

University of Technology, Sydney

# LOCAL GOVERNMENT CLIMATE CHANGE ROUNDTABLE

4th May 2011





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# Agenda

UTS Function Centre, Building 10, 235 Jones St

**8.30am**      **Coffee/Tea registration**

**9.30am**      **Setting the scene**

- Facilitator: Martin Brennan, Senior Associate ICLEI – Local Governments for Sustainability
- Welcome by Professor Graham Sansom (ACELG) and Marie Waschka NCCARF)
- Overview of the day, recap desired outcomes (Martin Brennan)

**10.00am**      **Where are councils at? What do we know about their needs?**

- Brief overview of papers prepared by ICLEI and ALGA, with input by local government associations and practitioners
- Q & A discussion

**11.15am**      **Morning tea break**

**11.45am**      **In what areas is research well advanced? What are the gaps?**

- Brief overview of papers prepared by NCCARF and ACELG, with input by other researchers
- Q & A & discussion to include perspectives how well completed research is being applied and barriers to the application of research

**1.00pm**      **Lunch**

**1.45pm**      **Setting Priorities**

- Facilitator: Professor Stuart White, Institute for Sustainable Futures, UTS
- Recap key findings from the morning's discussion, and outline process for the afternoon
- Breakout groups to discuss key interests – mitigation strategies, adaptation strategies, governance and decision making and resourcing

**3.30pm**      **Break**

**3.45pm**      **Setting Sail!**

- Collaboration in following up agreed priorities
- Feedback on draft communiqué & next steps

**4.30pm**      **Drinks**



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# Lessons learnt from the former Cities for Climate Change Program and implications for future planning and resourcing

*Wayne Wescott, former CEO and Martin Brennan,  
Senior Associate ICLEI - Local Governments for  
Sustainability.*

## The Program

Local Governments for Sustainability (ICLEI) developed the Cities for Climate Protection (CCP) program (note that ICLEI used the terminology of “campaign”, which came from its more activist roots) in the 1990s. It was based on five milestones:

**Milestone 1:** Conduct a CO<sub>2</sub>-emissions inventory, analysis and forecast

**Milestone 2:** Set emissions reduction goals

**Milestone 3:** Develop a local action plan to achieve sustainable reductions in emissions

**Milestone 4:** Implement the climate action plan and quantify the benefits of policies and actions

**Milestone 5:** Monitor progress towards the reduction goals, and start the process for re-inventory and review of the plan

In June 1997, the Federal Government agreed to support a pilot program between the ALGA, Environs Australia and ICLEI (as ICLEI did not have a regional organisation at that time). After the one year pilot process, ICLEI Oceania was created and became responsible for the program through funding from the new Australian Greenhouse Office. In 2004, ICLEI Oceania began the NZ equivalent of CCP, called Communities for Climate Protection.

The CCP programs in New Zealand and Australia were voluntary programmes for CO<sub>2</sub> abatements run by local councils. The New Zealand program ran between 2004 and 2009, and was joined by 34 councils covering roughly 50% of the territorial councils with 83% of New Zealand’s population. The Australian program ran between 1997 and 2009, and had 238 participating councils covering roughly 50% of the local government areas with 84% of the Australian population.

Methodologically, ICLEI developed some key approaches:

- dividing Council activities into “corporate” (directly controlled) and “community” (indirectly influenced)
- carbon accounting practices that harmonised both nationally

(in particular in terms of the potential for double counting across sectors) and internationally (mainly in relation to methodologies of counting waste, but also in relation to key Intergovernmental Panel on Climate Change debates)

- working with the sector on the basis that CCP Councils would provide data to the sectoral representatives (ALGA and the state associations) for state and national advocacy: this had patchy effectiveness given the potential for competition between these organisations and scarcity of resources
- providing an international outlet at the annual United Nations Climate Conference of Parties, at which Australian and New Zealand Councils discussed their work among their global peers
- developing a reporting process that was timed to deliver data and material to the ALGA General Assembly in November/December each year.

## Lessons

### Climate change: Bundling sustainability issues

Climate change as a content area provided an opportunity for councils to bundle many different activities together. In CCP, these were energy, waste and transport, as these were seen as the emitters that were most directly controlled by councils and quantifiable.

### Milestones: Making complex processes understandable

CCP's milestones were a key feature of the program. The five milestones were a sequence that made sense to mayors, councillors and staff, and provided a map for progress. Councils would readily state that they were 'at milestone three' and there was some competition (not necessarily encouraged by ICLEI) associated with achieving milestones first, either nationally or in their state and region.

More importantly, the milestones broke down the complex culture change program into chunks that could be implemented. The standard for each milestone was set by ICLEI, and it was a requirement to meet that standard. This was the subject of some controversy, as some Councils felt

the standard was too high (for example, requiring a Council resolution in counting their emissions or developing their action plan).

ICLEI's view was that the process was important and needed to meet a certain standard to maintain credibility. ICLEI focused on the process rather than the outcome. Note, therefore, that though there was subtle persuasion used, the emissions reduction goals that were adopted by Councils (milestone two) were not required meeting a certain number.

### Measurement: Making one element a key indicator

The core indicator for the success of CCP was the reduction of CO2 emissions. By the end of 2008-09 Financial year, Councils reported to the CCP program that they had saved 18 million tonnes of CO2 emissions since the start of the program in 1997.

This number was powerful for two key reasons:

First, mayors, councillors and staff had a practical indicator that they could use to assess the success of the program (as opposed to the progress of the program through the milestones). Generally, councils used the goal that they had set as a proxy for this, as for most of the program there was a long time lag before Councils could see results.

Second, the Federal Government (both Ministers and staff) were persuaded by the size of the reductions and the conversion of them to the real economic cost of carbon emission. With the discussion through this period being that carbon could be costed at between \$20 to \$40 and beyond, the multiplication of this by 18 million was a demonstration of the direct potential savings to councils.

Note that ICLEI measured other indicators as well: in particular jobs created and dollars spent. In regional councils, job creation was seen as important, and it is true that many young staff started their work as interns counting carbon (one of the authors of this report met one such council staffer two weeks ago in NSW). As the program advanced into rural areas, this may have played a larger role.

## Capacity-building: Transferring skills

ICLEI defined its role early on as providing for the transferral of skills to councils in order for them to manage their response to climate change more effectively. ICLEI provided software, first on discs and then on-line, to CCP members, training in its use, workshops on milestone activities, and recognition of the achievement of actions.

