



QUEENSLAND GOVERNMENT-BRISBANE CITY COUNCIL



TRADING HOURS WORKING GROUP

**Minutes of meeting  
17 November 2009  
8:30 - 9:30am**

**1. Welcome / apologies**

In attendance:

- Mr Ken Smith (Chair), Dept. of the Premier and Cabinet
- Ms Pamela Muir, Dept. of the Premier and Cabinet
- Mr Greg Scroope, Brisbane City Council
- Mr John Beirne, Brisbane City Council
- Mr Leo McNamara, Queensland Ambulance Service
- Insp. Brad Little, Queensland Police Service
- Mr David Hart, Dept. of Employment, Economic Development and Innovation
- Ms Linda Woo, Dept. of Employment, Economic Development and Innovation
- Ms Kath McCabe, Dept. of the Premier and Cabinet

Apologies:

- Mr Ryan Huelin, Queensland Transport
- Sup't Shane Doyle, Queensland Police Service
- Mr Mike Sarquis, Dept. Employment, Economic Development and Innovation

Action:  
Attendees and  
apologies  
noted

**2. Background and context**

Premier and Lord Mayor have held discussions about trading hours and violence in Brisbane's entertainment precincts - identified need for collaboration.

Police union, emergency department physicians, ambulance officers and others have proposed a 2am closure of licensed premises to curb alcohol-related violence.

Number of other processes already underway:

- Parliamentary Committee looking at trading hours and other issues
- Moratorium in place on applications for extended trading hours
- Other work in relation to glassing (not limited to entertainment precincts)
- This group has been asked to consider:
  - current measures;
  - 'on the ground' observations of the effectiveness of these measures;
  - impact on staff (eg. police, ambulance);
  - impact on council; and
  - transportation issues.
- The group will consolidate existing efforts and develop options.
- Will need to ensure no new measures are recommended without consideration of potential unintended consequences - for example moving the problem out of entertainment precincts and into suburban areas.
- The scope for this work is limited to Brisbane entertainment precincts.
- The group will report to the Premier and Lord Mayor in December 2009 with a summary statement, and a set of options for their consideration.

**3. Working group membership**

Brisbane City Council and DEEDI representatives suggested that membership should be expanded to include Queensland Health representation.

The Chair noted that membership would include DPC's Criminal Justice Research (CJR) Area, who will also support the group through provision of research/advice.

Action:  
Membership to be expanded to include Qld Health and CJR (DPC) representation

**4. Terms of reference**

Draft terms of reference were tabled for discussion and were generally accepted.

Greg Scroope noted that land use planning and activity issues should be considered. Members agreed that paragraph (2) should include an additional dot-point 'intersection of land use planning and liquor licensing issues within entertainment precincts.'

Members agreed that reporting arrangements to the Premier and Lord Mayor should be specified.

Action:  
Terms of reference to be amended and resubmitted for next meeting.

**5. Discussion of issues**

Greg Scroope noted that the matter was not restricted to trading hours but included broader entertainment precinct issues, and that the BCC was currently considering a range of minor proposals to address problems.

The group agreed that the report produced should be concise (maximum 20 pages) and should include:

1. What is in place in Queensland (factual information about liquor licensing arrangements, lockouts etc)
2. Effect on the ground (data on crime rates, assaults trends, assaults on staff etc; plus on the ground qualitative assessment - from QPS, Ambulance, health etc)
3. A summary of supporting initiatives currently in place
4. How Queensland compares with other jurisdictions (mainly Australia, but also any relevant international examples)
5. What works, what doesn't (including unintended consequences - eg. transport problems when people 'spill out' at 3am)
6. Issues to consider - eg. balancing right to enjoy nightlife with public and staff safety
7. Options
8. Way forward, including engagement with stakeholders
9. Members noted that existing documents such as the 17-point plan may be a suitable basis for this report.
10. Greg Scroope raised the opportunity to look at development of night-time economies that are not reliant on alcohol revenue.
11. John Beirne noted that Dr John Montgomery (a planner from the UK) and Mark Boyle (of ICLEI Oceania) have been contracted by Lord Mayors to develop the evidence base around alcohol issues.
12. Linda Woo discussed some existing arrangements that are achieving varying degrees of success - for example accords to which the QPS and BCC are partners - these are active in developing safe practices for entertainment precincts.
13. John Beirne noted the importance of engaging with stakeholders (including industry) at the appropriate stage.
14. Greg Scroope raised a scope issue - some single venues outside of the entertainment precincts can draw large crowds (eg. 2500 people), creating similar policing and transport problem as the precincts.

Action:  
Secretariat to prepare skeleton of report for working group members to populate and discuss at next meeting

**6. Other business**

Important to note that other efforts (by BCC, police, Queensland Transport etc) to

address these issues should continue, ie. they should not be halted because the working group has been created.

John Beirne offered to organise a night-time tour of precincts for interested working group members.

BCC will host a seminar on 2 December 2009 at which Dr Montgomery will speak about creating sustainable night-time economies. John Beirne will invite members of the working group to this seminar. The Chair noted that given the working group's timeframe, materials provided in advance of this seminar would be useful.

**7. Next meeting**

The group will reconvene in approximately two weeks. The secretariat will advise members of meeting details.

