

Challenges of adaptation for local governments

Local governments play a critical front-line role in Australia's response to the impacts of climate change and sea-level rise. Consistent approaches across all tiers of government are needed to support local adaptation action.

Key Points

Local government authorities are at the forefront of managing the impacts of climate change through land-use planning, development consent and asset management and protection.

While climate change impacts are manifest at the local level, the responsibility for adaptive action cannot lie solely with local government. Effective adaptation requires coordinated national leadership to support decisions made at the local level.

The priority policy need of local governments is for legal, technical, financial and governance frameworks that enable effective delivery across their broad range of responsibilities.

Local governments will better respond to the challenges of climate change in an environment where adaptive responsibilities are clear, response and evaluation frameworks are consistent across jurisdictions, approaches to mainstreaming climate change adaptation are implemented, and decisions are made on the basis of the best data and information.

Within their jurisdictions, local governments should evaluate physical vulnerabilities, to understand where action is most needed, and social vulnerabilities, to ensure that adaptation decisions do not contribute to inequity.

Communities should be empowered to build resilience to climate change, to reduce dependency on local governments, especially during extreme events.



NCCARF's evidence-based Policy Guidance Briefs address key challenges to effectively adapting Australia to a variable and changing climate, providing high-level policy guidance designed for use by policy makers at Commonwealth and State level. This Guidance Brief deals with the challenges of adaptation for local governments.

1 The climate context

Local government authorities are situated throughout the continent of Australia and will face diverse climate change impacts depending on their geographic location. Projected changes in Australian climate include (Whetton, 2011):

- Annual average warming by 2030 (above 1990 temperatures) of approximately 1°C across Australia, with warming of 0.7 - 0.9°C in coastal areas and 1 - 1.2°C inland.
- Drying in southern areas of Australia, especially in winter, and in southern and eastern areas in spring. Changes in summer tropical rainfall in northern Australia remain highly uncertain.
- Intense rainfall events in most locations will become more extreme, driven by a warmer, wetter atmosphere. Drying plus increased evaporation means soil moisture is likely to decline over much of southern Australia. An increase in fire-weather risk is likely.

Many local governments have responsibility for planning and development along Australia's coasts. Estimates of sea-level rise due to global warming vary depending on how ice cap melt is factored in. The most recent estimate from the Intergovernmental Panel on Climate Change (IPCC, 2007) is for an increase of 18-59 cm by 2090-99 compared to 1990. In a more recent paper (Church et al., 2011) models estimate a rise of 80 cm by 2100 compared to 1990, taking into account 'rapid ice flow'.

2 Current effects, impacts and issues

As of November 2012, there were 565 Australian local governments in urban, rural, peri-urban, inland and coastal areas. The responsibilities of councils across Australia vary between jurisdictions, reflecting differences in state and territory legislative and regulatory frameworks (ALGA, 2012). As a result, Australian local governments are characterised by a high degree of diversity in terms of their functions and revenue bases. These factors in turn affect their ability and capacity to respond to present-day climate risks and to plan for future climate change and sea-level rise.

Box 1: Climate Change Responsibilities of Local Governments. Source: DCCEE, 2012

- Administer relevant state and territory and/or Commonwealth legislation to promote adaptation as required, including the application of relevant codes, such as the Building Code of Australia.
- Manage risks and impacts to public assets owned and managed by local governments.
- Manage risks and impacts to local government service delivery.
- Collaborate across councils and with state and territory governments to manage risks of regional climate change impacts.
- Ensure policies and regulations under their jurisdiction, including local planning and development regulations, incorporate climate change considerations and are consistent with State and Commonwealth Government adaptation approaches.
- Facilitate building resilience and adaptive capacity in the local community, including through providing information about relevant climate change risks.
- Work in partnership with the community, locally-based and relevant non-government organisations, business and other key stakeholders to manage the risks and impacts associated with climate change.
- Contribute appropriate resources to prepare, prevent, respond and recover from detrimental climatic impacts.



Future effects, impacts and issues

Climate change will continue to be a driver of change that Australian local governments will be required to manage, in combination with other concerns such as shifting demographics, global economic trends and technological advances.

Key climate change considerations are likely to include:

- **Biophysical changes:** All councils will be faced with changing and uncertain incidence of extreme weather events, including floods, storms, droughts and heatwaves. Coastal councils will need to take account of rising sea levels, including the impacts of inundation and salinisation on aquatic and terrestrial ecosystems, agriculture and infrastructure. This is especially important in managing planning and development of infrastructure with long lifetimes.
- **Liability:** Without consistent planning legislation, or defined adaptation-related roles and responsibilities, councils may not be able to reject maladaptive development, which will create litigation risks.
- **Risk transfer:** Insurance is often quoted as a mechanism to transfer climate change risks. However, it is a market-based instrument that constantly adjusts to changing risk profiles, and insurers may choose to refuse cover (as has happened recently in Emerald and Roma with respect to flood insurance) or to raise premiums to unaffordable levels (as has happened in Bundaberg, again for flood cover), with 'knock-on' impacts for peace of mind, property values and marketability. It is not unreasonable to suppose that inability to obtain insurance against natural hazards could drive whole communities into decline.
- **Migration pressures towards resilient areas:** People may seek to relocate to regions of low risk exposure. In destination areas, this is likely to cause increased pressure on housing, infrastructure and planning services. In origin areas, councils will be faced with declining rate bases and revenue streams. It is likely that wage-earners will move first, simply because they have the financial capacity to do so, with the perverse effect that vulnerable members of society become concentrated in the areas of greatest risk.
- **Adaptation and mitigation:** Adaptation must be considered in a carbon-constrained context, and local governments will need to consider the sustainability of their adaptation activities. For example, addressing heat stress through increased use of air conditioners has implications for energy use and budgets, and increasingly so as the price of carbon is factored in.