This was an approach that tried to build the level of debate internally within councils and the sector on climate change. Key indicators of this change were the increase of ALGA General Assembly motions that referenced key issues relating to climate change, the use of CCP as a shorthand for “climate engagement”, and feedback from governments and consultants about the widespread use of the terminology and methodology of CCP.

One flaw in this approach was the constant churn of staff involved in the program both within ICLEI and in the councils. Staff tended to be younger in both cases, and saw involvement in CCP as a stepping stone to other tasks. Many ICLEI staff ended up in local governments while in local governments, staff were often moving among other environmentally-related areas such as waste and water.

## Partnership: Working across levels in councils

ICLEI decided early on to identify three levels of Council interaction:

- elected representatives
- senior managers
- operational staff.

Reflections on the successes and failures of the Local Agenda 21 work<sup>1</sup> of the early 1990s led ICLEI to constantly work to manage all three levels of interaction, as at any one point the program could become unstuck at any of the levels. Many energy programs, in particular, have focused on engineers within local government and neglected

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<sup>1</sup> Local implementation of the United Nations agenda for sustainable development, arising from Earth Summit held in 1992

the political underpinnings of the work.

Elected representatives are critical policy makers in councils, and an important interface with other levels of government as well as sensitive to the needs and approaches of their community organisations. Senior managers decided on resources and budgets, and tended to be focused on business cases. Operational staff needed tools to perform their work, and were keen on software, training, workshops, best practices and peer networking.

By focusing on all three levels, ICLEI took on a major task. There was a need to articulate the messages in a way that made sense to each audience, and this was both time consuming and changing rapidly. By the end of the program, elected representatives were responding both to their own dynamic (several years of CCP reporting) and to the wider spread of climate change information. Operational staff were keen for ever more effective tools, which meant significant investment by ICLEI in new programs and approaches.

## Recognition: Rewarding effort equally

ICLEI made a deliberate decision to avoid awards for excellence, as it was noted that these either went to the same small group of councils that had the necessary skills and resources, or were artificially spread across the sector in a way that undermined the notion of excellence.

Awards also promoted a sense of competition within the sector. Although this has often been seen as a good thing - in that it encourages effort and especially entices those councils that want to be seen as leaders - in a program like CCP it was critical that we encouraged “collaborative learning”. ICLEI was keen to ensure that councils learned lessons from each other (actions that worked, approaches that failed) rather than each learn for themselves.

Instead, therefore, there was a very strong focus on “recognition” of effort. This noted that wherever councils were they could move through the milestones and manage their climate impacts more effectively. Councils with few resources

could still understand where their emissions were coming from and which actions would be effective in reducing them.

An additional benefit of this focus was that it linked up elected representatives with their staff: Councillors often met their climate staff for the first time in the early days, and this was seen as very powerful for the staff member. The elected representative would both read the speech (the substance of which was written by the staff member) and commit, therefore, publicly to the approach, often inviting staff to take to the stage in recognition events.

### **Aggregation: The power of many small actions**

ICLEI celebrated the many actions that made a difference to climate change, from minor retrofits in public facilities, to major new waste management approaches. By putting together the many small actions that councils implemented across the country, impressive numbers could be reached.

This built on the natural advantage of a sector that is decentralised and everywhere. It allowed councils to work with the material that was in front of them, rather than imagine that they needed to work on one large project. This encouraged action now, rather than putting it off.

The transaction cost to this is the reporting of the actions. Similar to the household sector (which has a similar aggregation benefit), ICLEI needed a low-cost way to gather the information from CCP members to report their multiple actions. The annual reporting process became a very difficult process by the end of the program, both in its size and administrative requirements for ICLEI and council staff. Further automation of reporting and better incentives for prioritisation would have been key elements in the next generation of reporting.

## **Key Reflections**

We need to build upon the achievements of local councils in responding effectively to climate change by providing opportunities for the dissemination of exemplary case studies; and the facilitation of peer networks that encourages a

rigorous evaluation of methodologies, tools and outcomes, and builds political commitment. Information services to build capacity, share knowledge, and support local government in the implementation of sustainable development will require a new development and delivery mechanism.

In particular, for many rural and remote councils, the opportunity to respond to climate change and to meet broader sustainability objectives is limited by staff resources and expertise. Resource and information sharing at the regional level needs to be supported by research, training, and the development of regional policy frameworks for climate change responses.



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# Climate Change

Review of current Federal and State government climate change policy, including a brief analysis of gaps and opportunities. To be prepared by **Australian Local Government Association (ALGA)**.

## ***John A Pritchard (Executive Director Policy and Research)***

Climate change policy has layers of scientific and technical complexity, multiple entry points, streams of research and stakeholders as well as being the focus of intense political debate. Its development has not been without challenge however some progress is being made. Climate change is now embedded into the domestic political process and key decision-making processes of business, governments and the broader community.

Local government is not new to the diverse challenges facing communities from climate change. Many local governments have undertaken considerable work in the area. Strategies and initiatives (often not specifically identified as climate change initiatives) include: work related to ecological sustainable development; participation in the Cities for Climate Protection Program; a range of other such as biodiversity strategies; coastal zone management; asset management; land-use planning, emergency management; and community engagement and education.

The Australian Local Government Association (ALGA) and all state and territory local government associations support the need for action on climate change. All associations have climate change policies and have undertaken a range of activities to assist councils to address climate change within their jurisdictions. While leadership at the local level is important, the actions of local government at a corporate level and within the community are conducted in the context of the broader federal and state legislative and policy frameworks. Local government have strongly advocated for leadership and coordination at the national level, in particular by the Commonwealth Government.

The Commonwealth Government has adopted a broad framework to addressing climate change based on three pillars:

- Mitigating carbon emissions
- Adapting to unavoidable climate change
- Helping to shape global solutions.

The three pillars provide a conceptual framework for a range of relatively recent programs and initiatives that have been developed by the Commonwealth and state/territory governments. Australia's Fifth National Communication on Climate Change, prepared by the Australian Government Department of Climate Change (2010), is the most comprehensive reports on recent climate change initiatives and actions undertaken by all jurisdictions.



