of resources, especially funding (Self 2005). Moreover, a fundamental issue relates to LG's lack of status, power and influence within Australian governance structures (Keen & Mercer 1992, McNeill 2005).

Within this wider context, LG in Australia is coming under increasing pressure from higher levels of government to develop and implement climate change adaptation policies and plans. The extent to which individual councils can, and are, engaging in climate change adaptation is highly variable. The adaptive capacity of LG is a key concern being raised in climate change research and policy discourse. A review of literature suggests that many factors influence the adaptive capacity of LGs, which the researcher categorized under three headings of context, council and community (the 'three C's').

South Australia (SA) is already the driest state of the driest continent on Earth. With climate change it is expected to become even drier and hotter, experience more frequent and intense extreme weather events such as heat waves, droughts and storms; and gradual sea level rise along its coastline. Each of the 68 LGs will need to undertake adaptation planning and action within their community's unique geographic, economic, political and social context, as well as the expected climate change effects for their area.

RESEARCH AIMS AND METHODOLOGY:

The research aimed to assess the adaptive capacity of LGs in SA. Two secondary aims were: to conduct an indicator-based assessment of LGs' adaptive capacity, and: to identify underlying issues influencing the adaptive capacity of LGs in SA.

A mixed methods approach was used, consisting of two stages of research. Stage 1 involved development and application of a Local Government Adaptive Capacity Index (LGACI), based on a set of twelve theory-driven indicators of adaptive capacity. An overall capacity score, out of 100, was generated for each LG area of SA, enabling comparisons of adaptive capacity to be made across the state's LG sector. Stage 2 of the research comprised case studies of five South Australian LGs, referred to as councils A to E. Councils were purposefully selected to reflect the

diversity among South Australia's 68 LGs and a range of LGACI scores. Each case study comprised analysis of secondary data sourced from the Internet, and primary data generated through interviews with one staff member and an elected member (mayor or councillor) of each participating council. The three C's were used as a priori themes for thematic analysis of data generated through the interviews.

MAJOR FINDINGS AND OUTCOMES:

LGACI scores varied considerably, from 26 to 82 out of 100, with a mean score of 48 and median of 45. A frequency chart shows scores in two main clusters, with a large cluster in the lower 35-49 capacity range, and a smaller one in the higher 60-74 range. LGACI scores were further ranked and divided into four quartiles, Q1-Q4. Spatial mapping by quartile showed that the highest scoring quartile (Q4) LGs tended to be metropolitan councils. A trend of higher capacity scores in metropolitan and peri-urban areas, than in regional or country areas, was further illustrated by analysis of LGACI scores by the twelve state government planning regions.

Stage 2 of the research also revealed adaptation planning and action was highly variable among the five case study councils. However all case study councils had undertaken adaptive actions regardless of whether or not they had been done as explicit climate change adaptation responses. Council B, a large metropolitan council, reported the highest number of adaptation actions in either underway, completed, or ongoing categories. Councils A and E (a moderate sized metropolitan and a small remote council respectively) reported the lowest number of adaptation actions, and the highest number of adaptation actions in the 'not currently considering' category. Thematic analysis of interview responses identified many interacting factors that were influencing councils' adaptive capacity, relating more to context and council-related factors than community. Contextual factors included a lack of direction and support for adaptation from higher levels of government, and an acute awareness of the LG sector as lacking in power and status and resources. Council related factors included the size of the council, staffing levels, support from senior managers and elected members, the council's environmental legacy, and the extent to which climate change was being approached as a council-wide issue, with strategic implications. Findings of Stage 2 also confirmed that larger, metropolitan councils, with higher revenue and staff levels, are likely to have higher adaptive capacity relative to smaller rural or remote councils, which are likely to have very limited capacity to plan and act for climate change.

SIGNIFICANCE OF THE RESEARCH AND SUGGESTIONS FOR THE FUTURE:

The wide range of adaptation actions being taken by LGs in SA as pragmatic responses to stimuli such as coastal erosion or water shortages, rather than as planned adaptation responses, is consistent with literature (Betsill & Bulkeley 2007, Dovers 2009, Smit & Wandel 2006) and further indicates that all councils have some degree of intrinsic adaptive capacity. However, individual council departments taking adaptive actions, in such a reactive manner, will not be sufficient in the future. Explicit, council-wide planning for climate change adaptation is required, that integrates planning and actions across all council departments and considers climate change adaptation within the context of broader sustainable development principles. Only one case study council (Council B) exemplified such a strategic approach, where climate change adaptation is embedded into all levels and areas of the council's business including long-term planning, departmental plans and day-to-day provision of services.

The research suggests that even councils that have relatively high adaptive capacity in the earlier stages of the adaptation process are likely to have insufficient capacity for later implementation. While a lack of resources was a universal factor influencing the capacity of councils, underlying issues of the role and status of local government, and a lack of support and guidance from higher levels of government, lie at the root of the sector's adaptive capacity. Within current institutional settings, many councils will continue to focus on providing core services and meeting the ever-increasing needs of their communities, while climate change responses are likely to be reactive, ad hoc, and piecemeal.

The study demonstrated that a mixed methods approach is an effective way to assess the adaptive capacity of LGs in SA. The LGACI is a useful and efficient tool for providing a 'first pass assessment' of the relative adaptive

capacity of LGs in SA, while case studies enabled many underlying and interrelating aspects of adaptive capacity to be explored, under the themes of context, council and community. The LGACI could be used by governments and agencies to assist in allocating resources to build capacity within the local government sector. However, its validity and robustness could be improved through a review of the index especially in the light of findings from Stage 2 of the research. Further research could also include case studies involving additional councils.

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