DRAFT

RTI RELEASE



QUEENSLAND GOVERNMENT-BRISBANE CITY COUNCIL



TRADING HOURS WORKING GROUP

**Minutes of meeting  
17 November 2009  
8:30 - 9:30am**

**1. Welcome / apologies**

In attendance:

- Mr Ken Smith (Chair), Dept. of the Premier and Cabinet
- Ms Pamela Muir, Dept. of the Premier and Cabinet
- Mr Greg Scroope, Brisbane City Council
- Mr John Beirne, Brisbane City Council
- Mr Leo McNamara, Queensland Ambulance Service
- Insp. Brad Little, Queensland Police Service
- Mr David Hart, Dept. of Employment, Economic Development and Innovation
- Ms Linda Woo, Dept. of Employment, Economic Development and Innovation
- Ms Kath McCabe, Dept. of the Premier and Cabinet

Action:

Attendees and  
apologies  
noted

Apologies:

- Mr Ryan Huelin, Queensland Transport
- Sup't Shane Doyle, Queensland Police Service
- Mr Mike Sarquis, Dept. Employment, Economic Development and Innovation

**2. Background and context**

Premier and Lord Mayor have held discussions about trading hours and violence in Brisbane's entertainment precincts - identified need for collaboration.

Police union, emergency department physicians, ambulance officers and others have proposed a 2am closure of licensed premises to curb alcohol-related violence.

Number of other processes already underway:

- Parliamentary Committee looking at trading hours and other issues
- Moratorium in place on applications for extended trading hours
- Other work in relation to glassing (not limited to entertainment precincts)

This group has been asked to consider:

- current measures;
- 'on the ground' observations of the effectiveness of these measures;
- impact on staff (eg. police, ambulance);
- impact on council; and
- transportation issues.

The group will consolidate existing efforts and develop options.

Will need to ensure no new measures are recommended without consideration of potential unintended consequences - for example moving the problem out of entertainment precincts and into suburban areas.

The scope for this work is limited to Brisbane entertainment precincts.

The group will report to the Premier and Lord Mayor in December 2009 with a summary statement, and a set of options for their consideration.

**3. Working group membership**

Brisbane City Council and DEEDl representatives suggested that membership should

Action:

Membership to

be expanded to include Queensland Health representation.

The Chair noted that membership would include DPC's Criminal Justice Research (CJR) Area, who will also support the group through provision of research/advice.

be expanded to include Qld Health and CJR (DPC) representation

#### 4. Terms of reference

Draft terms of reference were tabled for discussion and were generally accepted.

Greg Scroope noted that land use planning and activity issues should be considered. Members agreed that paragraph (2) should include an additional dot-point 'intersection of land use planning and liquor licensing issues within entertainment precincts.

Members agreed that reporting arrangements to the Premier and Lord Mayor should be specified.

Action:  
Terms of reference to be amended and resubmitted for next meeting.

#### 5. Discussion of issues

Greg Scroope noted that the matter was not restricted to trading hours but included broader entertainment precinct issues, and that the BCC was currently considering a range of minor proposals to address problems.

The group agreed that the report produced should be concise (maximum 20 pages) and should include:

1. What is in place in Queensland (factual information about liquor licensing arrangements, lockouts etc)
2. Effect on the ground (data on crime rates, assaults trends, assaults on staff etc; plus on the ground qualitative assessment - from QPS, Ambulance, health etc)
3. A summary of supporting initiatives currently in place
4. How Queensland compares with other jurisdictions (mainly Australia, but also any relevant international examples)
5. What works, what doesn't (including unintended consequences - eg. transport problems when people 'spill out' at 3am)
6. Issues to consider - eg. balancing right to enjoy nightlife with public and staff safety
7. Options
8. Way forward, including engagement with stakeholders

Members noted that existing documents such as the 17-point plan may be a suitable basis for this report.

Greg Scroope raised the opportunity to look at development of night-time economies that are not reliant on alcohol revenue.

John Beirne noted that Dr John Montgomery (a planner from the UK) and Mark Boyle (of ICLEI Oceania) have been contracted by Lord Mayors to develop the evidence base around alcohol issues

Linda Woo discussed some existing arrangements that are achieving varying degrees of success - for example accords to which the QPS and BCC are partners - these are active in developing safe practices for entertainment precincts.

John Beirne noted the importance of engaging with stakeholders (including industry) at the appropriate stage.

Greg Scroope raised a scope issue - some single venues outside of the entertainment precincts can draw large crowds (eg. 2500 people), creating similar policing and transport problem as the precincts.

Action:  
Secretariat to prepare skeleton of report for working group members to populate and discuss at next meeting

#### 6. Other business

Important to note that other efforts (by BCC, police, Queensland Transport etc) to address these issues should continue, ie. they should not be halted because the working group has been created.

John Beirne offered to organise a night-time tour of precincts for interested working group members.

BCC will host a seminar on 2 December 2009 at which Dr Montgomery will speak

about creating sustainable night-time economies. John Beirne will invite members of the working group to this seminar. The Chair noted that given the working group's timeframe, materials provided in advance of this seminar would be useful.

**7. Next meeting**

The group will reconvene in approximately two weeks. The secretariat will advise members of meeting details.

RTI RELEASE



Regional Climate Change Adaptation  
Workshop to Share Experiences and Learning

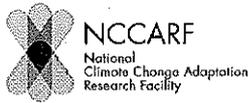
20-21 April 2010  
Glenelg Golf Course  
Adelaide, South Australia