## Mitigating carbon emissions

The Carbon Pollution Reduction Scheme (CPRS) was the Australian Government's headline policy initiative to reduce emissions from 2008- 2010. The direct impact of the proposed CPRS on local government relates to waste being a covered sector under the scheme. As a result, emissions from landfills were to be included<sup>1</sup>. Following strong representation by ALGA and the waste sector, amendments were made to the design of the CPRS to make the scheme more practical. These amendments included the exclusion of legacy waste and landfills under 25kt CO<sub>2</sub> equivalent (except for those within a prescribed distance of neighbouring landfills).

In its submission to Government on the CPRS, ALGA noted that the indirect impacts of the CPRS (or a carbon price of around \$20 per tonne) on councils were estimated by the Australia Institute at around \$344m.

While there remained some outstanding matters between ALGA and the Government on the CPRS, the CPRS legislation failed to be passed by Parliament and has subsequently been abandoned.

The Government went into the 2010 Federal election with a commitment to develop a national consensus on climate change including a price on carbon. With the re-election of the Labor Government a multi-party committee on climate change has been established comprised of Government representatives, the independents, and the Greens. This committee is chaired by the Prime Minister and its purpose is to negotiate policy proposals that the Government could introduce (with a reasonable likelihood of being passed) into Parliament.

In February 2011 the Government announced its intention to introduce a carbon tax. At the time of writing the details of the proposal are not available. However, it is highly likely that key elements of the CPRS are likely to inform further consideration of 'pricing carbon' and/or any future emissions trading scheme (ETS) in Australia. Until the design and legislation is

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<sup>1</sup> Note the CPRS Bill was to include local government under the CPRS. Without explicit inclusion of local government in the Bill, local government was not captured by the National Greenhouse Energy Reporting Act

determined, it is difficult to assess the implications for local government of this new proposal.

ALGA's policy position is to support a price on carbon and to support a market-based approach to determine the price. While recognising the need for councils to contribute to the reduction of Australia's greenhouse gas emissions, ALGA and the sector more broadly will seek discussions with the Government on practical ways of reducing council and community greenhouse gas emissions, and limiting the cost impact of a carbon price that would need to be passed onto rate payers.

## Intergovernmental collaboration

It is important to recognise that since 2007 under the auspice of the Council of Australian Government (COAG) there has been a level of collaboration between all levels of government to develop a national policy agenda to address climate change. In April 2007, COAG endorsed a National Climate Change Adaptation Framework as the basis for jurisdictional actions on adaptation over the next five to seven years. The framework included possible actions to assist the most vulnerable sectors and regions, such as agriculture, biodiversity, fisheries, forestry, settlements and infrastructure, coastal, water resources, tourism and health to adapt to the impacts of climate change.

This Framework had two priority areas for potential action:

- 1.** Building understanding and adaptive capacity. This comprises significant new actions to identify and fill knowledge gaps to enable effective adaptation action at the national and regional levels, including:
  - the proposed 'Australian Centre for Climate Change Adaptation';
  - improved regional climate change information and tools for decision makers; and
  - integrated vulnerability assessments of climate change impacts.
- 2.** Reducing vulnerability in key sectors and regions, in particular, water resources, biodiversity, coastal regions, agriculture,

fisheries, forestry, health, tourism, and settlements. This will include:

- addressing critical knowledge gaps, much of which would be coordinated through the 'centre for adaptation';
- building sector relevant tools and information; and
- developing and implementing climate change action plans for vulnerable sectors.

The Commonwealth made a committed of up to \$26 million to establish and manage the Australian Centre for Climate Change Adaptation, \$100 million program funding for the Centre over five years, and \$44 million for the CSIRO Adaptation Flagship. These initiatives were to assist particularly affected sectors and regions, planning bodies, farmers, businesses and local government to better understand the impacts of climate change, to develop responses, and to provide more accurate information on localised climate change. In 2008 the National Climate Change Adaptation Research Facility (NCCARF) was established.

Another major headline area of collaboration was the National Water Initiatives (NWI) and the Murray-Darling Basin Agreement. The agreements outlined the pathway for water reform, such as a more cohesive national approach to the way Australia plans, manages, measures, prices and trades water. In the process, government funding was provided for a range of initiatives to facilitate reform and accelerate adaptation to a more balanced approach to sustainable water management.

In November 2007 COAG established a Working Party chaired by Minister Penny Wong which, among other things, consulted with jurisdictions on the development of the Emissions Trading Scheme (ETS), a plan for the development of the Mandatory Renewable Energy Targets (MRET), a national cooperative approach to long term adaptation issues, and progress on water reform. ALGA was a member of this Working Party.

Subsequent to this work, the Commonwealth Government announced the design of the CPRS, RET (20% renewable energy by 2020), and the continuation of water reforms included in the

National Water Initiative, in particular in the Murray-Darling Basin.

Under the auspice of the Working Party, state and territory government's policies and initiatives were reviewed against an agreed complimentary measures framework to ensure national consistency with the objectives and design of the CPRS.

## Adapting to unavoidable climate change

The development of a national cooperative approach between governments to adaptation has been complex. Climate change adaptation is a multi-disciplinary cross-cutting issue that involves significant collaboration between all levels of government, business and the community. Adaptation is an on-going process built upon risk assessment, risk management and prioritisation. Many of the institutional arrangements to support adaptation are in their infancy or are yet to be developed.

In December 2009 COAG agreed to establish a Senior Officials Sub-group to further progress a national approach to long term adaptation. One of the key areas of need is greater clarity on the roles and responsibilities of each level of government. ALGA is a member of this group. This work is yet to be fully considered by COAG.

While the collaborative by the COAG Working Party continued, the Australian Government released its adaptation policy position in February 2010. It outlines the Commonwealth's broad approach to the issues, and the need for each level of government, businesses and individuals to accept responsibility in adapting to climate change. Importantly, it also recognises that there are some areas which will benefit from collaboration.

The Commonwealth's approach to adaptation is best summarized as focussing on 'building the tools and information needed to underpin sound decision-making at a national level and coordinating the economic or regulatory reforms needed to better address climate change risks

where they may affect more than one jurisdiction<sup>2</sup>.

Areas of particular focus by the Commonwealth include, but not limited to:

- a series of Garnaut Climate Change Reports and Reviews;
- the Australian Climate Change Science Program aimed at assisting in projecting how climate change will affect such things as temperature, rainfall, drought, heatwaves, fire, weather, storm intensity and sea level;
- water modelling;
- coastal mapping;
- and an assessment of Climate Change Risks to Australia's Coast etc.