Adaptation actions and policy

A number of specific climate change adaptation responsibilities are associated with local governments (Box 1). Local governments have themselves initiated additional actions to respond to climate risks. These include:

- policy development;
- drafting of adaptation plans and strategies;
- research; and
- obtaining grants for the implementation of adaptation projects and solutions.

Since 2008, there has been Australian Government funding to support approximately 150 climate change impact and adaptation assessments at the local government level (Preston and Kay, 2010). The Local Adaptation Pathways Program funded 40 projects in over 60 council areas to integrate climate change risk assessment into their decision-making processes. More recently, \$4.5 million was invested to demonstrate effective approaches to adaptation in the coastal zone. Thirteen projects received funding, mainly to local councils and council consortia, to develop leading practice approaches to better manage future climate risk to coastal assets and communities (visit www.climatechange.gov.au/government/initiatives/coastal-adaptation-decision-pathways).

In addition, some local governments have undertaken first-pass strategic assessment of potential climate change risks and awareness raising, through:

- local government insurance scheme risk assessments (e.g. NSW Statewide Mutual);
- risk assessment and planning programs driven by state and territory governments (e.g. NSW Integrated Regional Vulnerability Assessment Program and the Tasmanian Regional Climate Adaptation Program); and
- adaptation programs and products delivered via state Local Government Associations or equivalent.



Adaptation actions and policy ... continued

Lack of knowledge, capacity and authority to act are key barriers to implementing adaptation action at the local level. The increasingly political nature of adaptation decision-making, competing community interests, issues of legal liability and a rapidly evolving national adaptation policy landscape combine to make adaptation planning a challenging exercise for Australian local governments.

Local governments play a critical front-line role in Australia's response to the impacts of climate change. The priority policy need is for governance, technical and financial systems that enable local governments to deliver what is an increasingly broad range of responsibilities. Direct and indirect effects of climate change pose significant challenges to the Australian community, albeit with very different impacts depending on location. These impacts will affect all areas of local government responsibility. An enabling environment for local governments to effectively undertake adaptation planning and response is required.

5 Policy implications

Leadership, consistency and integration

1. Provide clarity on roles and responsibilities for adaptation planning across all levels of government.

Uncertainty regarding administrative responsibilities is a critical barrier to coordinated and proactive adaptation. While impacts are manifest at the local scale, adaptation is a national issue, since building resilience at the local level scales up to deliver enhanced national resilience.

Deferral of responsibility for action to the local scale alone is ineffective. Nationally coordinated leadership on adaptation is required to support local action. This may be top-down through, for example, a standing Ministerial Council of COAG on climate change. Or it may be bottom-up, representing local governments more explicitly, for example, the National Sea Change Task Force. There is need for:

- Nationally coordinated on-going governance.
- A clear framework outlining the roles and responsibilities of different levels of government, jurisdictions and community sectors. Despite significant discussion regarding roles and responsibilities, there remains a lack of clarity, resulting in continued uncertainty and a lack of direction for effective local adaptation planning.

2. Promote a shared approach and long-term commitment to manage the impacts of climate change.

Coordinated and long-term dialogue between governments will be required to address the impacts of climate change. There is need for:

- Mechanisms, bodies and activities to support and promote the establishment of committed partnerships and collaboration to address the impacts of climate change between all tiers of government and jurisdictions.

3. Understand legal liabilities for past and future decisions.

Local governments are responsible for making a broad range of decisions that are affected by considerations of climate change including, in most jurisdictions, for land use planning and development approval, that may expose them to legal liabilities. Exposure is determined through the courts on a case-by-case basis. There is need for:

- Support in understanding legal liabilities. This may include: exploring exposure through test cases in court; clarifying liabilities within particular legal frameworks at a state/territory level; sharing knowledge between councils on legal decisions as they are made; developing a nationally uniform legislative framework. The utility of these and other approaches in clarifying legal liabilities for local governments should be explored.

Building capacities: Financial, technical and organisational

4. Provide sustained, long-term financial support for adaptation planning.

One-off funding programs that support project-based responses to the impacts of climate change will not deliver the systemic changes required to reduce vulnerability. There is need for:

- A review of long-term sustainable financing strategies for adaptation. A range of opportunities should be explored, for example: the inclusion of a vulnerability factor within the Local Government (Financial Assistance) Act 1995 to direct funding to local governments based on differential social and environmental vulnerabilities to climate change impacts; developer pays practices; and tax levies.