Project Profiles: Participant Background Reading



## Table of Contents

<b>A Regional Climate Change Decision framework for natural resource management, Adelaide Mt Lofty Ranges</b>	<b>1</b>
<b>Clarence City Council Coastal Impacts of Climate Change</b>	<b>5</b>
<b>Hunter, Central and Lower North Coast NSW Climate Change Risk Assessment and Adaptation Strategy</b>	<b>8</b>
<b>Integrated assessment of Climate Change Impacts on Urban Settlements (IACCIUS)</b>	<b>12</b>
<b>ICLEI Oceania CCP Adaptation Initiative (2007/08) and Adaptive and Resilient Communities Program (ARC, 2009/10)</b>	<b>14</b>
<b>Local Government Climate Change Risk Assessments and Adaptation Planning</b>	<b>16</b>
<b>Climate Change: Whole of Landscape Analysis of the Impacts and Options for the South Coast Region of Western Australia</b>	<b>18</b>
<b>Integrated Regional Vulnerability Assessment – South East</b>	<b>22</b>
<b>South East Queensland Climate Adaptation Research Initiative (SEQCARI)</b>	<b>24</b>
<b>SEQ-CARI (South East Queensland Climate Adaptation Research Initiative)</b>	<b>27</b>
<b>Adaptive Capacity Synthesis Project</b>	<b>29</b>
<b>CSIRO Tasmanian Sustainable Yields Project</b>	<b>31</b>
<b>Evaluation of Climate Change Vulnerability Assessment</b>	<b>34</b>
<b>Health impacts of climate change, Western Australia</b>	<b>37</b>
<b>Impacts of Climate Change on Human Settlements in the Western Port Region: an Integrated Assessment</b>	<b>39</b>
<b>South West Water Supply: Climate Impacts and Adaptation</b>	<b>42</b>



<b>Victorian Centre for Climate Change Adaptation Research</b>	<b>45</b>
<b>Lower Murray Landscape Futures</b>	<b>49</b>
<b>Development of South Australian Adaptation Framework</b>	<b>51</b>

RTI RELEASE

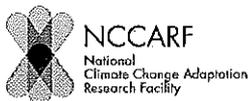


## A Regional Climate Change Decision framework for natural resource management, Adelaide Mt Lofty Ranges

<b>Rationale and Objectives</b>	<p>The potential risks to Mediterranean climate regions from climate change create an immediate need to ensure that regional natural resources management systems in South Australia take these risks into account.</p> <p>This project worked within the Adelaide Mt Lofty Ranges (AMLR) NRM region to undertake an assessment of key areas of NRM that are vulnerable to climate change, and developed and demonstrated methodologies for creating a regional framework for wider application in managing climate change risk and developing adaptation responses.</p>
<b>One Paragraph Description</b>	<p>This project:</p> <ol style="list-style-type: none"> <li>I) Developed a framework to support natural resource managers in their decision making processes for climate change adaptation.</li> <li>II) Undertook an assessment of key areas of NRM that are vulnerable to climate change.</li> <li>III) Researched community perceptions of climate change impacts.</li> <li>IV) Developed and demonstrated methods to assist natural resource managers to address climate change risk and develop adaptation responses in vulnerable sectors.</li> </ol>
<b>Project Sponsors</b>	<p>Department of Water, Land and Biodiversity Conservation - DWLBC (Project Manager)</p> <p>Department of Climate Change, (formerly the Australian Greenhouse Office in the Department of the Environment and Water Resources)</p> <p>Adelaide and Mount Lofty Ranges Natural Resources Management (AMLR NRM) Board.</p>
<b>Project Managers/Contributors</b>	<p>Susan Sweeney DWLBC, Douglas Bardsley University of Adelaide (formerly DWLBC)</p> <p>Contributors: Geoff Rogers, Chris Raymond and Jan Rowland (DWLBC); Peter Houston (PIRSA); Craig Liddicoat, Andy Cole and Tim Herrmann (Rural Solutions SA); Neville D Crossman and Brett A Bryan (CSIRO); Julian James (City of Onkaparinga) and Vic Waclawik (SKM).</p>
<b>Funding and funding sources</b>	<p>AGO/DCC \$211 000</p> <p>DWLBC and other state government agencies \$300 000 + (estimate)</p> <p>AMLR NRM Board \$15 000 plus in kind support</p>
<b>Scope: (and how determined)</b>	<p>To develop, apply and critically examine approaches to guide decision making on climate change adaptation within vulnerable NRM sectors in the AMLR</p>
<b>(a) Spatially</b>	<p>Adelaide and Mount Lofty Ranges Natural Resources Management Region</p>
<b>(b) Sectors</b>	<p>Initial vulnerability study: Riparian flood management, Surface water,</p>



	<p>Groundwater, Coasts: flooding, Coasts: beaches, Biodiversity: terrestrial, Biodiversity: freshwater, Invasive species, Parks and Gardens, Revegetation, Agriculture: annual crops, Agriculture: horticulture, Agriculture: livestock, Land management</p>
	<p>Detailed case studies: Land capability, Groundwater, Biodiversity, Land use planning, Perennial Horticulture, Coastal</p>
<b>(c) Time scale</b>	<p>The project ran for 3 years, July 2006- June 2008</p>
<b>(d) Dimensions of Integration</b>	<p>The project was focussed on NRM sectors with the initial vulnerability study being purely biophysical. Some of the case studies such as land use planning, perennial horticulture and coastal considered broader social and economic issues.</p>
<b>(e) Balance of biophysical and societal analysis</b>	<p>Although the vulnerability study was biophysical, more research was conducted to understand how key stakeholders perceive climate risk was seen as important to ensure that methods are employed to best engage the NRM community, to identify requirements for skills and knowledge development, and to help engender community ownership of management responses to change.</p>
<b>(f) Stakeholder involvement</b>	<p>Numerous presentations were undertaken, both throughout the region to raise awareness of climate change, the major vulnerabilities to climate change, the idea for a response framework and the project itself, and also in some cases, in other NRM regions. There were about 65 presentations, to over 2200 NRM researchers, practitioners, educators and students.</p>
<b>(g) Specific outputs and outcomes</b>	<p>In-depth interviews were undertaken with key stakeholders and workshops held to gain a further understanding of why or why not stakeholders are or are not interested or willing to engage in the climate risk management process, and strategies for NRM organisations to use in building interest and capacity in climate change issues</p> <ul style="list-style-type: none"> <li>• The vulnerabilities of different sectors within the region to climate change assessed and reported, including working with key research practitioners to undertake some sectoral case studies</li> <li>• Participatory methodologies for advancing both the development of adaptation management responses to climate change and the coordination between community and the regional NRM Boards</li> <li>• Workshops of potential consequences of regional climate change, including regional planning recommendations</li> <li>• Climate change vulnerability scenarios and adaptation options identified within the NRM context</li> <li>• Input into the comprehensive AMLR NRM planning process in relation to project outcomes</li> <li>• Frameworks for assessment and the communication of the vulnerability of landscapes and natural resources articulated and applied within a particular context</li> </ul>
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Completed 2006
<b>(b) Vulnerability assessment phase</b>	Completed 2006 see <a href="http://www.dwlbc.sa.gov.au/assets/files/ki_dwlbc_report_2006_06db.pdf">http://www.dwlbc.sa.gov.au/assets/files/ki_dwlbc_report_2006_06db.pdf</a>
<b>(c) Adaptation response options</b>	Completed 2008 see case study reports at <a href="http://www.dwlbc.sa.gov.au/nrm/projects/rccdf/reports.html">http://www.dwlbc.sa.gov.au/nrm/projects/rccdf/reports.html</a>