Climate change issues requiring national coordination on mitigation and/or adaptation continue to be managed through a number of ministerial councils, including:

- the Ministerial Council on Energy
- the Ministerial Council on Mineral and Petroleum Resources
- the Ministerial Council for Police and Emergency Management
- the Tourism Ministers' Council
- the Australian Transport Council
- the Natural Resource Management Ministerial Council
- the Local Government and Planning Ministers' Council (LGPMC).

Work of particular relevance to local government includes resilience and emergency response and recovery, collaboration and refocusing of Caring for Our Country to address biodiversity and natural ecosystems, and the development of a Draft National Planning Framework for Climate Change Mitigation and Adaptation by the LGPMC.

### State and territory collaboration

State and territory collaboration on climate change pre-dates the COAG initiatives. For example, the NSW Government established a Climate Change Impacts and Adaptation Research

Program (2005) to investigate key climate change impacts and vulnerabilities in the areas of health, bushfire risk, invasive species, biodiversity and coastal impacts. Academics and research bodies across the nation undertook research and received government support for a range of diverse initiatives, some driven by academic interest and others commissioned specifically to inform decision-making.

However, by 2007 there was a growing awareness of the mutual dependence of policies to address climate change at all levels, and COAG provided a more structured intergovernmental framework for collaboration and better coordination of government effort on climate change adaptation. State initiatives continue, but will benefit by more certainty about the national policy settings.

### Helping to shape global solutions

Internationally, the Kyoto Protocol (1997) was a turning point for action on climate change. The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialised countries and the European Union for reducing greenhouse gas (GHG) emissions. These targets amount to an average of five per cent against 1990 levels over the five-year period 2008-2012.

In early 2008 the Australian Government ratified the Protocol.

Commitments under the Kyoto agreement must be reviewed by 2012. In 2009 the United Nations Conference of Parties (COP) met for the 15th time in Copenhagen with the aim of reaching agreement on the successor to the Kyoto Protocol. The Australian Government adopted a negotiating position in Copenhagen to reduce Australia's carbon pollution to 25 per cent below 2000 levels by 2020 if the world agrees to an ambitious global deal to stabilise levels of greenhouse gases in the atmosphere at 450 parts per million CO<sub>2</sub> equivalent or lower. However, it also recognised that if the world is unable to reach agreement on a 450 parts per million target, Australia will still reduce its emissions by between 5 and 15 per cent below 2000 levels by 2020. A global agreement was not reached at

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<sup>2</sup> *Fifth National Communication on Climate Change*, prepared by the Australian Government Department of Climate Change 2010



Copenhagen, and international negotiations are continuing.

## Gaps

There are a plethora of research initiatives, small climate change programs, and initiatives that are sponsored by governments at all levels. At a strategic level, COAG has provided a valuable forum to develop a national approach to climate change and, where possible, align policies and programs. The Commonwealth at a national level is taking the initiative in relation to the mitigation by attempting to introduce a carbon price, and ultimately an emissions trading scheme. This has been argued to be the most effective measure to reduce emissions to the levels required to meet Australia's international commitments. Details of this initiative are still being developed. Uncertainty of the future of political debate and design details of a carbon price creates opportunities to consider complimentary measures to help reduce emissions at a local level. However, it would be expected that funding for any such initiatives would be limited.

In 2010 ALGA, in partnership with state and territory associations, convened a facilitated national Climate Change (local government) Leaders Forum. A total of 38 participants attended. Participants were nominated by all state and territory associations and drawn from the state associations and the NT, as well as selected councils within their jurisdictions. Four key resource people were invited to provide additional expert advice to assist the process including representatives from the Commonwealth Scientific and Industrial Research Organisation CSIRO, the Bureau of Meteorology (BOM), the Commonwealth Department of Climate Change and Energy Efficiency, and insurance brokers of the Jardine Lloyd Thompson Group. Following the Forum the ALGA Board subsequently endorsed a Climate Change Position Paper and the ALGA Climate Change Implementation Plan 2010-14. The plan is based on identified gaps and priority needs of local government. Nine policy outputs are included in the ALGA Climate Change Implementation Plan.

These are:

- to improve local data and information to assist councils to address climate change;

- to accelerate risk assessment and risk management planning across local government;
- to embed climate change into local government strategic and corporate plans;
- integration of council plans with regional plans;
- a shared approach to legal liability and litigation arising from climate change;
- greater clarity on roles and responsibilities, in particular on the management of public assets;
- a national technology platform to share information, resources, templates, ideas and plans;
- nationally consistent communication and locally relevant education templates; and
- policy alignment between the three levels of government.

## Opportunities

ALGA is currently working through the Plan, and working with state and territory local government associations and partners to deliver its outcomes. Each of the outputs identified above provide opportunities for further collaboration between key organisations (see Attachment 1 – Summary of National Gaps, Opportunities and Key Actors\* Adapted from the ALGA Climate Change Implementation Plan 2010-2014).

## Further Reading

Fifth National Communication on Climate Change, prepared by the Australian Government Department of Climate Change 2010  
<http://www.climatechange.gov.au/publications/international/nc5.aspx>

National Climate Change Adaptation Framework is at  
[http://www.coag.gov.au/coag\\_meeting\\_outcomes/2007-04-13/docs/national\\_climate\\_change\\_adaption\\_framework.pdf](http://www.coag.gov.au/coag_meeting_outcomes/2007-04-13/docs/national_climate_change_adaption_framework.pdf)

## Attachment 1

Summary of National Gaps, Opportunities, and Key Actors adapted from the ALGA Climate Change Implementation Plan 2010-2014