Policy implications ... continued

- Mainstreaming of climate change within other funding schemes, for example, natural disaster management funding. This would assist local governments to improve infrastructure that has been destroyed. Currently the funding provided for natural disasters only replaces what was there 'like-for-like'. There is a need to explore funding mechanisms which encourage replacement of damaged infrastructure with more climate-resilient structures and/or rebuilding at less vulnerable locations.

5. Support climate change adaptation mainstreaming in local governments. Integrating climate change into day-to-day operational processes and decision-making is recognised as a tool to support effective adaptive decision-making. However, mainstreaming without due care can mean that adaptation to climate change impacts is neglected as other risks are seen to be more imminent. The need is for:

- Guidance and support to embed climate change risk management into due diligence across all council operations including, for example, asset management and financial management systems.
- Guidance on good practice approaches to mainstream climate change into local government processes.
- Support for local governments to implement organisational change to ensure climate change is considered across all areas of decision-making.

6. Provide tools, frameworks and information to support adaptation decision-making. Due diligence suggests that all decisions made at the local government level should consider climate change. Ideally, there should be consistency of approach across local governments. There is the need for:

- Access to data, information and databases that provide the information to underpin adaptation policy, for example, around land use planning.
- Technical studies to increase certainty in impact assessments, for example, improving models to assess flood and erosion hazard.
- Standardised and nationally consistent methods to incorporate climate change into planning and development decision-making at the local government level. Local government practitioners should be engaged in the development of these standardised frameworks.
- Support (financial and technical) to acquire and consolidate knowledge to inform adaptation decision-making, for example, knowledge on existing vulnerabilities due to properties located in the flood-plain. An important step in understanding future exposure is to first understand existing vulnerabilities.
- Guidance on assessment approaches to understand social vulnerabilities and issues of social equity, to ensure that adaptation decisions and actions do not impact negatively on the people involved.
- Tools and capacities to facilitate and direct behaviour change at the local scale, so that communities become more resilient to climate change.

A framework for change: Organisational and community change

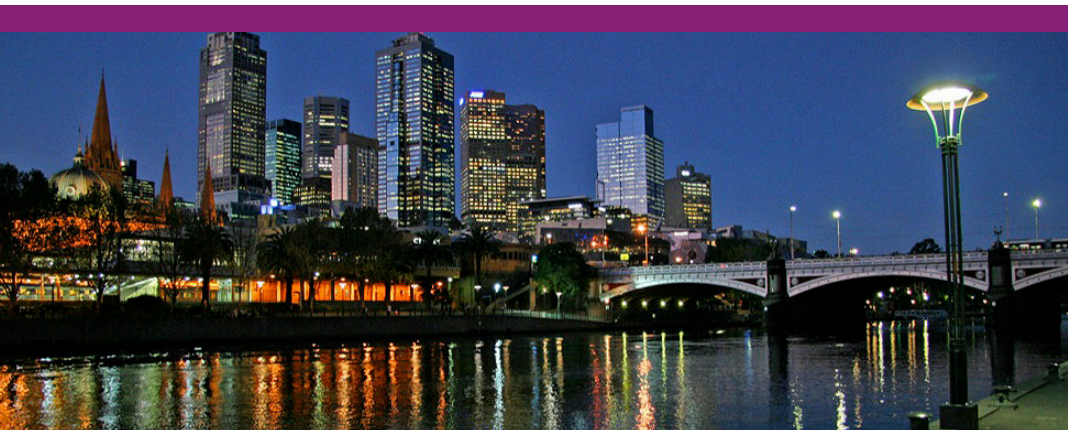
7. Development and monitoring of organisational and community capacity to adapt. Climate adaptation is about facilitating change from individual, to local, to national scales. Inconsistent messaging and lack of bipartisan support for climate change adaptation presents challenges for proactive responses by local governments. A lack of community buy-in is a barrier to adaptation planning. There is the need for:

- Political and local leadership to enhance community buy-in. The community needs to be given the opportunity to take more responsibility for its own resilience. Currently there can be a perception that disaster management is solely the responsibility of government. There needs to be a greater emphasis on individual and community preparedness through, for example, the provision of relevant, tailored information and sharing of experiences.
- Guidance and tools to monitor and evaluate adaptation action and adaptive capacity. Local governments seek guidance and support to embed monitoring and evaluation strategies that will (i) provide the evidence base to implement adaptive action; and (ii) monitor the effectiveness of implemented adaptive actions.



Approach

The policy guidance provided in this brief was developed based on a workshop held in Melbourne, Victoria. The workshop was attended by local government representatives from across Australia, Paul Burton (Griffith University), Jamie Pittock (Australian National University), Robert Kay (Adaptive Futures) and NCCARF staff.



NCCARF is producing a portfolio of twelve Policy Guidance Briefs in 2012–13 on critical climate change adaptation topics. For a complete list of available Policy Guidance Briefs, please go to: www.nccarf.edu.au/publications/policy-guidance-briefs

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