**(d) Decision making and implementation**

Still ongoing in the real world, but the project's specific links wrapped up in 2008. The greatest impact was on planning within the AMLR NRM Board, which incorporated goals and funding towards projects related to climate change adaptation largely because of the project. Some examples of where local governments are also using the work to develop adaptation responses in particular contexts including coasts (Victor Harbor), flood risk (Adelaide Hills), biodiversity (Port Adelaide-Enfield) and more broadly to develop a council adaptation strategy (Onkaparinga). The work has been picked up nationally to inform NRM adaptation (Campbell, 2008) and internationally where it has been published and presented – see publication list.

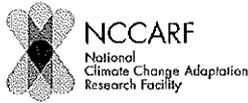
**(e) Evaluation and learning**

Final report See

[http://www.dwlbc.sa.gov.au/assets/files/ki\\_dwlbc\\_report\\_2008\\_21.pdf](http://www.dwlbc.sa.gov.au/assets/files/ki_dwlbc_report_2008_21.pdf)

**Reports/  
Publications  
References**

- Bardsley D, 2006, There's a change on the way: an initial integrated assessment of projected climate change impacts and adaptation options for natural resource management in the Adelaide and Mt Lofty Ranges region, DWLBC Technical Report 2006/06, Department of Water, Land and Biodiversity Conservation, Adelaide.
- Bardsley D.K. and Bardsley A. (2007) A Constructivist Approach to Climate Change Teaching and Learning. *Geographical Research*. 45: 329-339. (Reproduced as: Bardsley D.K. and Bardsley A. (2007) A Constructivist Approach to Climate Change Teaching and Learning. *Queensland Geographer* 44(3): 23-33).
- Bardsley DK, Edwards-Jones G (2007) Invasive species policy and climate change: social perceptions of environmental change in the Mediterranean. *Environmental Science and Policy* 10:230-242
- Bardsley DK & Liddicoat C, 2008, Community perceptions of climate change impacts on natural resource management in the Adelaide and Mount Lofty Ranges, DWLBC Report 2008/14, Department of Water, Land and Biodiversity Conservation, Adelaide.
- Bardsley DK & Sweeney S, 2008, A regional climate change decision framework for natural resource management, DWLBC Report 2008/21, Government of South Australia, through Department of Water, Land and Biodiversity Conservation, Adelaide
- Bardsley DK & Sweeney S, 2010 Applying a climate change adaptation decision framework for the Adelaide-Mt Lofty Ranges in Jubb I, Holper P and Cai W (Eds) (2010) *Managing Climate Change: Papers from the GREENHOUSE 2009 Conference*. CSIRO Publishing, Melbourne
- Bardsley DK & Sweeney S, (Forthcoming) Guiding climate change adaptation within vulnerable natural resource management systems. *Environmental Management*.
- Bardsley D.K. & Rogers G. (Forthcoming) Prioritising engagement for sustainable adaptation to climate change: An example from natural resource management in South Australia, *Society and Natural Resources*.
- Campbell, A. 2008. *Managing Australian Landscapes in a Changing Climate: A climate change primer for regional Natural Resource Management bodies*. Report to the Department of Climate Change, Canberra, Australia.
- Crossman ND, Bryan BA & Bardsley DK, 2008, Modelling native and exotic flora distributions under climate change, CSIRO Land and Water Science Report 01/08, CSIRO, Adelaide
- DWLBC, 2008, Climate Change and the potential for wind erosion – a model for the Adelaide and Mt Lofty Ranges-NRM region, Department of Water, Land and Biodiversity Conservation, Adelaide



- Houston P & Rowland J, 2008, Room to move: towards a strategy to assist the Adelaide Hills apple industry adapt to climate change in a contested peri-urban environment, DWLBC Technical Report 2008/20, Department of Water, Land and Biodiversity Conservation, Adelaide
- James J & Liddicoat C, 2008, Developing industry climate change adaptation strategies: a case study for the McLaren Vale viticulture and Fleurieu Peninsula oliveculture industries, DWLBC Report 2008/11, Department of Water, Land and Biodiversity Conservation, Adelaide
- Raymond C, 2008, Mapping landscape values and perceived climate change risks for natural resources management: a study of the Southern Fleurieu Peninsula region, SA, DWLBC Report 2008/07, Department of Water, Land and Biodiversity Conservation, Adelaide
- Wacławik V, 2007, Discussion Paper on the Potential Impact of Climate Change on the Groundwater Resources of the McLaren Vale Prescribed Wells Area, Department of Water, Land and Biodiversity Conservation, Adelaide