GAP	OPPORTUNITY	KEY ACTORS *
Locally relevant data (regional and local) to assist councils decision-making and action.	Improved local and regional data.	COAG, Australian Government, CSIRO, BOM, ABS, NCCARF, Geoscience Australia, state and territory associations.
Assistance to build knowledge of the risks and risk management strategies needed under likely scenarios.	Accelerate risk assessment and risk management planning across local government.	Australian Government, Mutual Insurance Schemes through state and territory local government associations.
Commitment to address climate change at the whole of council level.	Embedding climate change into local government strategic and corporate plans.	Government Skills Australia and the Australian Centre of Excellence for Local Government, state and territory local government associations, professional officers associations, tertiary education sector.
Strategic linkages between climate change plans to address the effects at different scales.	Integration of council plans with regional plans.	State and territory associations; state, territory governments; Regional Organisations of Councils (ROCs); Catchment Management bodies.
Legal certainty.	A shared approach to legal liability and litigation arising from climate change.	Commonwealth, state and territory governments, COAG, Attorney Generals Departments.
Lack of clarity in roles and responsibilities of respective levels of government, with particular reference to the management of public assets.	Greater clarity on roles and responsibilities, in particular on the management of public assets.	COAG, Climate Change Select Council, Transport and Infrastructure Select Council.
Ad hoc research priorities and poor matching with applied needs.	A national technology platform to share information, resources, templates, ideas and plans, and a consistent meta-tagging methodology to aid discovery of relevant information.	National Climate Change Research Adaptation Framework (NCCRAF), Australian Climate Change Adaptation Research Network for settlements and Infrastructure, Tertiary Education sector.
Community education	Nationally consistent communication and locally relevant education templates to facilitate community education by councils.	ALGA, state and territory associations, key non-for-profit sector leaders.
Inconsistent approaches to address climate change across jurisdictions.	Policy alignment between the three levels of government.	COAG, Climate Change Select Council.

\*Key Actors are not limited to those listed, and includes councils as partners.

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# Status of Local Government Climate Change Adaptation Research in Australia

*By Donovan Burton, Stakeholder Engagement, National  
Climate Change Adaptation Research Facility*

## Introduction

Local governments play a critical role in identifying and implementing climate change adaptation actions for settlements, infrastructure and the natural environment. Recent recognition that Australian local governments are at the coalface of climate change impacts and implementation planning has seen a step change increase in research in this field during the past 3-4 years. This discussion paper attempts to capture the climate change adaptation and local government research that is currently being undertaken by a range of institutions.

For ease of reading it is grouped into the following categories:

- Research and/or actions being undertaken by local governments
- Research being undertaken by academic institutions and the CSIRO

The scope of this paper incorporates a broad spectrum of the climate change adaptation pathway, including climate change risk assessments, adaptation plans as well as issues associated with implementation and governance (e.g. adaptive capacity).

## Local Government Actions

In recent years many local governments have undertaken climate change risk assessments and/or adaptation plans. Many of these have been a result of two Australian Government funding rounds of the Local Adaptation Pathways Program (LAPP). Since its inception in 2007, the purpose of the LAPP has been to assist local governments to undertake climate change risk assessments and adaptation plans.

Round one of the LAPP funding saw 60 councils involved in 33 projects, with the Australian Government providing \$1.5 million in funding. As round one funding focused on urban and coastal environments, a second round of funding (round two) was established, focusing on regional and remote councils. In this round a total of 30 councils (across seven projects) shared a funding pool of \$874,000<sup>1</sup>.

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<sup>1</sup> Australian Government Department of Climate Change and Energy Efficiency (DCCEE) (2010) Local Adaptation Pathways Program, available from <<http://www.climatechange.gov.au/government/initiatives/lapp.aspx>>.



The Australian Government has also provided \$200 million for its Strengthening Basin Communities initiative that, in part, is used to explore the impacts of climate change on water availability for communities in the Murray Darling Basin<sup>2</sup>.

Projects outside the above funding rounds have also been undertaken by many local governments (e.g. NSW Echelon Project: Moreton Bay Regional Council, Sunshine Coast Regional Council, Darebin City Council, Brisbane City Council, and Coffs Harbour City Council; SEQ Region: Sydney Coastal Catchments, and Somerset Regional Council) although further research is required to identify all non LAPP projects. In general the self-funded projects explore climate change risks, adaptation plans, planning studies (e.g. prior to creation of planning schemes), and insurance-related risks<sup>3</sup>.

Local government issues are also reflected in the recently awarded Settlements and Infrastructure grants from NCCARF, which include a project by Rockhampton Regional Council, Geosciences Australia (Reforming Planning Processes Trial: Rockhampton 2050), and the Local Government Association of South Australia (development of tools that allow local governments to translate climate change impacts on assets into strategic and operational financial and asset management plans).

The states and territories have also been undertaking a range of climate change research initiatives, and these are covered briefly in the ACELG Working Paper 'Australian Local Government and Climate Change'<sup>4</sup>. This paper also covers initiatives by local government associations, regional organisations, and also ICLEI – Local Governments for Sustainability.

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<sup>2</sup> Australian Government Department of Sustainability, Environment, Water, Population and Communities, <http://www.environment.gov.au/water/programs/basin-communities/index.html>.

<sup>3</sup> For example see Echelon <[http://www.echelonaustralia.com.au/case\\_study\\_climate.aspx](http://www.echelonaustralia.com.au/case_study_climate.aspx)>; Sunshine Coast Regional Council <<http://www.sunshinecoast.qld.gov.au/sitePage.cfm?code=cc-strategy>>

<sup>4</sup> Pillora, S. (April 2011) 'Australian Local Government and Climate Change', available from <<http://www.acelg.org.au>>

## Academic Institutions and the CSIRO

The following attempts to briefly capture the broad spectrum of climate change adaptation research that may be relevant to local governments, and is grouped alphabetically by organisation. There is no doubt that this paper does not capture all research being undertaken in this rapidly advancing field – and as such the author invites readers to help update this paper<sup>5</sup>.

### Australian National University (Climate Change Institute)

- Host of the NCCARF Human Health Network
- Financing Adaptation to Climate-Induced Retreat from Coastal Inundation and Erosion.

### Bond University

- Beach and Surf Tourism and Recreation Australia in Australia: Vulnerability and Adaptation.

### Commonwealth Scientific and Industrial Research Organisation (CSIRO – Climate Change Adaptation Flagship)

The CSIRO has a strong research focus on climate change adaptation with a wealth of projects exploring local government challenges, these include:

- Improving Local Government Communication about Sea Level Rise to Residents (with James Cook University)
- CSIRO's Our Resilient Coastal Australia (ORCA): Coastal Research for Informed Decision Making
- Your Development: Creating Sustainable Neighbourhoods
- Managing and Allocating the Risks of Sea Level Rise for Coastal Property
- Future vulnerabilities – assessing vulnerability and adaptive capacity to identify priorities for adaptation or transformation programs
- Future climates – understanding the information needs of different stakeholders and delivering appropriate information on climate variability and change to support adaptation
- Future adaptations – understanding how different stakeholders make decisions about

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<sup>5</sup> Coastal projects have been gleaned from Project Summaries report presented at the Coastal Research Forum 28<sup>th</sup> March 2011

adaptation, developing adaptation options suited to different regions and communities, and analysing the benefits of adaptation and key policy actions through modelling

- Future drivers – understanding how climate change will affect Australia’s international comparative advantages, and how changes elsewhere in the globe (particularly in the Asia-Pacific) will affect Australia.