## Clarence City Council Coastal Impacts of Climate Change

<b>Rationale and Objectives</b>	To assess the risks of climate change on coastal areas, and based on the findings and consultation, to propose responses to manage the risks to acceptable levels
<b>One Paragraph Description</b>	The project combined technical assessment of coastal risks for three scenarios of sea level rise based on modelling at 17 specific sites using detailed coastal elevation data to identify the hazard arising from the major risks of inundation, erosion and storm surge. Hazard lines were drawn for each of the 17 sites where hazards were identified and the major assets in the areas affected were identified (roads, dwelling counts). A literature search, extensive consultation of stakeholders and a community survey were used to inform recommended planning and risk management approaches for affected areas.
<b>Project Sponsors</b>	Clarence City Council State Emergency Services (Tasmania) Department of Climate Change
<b>Project Managers/Contributors</b>	Project management committee had representation of all funding agencies, other State Government, Local Government Association and Council staff Technical reference group had representatives of UTAS, CSIRO, etc. Consultant team included Water Research Laboratories (UNSW), Pitt and Sherry (engineers), Myriad Research (market research), Melissa Nursey Bray, (academic – literature search) and SGS Economics and Planning
<b>Funding and funding sources</b>	Jointly by project sponsors. Supplementary funding provided detailed elevation data (LIDAR) for most low lying areas of the state
<b>Scope: (and how determined)</b>	The scope was determined by the applicant (Clarence City Council), based in large part on observed past erosion and flooding events and community concern about coastal risks. Specific sites to be assessed were based on previous work by Chris Sharples of the University of Tasmania
<b>(a) Spatially</b>	Seventeen sites in Clarence City Council area had been identified as being either low lying or potentially erosive (sandy shorelines)
<b>(b) Sectors</b>	Most areas identified were beachside suburbs or had some significant roads.
<b>(c) Time scale</b>	Project started in December 2006 and completed in April 2009
<b>(d) Dimensions of Integration</b>	The project went from assessment of coastal processes to assessment of hazards and risks to identified assets arising from these, and integrated that with an understanding of possible responses (based on the literature and site analysis) informed by consultation to produce a framework for future responses. The project findings were presented for comment to the community with full details including hazard maps published.



<b>(e) Balance of biophysical and societal analysis</b>	<p>Consideration was given to the impacts on natural assets valued by the community (eg beaches) as well as built assets and the adjustment required over time by the community to the expected risks to these assets. There was a limited emphasis on natural (biological) assets although some wetlands were noted as likely to be prone to inundation with little prospect of shoreward retreat.</p>
<b>(f) Stakeholder involvement</b>	<p>A wide range of government agencies and community groups were interviewed. Community focus groups and surveys were held (sample &gt;400) in both affected areas and areas unlikely to be affected directly. Regular workshops were held with Council staff and Councillors (about 6) to brief them on the technical findings and the development of proposed responses as they developed. This was critical in gaining both understanding and support for the proposed approach.</p>
<b>(g) Specific outputs and outcomes</b>	<p>Published risk assessment reports with detailed hazard maps                  A comprehensive framework for response to developing risk (while leaving flexible the specific responses for more detailed community consultation)                  Changes to the planning scheme to address expected future coastal hazards</p>
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Pre application for funds, during early 2006
<b>(b) Vulnerability assessment phase</b>	Late 2006 to September 2008. The process was extended when the available elevation data was found to be too imprecise to be useful and the State government agreed to pay for LIDAR data to be acquired early 2008.
<b>(c) Adaptation response options</b>	Initial phase – literature search in early 2007 Consultation of agencies, community groups Feb- Apr 2007 Focus groups March 2007 Community survey and analysis, April – July 2007 Response framework development – ongoing March 2007 to December 2008
<b>(d) Decision making and implementation</b>	Council adopted report in May 2009 Planning scheme amendment was developed during 2009 Plans for coastal protection works for two beaches with significant present day risk currently under way Coastal shore profile monitoring project in place Ongoing natural areas response management plan in development
<b>(e) Evaluation and learning</b>	Public response from meetings, web site activity and other responses to Council Very positive response to publication of hazard maps Ongoing consultation with coastal works proposed
<b>Reports/ Publications References</b>	Coastal Processes, Coastal Hazards, Climate Change And Adaptive Responses For Preparation Of A Coastal Management Strategy For Clarence City, Tasmania , WRL UNSW September 2008 Climate Change Impacts On Clarence Coastal Areas – SGS Economics and Planning, Final Report April 2009 These are available at <a href="http://www.ccc.tas.gov.au/site/page.cfm?u=80">http://www.ccc.tas.gov.au/site/page.cfm?u=80</a>  Internal working reports were prepared on the literature review and community survey.



A range of papers were prepared and presented at a number of conferences describing some of the thinking and findings from the project including:

Three pass assessment approach to coastal risk management (Sharples, Carley and Attwater)

Establishing triggers for adaptive response to climate change (Attwater, Witte, Carley)

Communications – critical to achieving public support for adaptation (Witte, Attwater)

Choosing from adaptation options – more than a short term cost benefit approach. (Attwater & Witte)

The changing coast – providing room for natural adjustments (Sharples, Attwater, Ellison Stephenson)

Bearing the cost – setting price signals and cost sharing to ensure a soft landing (Attwater, Witte)

Planning Schemes and Legal Issues – adjusting the instruments to changing conditions. (Howorth)

Climate change driving a new social divide (Witte, Attwater)



## Hunter, Central and Lower North Coast NSW Climate Change Risk Assessment and Adaptation Strategy

### Rationale and Objectives

#### Stage 1

In light of the potential impacts of climate change on the diverse industries, communities and environments of the region, HCCREMS and its councils initiated a region wide project to:

Identify the regional scale implications of climate change;  
Raise awareness among councils, government agencies, industry groups and the community of these impacts; and  
Facilitate the development of appropriate adaptation strategies to manage the predicted risks.