Multiple working papers including stakeholder engagement, benchmarking, adaptive capacity and coastal inundation<sup>6</sup>.

#### **Curtin University**

- Coastal Collaboration Cluster: Enabling Better Science Uptake in the Governance of Australia’s Coastal Zone.

#### **Deakin University**

- Facilitating Community Discussion of Alternative Responses to Adapting to the Impacts of Climate Change on Coastal Communities.

#### **Geoscience Australia**

- Impacts of 2011 Extreme Weather Events in Queensland.

#### **Griffith University – (Griffith Climate Change Response Program) (Also hosts NCCARF)**

- Hosts NCCARF
- Hosts Water Resources & Freshwater Biodiversity Network
- South East Queensland Climate Adaptation Research Initiative
- Future coastlines: Modelling Impacts of Extreme Events on Coastal Environments
- Historical Case Studies of Extreme Events: Storm Tides
- Climate Change, Health Impacts and Urban Adaptability: Case Study of Gold Coast City
- Urban Planning to Adapt to Climate Change: Ecosystem, Biodiversity and Urban Resilience
- Governance, and Urban and Regional Planning for Adaptation
- Achieving Adaptation in Coastal Communities: Coastal Processes, Risk Perception and Policy Responses.<sup>7</sup>

<sup>6</sup> For more detail see <<http://www.csiro.au/resources/CAF-working-papers.html#1>>

<sup>7</sup> For more information see <<http://www.griffith.edu.au/research/research->

#### **James Cook University**

- Hosts of the Terrestrial Biodiversity Adaptation Research Network
- Linking Social Science and Ecology to Understand the Vulnerability of Coastal Societies to Changes in Coral Reef Resources.

#### **Macquarie University (Climate Futures)**

- Assessing Climate Change Adaptation Options for Local Government.

#### **Monash University**

- Advancement of cohesive crack approach to model shrinkage and load induced cracking in multi phase soils.

#### **National Climate Change Adaptation Research Facility (NCCARF)**

- Local Government Case Study on Implementing Adaptation Actions
- Reforming Planning Processes Trial: Rockhampton 2050
- Development of Tools that Allow Local Governments to Translate Climate Change Impacts on Assets into Strategic and Operational Financial and Asset Management Plans<sup>8</sup> - A recent call for expressions of interest from NCCARF for Social, Economic & Institutional Dimensions of Climate Change (totalling \$5 million) has just been completed, with possible local government-specific research outputs.<sup>9</sup>

#### **Queensland University of Technology**

- From Science to Policy: Quantifying and Managing the Risk of Mosquito Borne Disease in the Context of Climate Change.

#### **Royal Melbourne Institute of Technology (RMIT) - Climate Change Adaptation Program**

- Hosts of the Emergency Management Network
- Framing Adaptation Responses in the Victorian Context
- Water Recycling

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[excellence/griffith-climate-change-response-program/projects](http://www.griffith.edu.au/research/research-excellence/griffith-climate-change-response-program/projects)>

<sup>8</sup> An ACCARNSI project (ACCARNSI one of eight Adaptation Research Networks hosted by NCCARF)

<sup>9</sup> See <<http://www.nccarf.edu.au/>> after May 2011 for further announcements

- Understanding the City of Melbourne’s Heat Island Through Time and Space.

Other projects which cross over local government applications include agent based modelling for emergency response; resilience of sea ports; as well as international studies.<sup>10</sup>

#### **Swinburne University of Technology**

- New Paradigms for Urban Public Transport Planning in Australia: Assessing the Capacity of Institutions and Infrastructure.

#### **University of Adelaide**

- New methods for improving active adaptive management in biological systems.

#### **University of Melbourne**

- Hosts the Social, Economic and Institutional Dimensions of Climate Change Adaptation (NCCARF-SEI) Network and the Primary Industries Network
- Equitable Local Outcomes in Adaptation to Sea Level Rise
- From Prediction to Action: Responding to Rapid Ecosystem Shifts Under Climate Change.

#### **University of NSW**

- Hosts Australian Climate Change Adaptation Research Network for Settlements and Infrastructure (ACCARNSI) and Climate Change Research Centre. They are also members of the Australian Universities Climate Change Consortium (UCC).

#### **University of Queensland**

- Climate Change Adaptation and Resilience-Building Needs within Management of Social-Ecological systems – project under the Global Change Institute.

#### **University of the Sunshine Coast**

- iClimate: a searchable database on climate change impacts and adaptation in Australia, through the CSIRO and the National Climate Change Research Facility – as part of the South East Queensland Climate Adaptation Research Initiative.

#### **University of Sydney**

- Planning for Climate Change Adaptation in Coastal Australia: State of Practice.

#### **University of Tasmania**

- Hosts Marine and Biodiversity Network
- Climate change adaptation law and policy
- Climate change impacts and risks for health at whole-of-community level.

#### **University of Technology, Sydney**

- Integrating remote sensing, landscape flux measurements, and phenology to understand the impacts of climate change on Australian landscapes.

#### **University of Wollongong**

- A Model Framework for Assessing Risks and Adaptation to Climate Change on Australian Coasts.

## **Discussion**

### **Consideration of Synergies**

Although there is a vast array of research exploring adaptation issues for local government, there has been no real effort to align methodologies (and so a view is taken by the author that they should be aligned). It is of interest to briefly note the types of differences between past and current research:

- The use of differing climate change models and IPCC scenarios
- Both scoping and more detailed risk assessments
- Use of differing climate platforms (e.g. OzClim, SimCLIM, CSIRO outputs)
- Use of differing downscaling techniques
- Differing risk assessment methodologies (e.g. LAPP projects had to follow DCCEE AS/NZS 4360 guidelines)
- Different scope (e.g. council operations only versus community and economic impacts).

Given the above, it is very difficult to compare climate change sensitivities between councils (e.g. one council may seem more exposed to flash flooding simply because a higher climate perturbation was applied. This especially is problematic when attempting to align regional

<sup>10</sup> For more information see <<http://www.global-cities.info/climatechange/projects>>



adaptation strategies when mixed risk assessments have been used.

## Tangible Applications

As climate change adaptation research is still in the early stages of development, it comes as no surprise that little is yet to be filtered down into many Australian local government planning instruments.

An example of research that has guided local government planning is the Queensland Inland Flood Study. This research led to State's general advice on precipitation increases for flood studies (i.e. 5% increase in precipitation per 1°C of average global warming).

## Researching Barriers to Application

Given the above, showing the plethora of local government focussed climate change research and minimal ground level application, it is fair to assume that directed research exploring implementation is required. Some of the potential obstacles between research and applications (based on the authors' experience in the adaptation industry) may include:

- Researchers may have little experience with the end user (LGAs) and as such not clearly understand the needs of LGAs
- Climate change adaptation is a reasonably new area of research and some researchers have a better understanding/experience of the issues than others
- e and local directions – ultimately local governments are an instrument of the state and have the subordinate role
- Funding availability – small budgets may lead to scoping assessments of climate change risks only, larger budgets are required for detailed assessments
- Research may be too “academic” – often an issue facing councils<sup>11</sup>

## Concluding Remarks

A plethora of local government specific climate change research is being undertaken, although

most is in the nascent stages. This author believes that we are at a crossroads where, without clear recognition and intervention at the state level, the research may merely be academic. As an instrument of the state, local governments are bound by their constitutional recognition, and ultimately climate change considerations in local planning instruments need approval from above.

It should also be recognised that there is very limited research in sectors that are key stakeholders with local governments (e.g. adaptation research for the property development industry, energy and ICT providers, banking sector and insurers). Local governments are part of a system – and without a systems approach, researchers may fail to see that some of the barriers and opportunities for action on climate change will be driven by these stakeholders.

## Recent Relevant Publications

The following recent publications may be of use for future reading to help explore the issues further:

Abel, N, Gorddard, R, Harman, B, Leitch, A, Langridge, J, Ryan A, and Heyenga, S (2011) *'Sea level rise, coastal development and planned retreat: analytical framework, governance principles and an Australian case study, in Environmental Science and Policy, Vol 14, Iss 3, pp.279 -288*

Bonyhady, T, Macintosh, A and McDonald, J (Eds.) (2011) *'Adaptation to Climate Change: Law and Policy'*, Fedearthion Press

Boyer, H, Newman, P and Beatley (2009) *'Resilient Cities: Responding to Peak Oil and Climate Change'*, Island Press

Calthorpe, P (2010) *'Urbanism in the Age of Climate Change'*, Island Press

Jones, R. N. and Preston, B. L. (2011), *Adaptation and risk management. Wiley Interdisciplinary Reviews: Climate Change*, 2, pp. 296–308

<sup>11</sup> This seems to be an issue not unique to Australia – see Moser, S. C., 2009a. 'Now More Than Ever: The Need for More Societally Relevant Research on Vulnerability and Adaptation to Climate Change', *Applied Geography*, Available from <<http://www.sciencedirect.com/science/article/B6V7K-4XHJX6Y-1/2/453fc3af3ee293d41baa640a1d6fd89b>>

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# Australian Local Government and Climate Change

*Paper prepared by Stefanie Pillora, ACELG*

## Introduction

The Australian Centre of Excellence for Local Government (ACELG) is pleased to be hosting the climate change roundtable at a time when there is renewed attention on our responses as a nation. The Climate Commission claims that 2011-2020 decade is the crucial decade in terms of whether we can get on top of the climate change challenge or not.<sup>1</sup> Local government, along with other sectors of Australian society, need to ensure the effectiveness of their responses to this issue.

This paper provides background information to workshop participants on the interests of the ACELG network in the topic of climate change, an overview of the ACELG working paper 'Local Government and Climate Change', a summary of the issues raised in that paper that warrant further attention, and a list of the desired outcomes of the roundtable.

## Why Climate Change is a focus of ACELG research

ACELG, supported by the Federal government, is a unique collaboration of universities and professional bodies committed to the advancement of local government. ACELG's activities are grouped across six program areas, including a national research program that supports policy development and helps address challenges facing local government. Researchers funded by ACELG are required to consult with practitioners in the development of their research to ensure the relevance and practical application of the research.

In consulting senior local government managers from across Australia about the priorities for the ACELG research program, climate change emerged as one of the top ten critical issues.<sup>2</sup> As a result, ACELG is focused on meeting the needs of managers in their responses to, and understanding of the issue of climate change.

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<sup>1</sup> <http://climatecommission.gov.au/>

<sup>2</sup> Mark Evans (2010) *Leading the Local State – What skills local government leaders say they need and why*, paper prepared for the Australian Centre of Excellence for Local Government.

Another of ACELG's key program areas focuses on the particular needs of local government in rural and remote areas. Many of these councils are already struggling with the cost of essential services and are now faced with additional challenges of social costs and infrastructure management related to climate change adaptation.

## Interests of ACELG consortium and program partners

The national associations within the ACELG network are looking for new ways to support their members respond effectively to climate change.

- **The Local Government Managers Association National (LGMA National)** is looking to establish a 'National Local Government Climate Change Think Tank' and is currently facilitating fellowships to the United States, which involves six Australian local government practitioners travelling to the US for four weeks to undertake studies into climate change initiatives by US local governments.
- **The Institute of Public Works Engineering Australia (IPWEA)**, which has 2000 members across Australia, recognises that public works engineers and technical staff can make a critical contribution to responding to climate change, and are seeking to be actively involved in providing access to information and tools and guidelines which can assist practitioners.
- **The Australian Local Government Association (ALGA)** which is represented on the ACELG Board has included climate change as a key priority in their Strategic Plan 2011-2014 and endorsed a Climate Change Implementation Plan. ALGA policy staff support the need to take a fresh look at current climate change research, and how it is being translated into practice by councils. They are also interested in the extent to which actions around climate change are being evaluated.