Because the climate of the Hunter, Central and Lower North Coast region is well known for its variability and extremes (both geographically and over time) it was considered unlikely that the effects of climate change would be uniform across the region. Previously available projections however, had not provided information at a fine enough scale to detect such variability. It was for this reason that the project embarked upon a research initiative to identify the likely impacts of climate change across the region at both sub regional and seasonal scales.

#### Stage 2

Stage 1 was effective in achieving increased levels of awareness and understanding of climate change and its implications for the region. This needed to be translated into a commitment to action, particularly the need to assess the risk that climate change poses and to develop and implement adaptation strategies in response to these.

The project:

Has worked with industry bodies in utilising the stage 1 research outputs and undertaking risk assessments

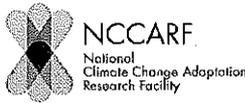
Is currently facilitating a process of identifying individual organisational risks arising from climate change for all 14 councils across the region, and developing adaptation strategies in response to these.

Will also identify areas of "common risk" across these councils and determine actions and priorities for collaborative, cross border adaptation planning and implementation.

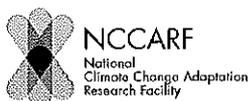
Is designing and disseminating a range of briefing and educational materials for council staff to use internally and with their communities to support the above processes



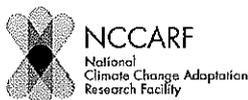
<b>One Paragraph Description</b>	<p>The HCCREMS program has been working with 14 councils on regional environmental management initiatives for many years, and climate change is currently a key area of focus. A two year research program was commissioned to downscale existing climate models to sub-regional and seasonal scales. This research has since been utilised to engage industry bodies and all 14 Councils of the Hunter, Central &amp; Lower North Coast region in undertaking formal risk assessment processes and adaptation strategies.</p> <p>The HCCREMS team have supported the process with the establishment of an extensive regional data and mapping repository, delivery of an on-going engagement and capacity building program across all 14 LGAs (with Councillors, senior management and staff), development of a range of information and educational resources (technical reports, fact sheets, cases studies, educators toolkit etc), facilitation of a coastal council network to collaborate on sea level rise planning issues, and the roll out of a 3 year regional sustainability program including climate change mitigation initiatives.</p>
<b>Project Sponsors</b>	<p>Hunter and Central Coast Regional Environmental Management Strategy group and its 14 member councils DECC (LAPP2) DECCW NSW Environmental Trust</p>
<b>Project Managers/ Contributors</b>	<p>Project Managers : HCCREMS team</p> <p>Contributors: University of Newcastle, Macquarie University (CORE), DECCW, Councils, NSW Rural Fire Service, NSW Health, Hunter Wine Industry, Emergency Services</p>
<b>Funding and funding sources</b>	<p>Stage 1: \$250,000.00 (DECCW)</p> <p>Stage 2: \$150,000.00 (DECC LAPP2) &amp; \$100,00 (NSW Environmental Trust)</p>
<b>Scope: (and how determined)</b>	<p>Total \$500,000</p>
<b>(a) Spatially</b>	<p>Formally defined group of councils who have been collaborating on regional environmental management issues under the HCCREMS program since 1996;</p> <ul style="list-style-type: none"> <li>Cessnock City Council</li> <li>Dungog Shire Council</li> <li>Gloucester Shire Council</li> <li>Great Lakes Council</li> <li>Lake Macquarie City Council</li> <li>Maitland City Council</li> <li>Greater Taree City Council</li> <li>Muswellbrook Shire Council</li> <li>Newcastle City Council</li> <li>Port Stephens Council</li> <li>Singleton Shire Council</li> <li>Upper Hunter Shire Council</li> <li>Gosford City Council</li> </ul>



	<p>Wyong Shire Council</p> <p>The region is approximately 42,000 sq kms in size, comprising a diversity of landforms and climates. These include moist, warm, coastal lowlands; semi-arid inland areas; and reasonably high-altitude montane areas.</p>
<b>(b) Sectors</b>	<p>Local Government primarily</p> <p>Regional biodiversity, weeds, water resources</p> <p>Viticulture, human health, emergency services sectors</p>
<b>(c) Time scale</b>	<p>Stage 1: 2007 – 2009</p> <p>Stage 2: 2009 - August 2010</p>
<b>(e) Balance of biophysical and societal analysis</b>	<p>Risk assessment currently primarily on council assets and activities at this stage (i.e. infrastructure, community, environment, etc) but also analysis of broader economic and social impacts</p> <p>Industry Case studies look at human health (Extreme Heat), extreme events (Coastal Zone), Viticulture Industry and Bushfire Risk</p>
<b>(f) Stakeholder involvement</b>	<p>Local government: 14 rural &amp; coastal councils</p> <p>NSW Department of Health</p> <p>DECCW</p> <p>NSW Rural Fire Service</p> <p>National Parks &amp; Wildlife Service</p> <p>The Viticulture industry</p> <p>NSW Emergency Services</p>
<b>(g) Specific outputs and outcomes</b>	<p>Stage 1</p> <p>Engagement of all levels of Council on climate change issue</p> <p>Established network of coastal Councils to consider planning options for sea level rise</p> <p>Completed research: Sub regional and seasonal Climate projections for region for range of key climate parameters</p> <p>Published reports</p> <p>Promoted research, developed presentation kit for educators, delivered extensive program of briefings to councils (elected representatives, senior management, staff)</p> <p>Industry engagement and risk assessments, produced case studies</p> <p>Produced Fact Sheets, Climatic Zone Profiles, Individual LGA profiles</p> <p>Stage 2 (current)</p> <p>Facilitating individual risk assessment and adaptation planning processes for each council as well as identification of common risks and collaborative regional adaptation opportunities</p> <p>Established a substantial regional repository of available data and mapping</p> <p>On-going support activities</p>
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Complete
<b>(b) Vulnerability assessment phase</b>	Complete

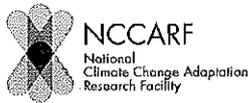


<b>(c) Adaptation response options</b>	In progress – strategies to be completed around June 2010
<b>(d) Decision making and implementation</b>	<p>Some early progress – all coastal councils adopted a common SLR figure for planning purposes in 2009, and have been collaborating on the issue for over 18 months</p> <p>Progress with mitigation actions under HCCREMS sustainability program which commenced in 2008</p> <p>June 2010 onwards – for implementation of adaptation plans</p>
<b>(e) Evaluation and learning</b>	2007 – present....and ongoing
<b>Reports/ Publications References</b>	<p>Verdon, D and Goodwin, I (2007). Progress Report 1 to HCCREMS on Stage 1 of the Regional Climate Change Study. A report prepared for HCCREMS, NSW</p> <p>Blackmore, K &amp; Goodwin, I (2008). Report 2: Climate Variability of the Hunter, Lower North Coast and Central Coast Region of NSW. A report prepared for HCCREMS, NSW</p> <p>Blackmore, K and Goodwin, I, 2009. Report 3: Climatic Change Impact for the Hunter, Lower North Coast &amp; Central Coast Region of NSW. A report prepared for HCCREMS, NSW.</p> <p>Blackmore, K, Goodwin, I &amp; Wilson, S, 2009. Case Study 1: Potential Impacts of Climate Change on the Hunter Valley Wine Industry. A report prepared for HCCREMS, NSW, NSW</p> <p>Blackmore, K, Goodwin, I &amp; Wilson, S (HCCREMS 2009) Case Study 2: Potential Impacts of Climate Change on Extreme Heat Events Affecting Public Health in the Hunter, Lower North Coast and Central Coast Region. HCCREMS, NSW</p> <p>Blackmore, K, Goodwin, I &amp; Wilson, S (HCCREMS 2009) Case Study 3: Potential Impacts of Climate Change on Bushfire Risk in the Hunter, Lower North Coast and Central Coast Region (HCCREMS 2009)</p> <p>Blackmore, K, Goodwin, I &amp; Wilson, S, 2009. Case Study 4: Potential Impacts of Climate Change on Extreme Events in the Coastal Zone of the Hunter, Lower North Coast and Central Coast Region. (HCCREMS 2009)</p> <p>HCCREMS, 2009. Potential Impacts of Climate Change on the Coastal Climatic Zone of the Hunter, Central and Lower North Coast. HCCREMS, NSW</p> <p>HCCREMS, 2009. Potential Impacts of Climate Change on the Central Climatic Zone of the Hunter, Central and Lower North Coast, HCCREMS NSW</p> <p>HCCREMS, 2009. Potential Impacts of Climate Change on the Western Climatic Zone of the Hunter, Central and Lower North Coast, HCCREMS, NSW</p> <p>HCCREMS 2009: Climate Change in the H,C &amp; LNC region of NSW - Fact Sheet series</p> <p>HCCREMS 2009: Climate Change in the H,C &amp; LNC region of NSW – Presentation Kit for educators</p> <p>HCCREMS 2010: Individual LGA Climate Profiles for all 14 LGAs</p>
	<p><b>Currently in development</b></p> <p>Data analysis, mapping and reporting: risk profiles for all 14 Councils</p> <p>Adaptation strategies for all 14 councils</p> <p>Regional adaptation response opportunities</p>



## Integrated assessment of Climate Change Impacts on Urban Settlements (IACCIUS)

<b>Rationale and Objectives</b>	To develop IA methodology specific to climate and smaller urban settlements, and to develop useful contributions to understanding of impacts and implications in case study settlements
<b>One Paragraph Description</b>	Methodological development and case studies of small-medium settlements, within an interdisciplinary framework. Case study settlements: Cooma, Bendigo, Canberra, Queanbeyan and Darwin.
<b>Project Sponsors</b>	AGO, which became DCC, under the Human Settlements Sub-programme (along with 4 other projects)
<b>Project Managers/Contributors</b>	Fenner School of Environment and Society, ANU – Geraldine Li, Steve Dovers, et al.
<b>Funding and funding sources</b>	DCC
<b>Scope: (and how determined)</b>	
<b>(a) Spatially</b>	Small-to-medium settlements, across a variety of geographical and climate types. Rationally selected by where looked interesting and stakeholders proved interested.
<b>(b) Sectors</b>	Multi-sectoral – initial “full” risk assessment followed by detailed investigation of priority issues, which varied across cases. Included differential vulnerability, urban land surfaces, open space management, impacts on tourism, and water-energy consumption.
<b>(c) Time scale</b>	Some historical analysis esp of local climate, and now-to-future in terms of impacts.
<b>(d) Dimensions of Integration</b>	Systems framework, participatory process, Multiple disciplinary inputs – urban studies, climate science, demography, social research, systems thinking etc.
<b>(e) Balance of biophysical and societal analysis</b>	Pretty much even.
<b>(f) Stakeholder involvement</b>	From initial scoping through detailed investigations, to re-integration.
<b>(g) Specific outputs and outcomes</b>	Seven reports to soon be released after considerable delay, as well as other, non-published reports. Forthcoming book chapter, two peer-reviewed State of Australian Cities Conference papers, and two unpublished cross-project “lessons learned” reports (across IACCIUS, SCCG, Westerport, Gold Coast, Clarence City projects).
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	2007
<b>(b) Vulnerability assessment phase</b>	2007-2008
<b>(c) Adaptation response options</b>	2007-2008