The ACELG network also includes several University researchers who are contributing to local government climate change related

research:

- **Dr Erica Bell**, University of Tasmania (UTAS) has research experience in the health impacts of climate change and tools to assist local government.
- **Professor John Martin** represents La Trobe University on the committee overseeing the Victorian Centre for Climate Change Adaptation Research, a consortium of five universities (University of Melbourne, Monash University, La Trobe University, Royal Melbourne Institute of Technology, and Deakin University) to undertake research in climate change adaptation, and has an interest in climate change adaptation in regional Australia
- **Professor Stuart White** and senior staff from the Institute of Sustainable Futures at the University of Technology, Sydney provide research assistance to councils in implementing energy efficiency measures and supporting renewable energy options
- **Professor Barbara Norman** from the University of Canberra has published papers related to coastal planning, sustainable cities, climate change adaptation and coastal and urban governance, and is represented on the Coasts and Climate Change Council.

## ACELG Working Paper 'Local Government and Climate Change'

In 2010 ACELG commissioned the working paper 'Local Government and Climate Change'<sup>3</sup> which was designed to provide a snapshot of what is happening in Australian local government in relation to climate change, and provide a resource for local government elected representatives and managers.

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<sup>3</sup> Pillora, S. (June 2010, updated April 2011), Australian Local Government and Climate Change, available at <http://www.acelg.org.au>

Topics covered by the paper include:

- Summary of the science of climate change and related sources of information for councils
- Likely impacts of climate change at the local government level
- Federal government initiatives, support and funding
- Actions by local government representative bodies
- Progress reports and case studies from councils that provide examples of significant achievements by councils in terms of both climate change mitigation and adaptation.

It was felt that for those at early stages of developing climate change policies, information on the existing policy context, the details of federal and state government targets to reduce greenhouse gas emissions, programs to assist the community achieve these targets, and details of guidelines and resources to assist decision makers adapt to unavoidable climate change would be of particular value.

The working paper also canvassed several issues that warrant further attention and discussion. These are summarised below.

### Information and research needs

- A high priority identified by councils is the need for specialist localised information on effects, impacts and responses, and consistent messages from all key sources to enable decisive action by local authorities
- Research on legal risks, in particular in relation to local authorities acting or not acting on development in highly vulnerable areas.

### Planning guidance from state and federal government agencies

- Councils are looking for support in prioritising actions and expenditure in response to risk factors in the context of limited revenues and many unknowns in terms of specific impacts
- Councils are also calling for more backing by their state government planning agencies in enforcing existing planning guidelines, for example floodplain management guidelines,

and responding to the need for back-zoning in vulnerable areas.

### State and territory government funding and support

- State and territory governments provide limited direct funding to councils for climate change related initiatives
- While some councils are able to fund their own initiatives, state governments need to carefully examine how to further assist those councils with limited resources – many of which are located in areas most vulnerable to climate change impacts.

### Federal government funding and support

- The main recent funding program for adaptation planning by councils, the Local Adaptation Pathway Program (LAPP), provided a small amount of money for recipient councils to hire an external consultant (approved by the Federal government) to carry out a risk assessment
- In response to concerns raised about aspects of the LAPP, including the need for the learning from completed projects shared more widely, the Australian Government with the support of ICLEI is hosting a forum for LAPP participants on 18th May 2011 to provide feedback which is designed to contribute to the Government's policy agenda.

### Guidance and resourcing offered by local government associations

- Local government associations play a key role in representing council interests on the issue of climate change, and providing resources, training and support to member councils. They are also the key point of contact when governments, research institutions and other organisations want to interact with the sector.
- However not all state and territory associations have a full-time officer dedicated to climate change policy work. In effect less than 10 people are employed to work on behalf of Australian councils around climate change on a state or territory basis, and there is no full time policy officer working on behalf of the sector nationally. This has clear implications for the level of resourcing and



representation that is possible, and is linked to the reliance by many councils on external consultants.

### Local politics

- The views of the political parties to which some councillors belong, and those of the interest groups who influence councils, understandably have a bearing on the policies and actions of individual councils
- There are ongoing challenges for public agencies, including councils, in communicating the science and public policy around climate change. What are examples of effective practice? What could be offered to the sector to support their ongoing engagement work?

Since the dissemination of the working paper, ACELG researchers have been engaged in conversations with a range of stakeholders about the needs identified above. These exchanges led to the decision to bring researchers and practitioners together to better understand the research and policy gaps and how they might be addressed. The National Climate Change Adaptation Research Facility (NCCARF), which has an interest in supporting local government, is also sponsoring the roundtable. NCCARF is contributing its knowledge of the broad spectrum of adaptation research currently underway, and the implications for the application of that research by local government. The background paper provided by ALGA includes a summary of the intended policy outputs of the ALGA Climate Change Implementation Plan. This will provide a useful framework for discussion on policy and on the governance arrangements needed to support action at the local level.

## Desired outcomes from the May 2011 Climate Change Roundtable

### Short term outcomes

- Build a common understanding amongst leading local government practitioners, representatives and researchers about 'where councils are at' in terms of both adaptation and mitigation.

- Identify the gaps in research and policy support available to the sector, especially for smaller councils.
- Identify a priority research gap for the next phase of ACELG research as well as actions that could be taken by ACELG consortia partners and other organisations.
- Publish papers and roundtable outcomes on the ACELG website.

### Longer term outcomes

- Build interest and commitment by council CEOs and Mayors in taking a stronger lead on climate change issues
- Facilitate the integration of climate change issues into leadership and management training
- Inform Commonwealth Government policy as it relates to local government and climate change

The combined knowledge and insights of participants who are coming together with a willingness to explore better ways of working and using resources will greatly assist in meeting these desired outcomes.

Further comments or feedback can be made to **Stefanie Pillora** ([stefanie.pillora@acelg.org.au](mailto:stefanie.pillora@acelg.org.au)).

## About ACELG

ACELG is a unique consortium of universities and professional bodies that have a strong commitment to the advancement of local government. The consortium is led by the University of Technology Sydney's Centre for Local Government, and includes the University of Canberra, the Australia and New Zealand School of Government, Local Government Managers Australia and the Institute of Public Works Engineering Australia. In addition, the Centre includes three program partners to provide support in specialist areas and extend the Centre's national reach: the Australian National University, Charles Darwin University and Edith Cowan University.

## Program Delivery

ACELG's activities are grouped into six program areas:

- Research and Policy Foresight
- Innovation and Best Practice
- Governance and Strategic Leadership
- Organisation Capacity Building
- Rural-Remote and Indigenous Local Government
- Workforce Development