<b>(d) Decision making and implementation</b>	This is in the court of participating agencies – NRETA in NT, Cooma-Monaro Shire Council, City of Greater Bendigo, Queanbeyan City Council, TAMS in ACT.
<b>(e) Evaluation and learning</b>	Full evaluation report submitted to DCC, and two cross-project reports also submitted to DCC and to other four Sub-programme projects.
<b>Reports/ Publications References</b>	Seen reports to be released on Fenner School websites, forthcoming book chapter, forthcoming International Adaptation Conference paper, two SoAC papers.

RTI RELEASE

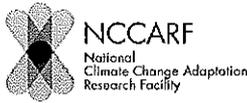


**ICLEI Oceania CCP Adaptation Initiative (2007/08) and Adaptive and Resilient Communities Program (ARC, 2009/10)**

<b>Rationale and Objectives</b>	<p>The aim of the ARC Program is to support local governments in Australia in systematically addressing the impacts of climate change at the local level.</p>
<b>One Paragraph Description</b>	<p>The specific objectives and success criteria of the program are to:</p> <ul style="list-style-type: none"> <li>• Increase the ability of local governments to assess their vulnerability and adaptive capacity to climate change impacts</li> <li>• Facilitate informed local government decision making on climate change impacts, based on climate change science</li> <li>• Build the capacity of local government staff for effective implementation of adaptation strategies</li> <li>• Apply and further develop adaptive management tools to assist councils in identifying, prioritising and implementing adaptation actions</li> <li>• Facilitate the integration of climate change adaptation planning with other key processes at council, including climate change mitigation</li> <li>• Enable peer-to-peer learning and advancement in a national and international network of councils working on climate change.</li> </ul>
<b>Project Sponsors</b>	<p>ARC provides a program framework and methodology that takes councils through a structured, cross-departmental approach of adaptation planning, implementation and review while being flexible enough to cater for specific local contexts and priority impacts. The program methodology and tools were developed during the CCP Adaptation Initiative (2007/08) and improved and updated in 2009/10.</p> <p>CCP Adaptation Initiative: Australian Greenhouse Office / Department of Climate Change</p>
<b>Project Managers/ Contributors</b>	<p>Adaptive and Resilient Communities: In 2009/10, fully funded by nine local governments participating in the program. Co-funding currently sought for 2010/11 program cycle.</p> <p>Project Manager: ICLEI Oceania Contributors: CSIRO, ICLEI regional offices in Europe and North America</p>
<b>Funding and funding sources</b>	<p>CCP Adaptation Initiative: \$200,000 (AGO/DCC) Adaptive and Resilient Communities: Unfunded. Participation fees of \$10,000 per council per annum</p>
<b>Scope: (and how determined)</b>	<p>(a) Spatially: Ambition: Operating in all states. Currently operating in NSW, QLD and VIC.</p> <p>(b) Sectors: Strategic planning at local government level (for all council functions and services), community development</p>

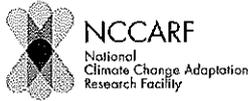


<b>(c) Time scale</b>	Planning horizons taken into account vary across councils: 2030 - 2070 - 2100
<b>(d) Dimensions of Integration</b>	Cross-departmental risk management process facilitates integration of adaptation planning via key organisational strategies / key result areas
<b>(e) Balance of biophysical and societal analysis</b>	Scope of risk analysis dependent on council's strategic objectives and key climate change impacts identified
<b>(f) Stakeholder involvement</b>	Internal (council) stakeholders are involved through participation in a cross-departmental climate change working group (10-50 members) which is responsible for steering the climate risk management and adaptation planning process. The working group comprises executive managers, managers, councillors (in some cases), and coordinators and officers working on climate change / sustainability.  A process for external stakeholder involvement is devised as part of the ARC program. Councils develop a communication strategy and plan and develop specific actions for community consultation and involvement of external stakeholders.
<b>(g) Specific outputs and outcomes</b>	To date: Local Government Climate Change Adaptation Toolkit (2009) Climate Change Adaptation Context Review Reports (some councils) Climate risk management process documents / tools (all internal)  Expected: Climate Change Adaptation Action Plans / Integrated Climate Change Action Plans
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	2009/10 - Completed for most councils. Some context review reports available.
<b>(b) Vulnerability assessment phase</b>	2009/10 - Currently taking place. Some results available.
<b>(c) Adaptation response options</b>	2010 - Currently taking place. No draft action plans yet.
<b>(d) Decision making and implementation</b>	Not yet commenced - From July 2010 onwards
<b>(e) Evaluation and learning</b>	Not yet commenced - 2010/11
<b>Reports/ Publications</b>	ICLEI Oceania 2009: Local Government Climate Change Adaptation Toolkit. <a href="http://www.iclei.org/index.php?id=adaptation-toolkit">http://www.iclei.org/index.php?id=adaptation-toolkit</a>
<b>References</b>	



## Local Government Climate Change Risk Assessments and Adaptation Planning

<b>Rationale and Objectives</b>	To raise the awareness of climate change risks and rollout adaptation planning
<b>One Paragraph Description</b>	Since 2008 there have been 80 local government climate change risk assessments and adaptation plans undertaken. This presentation draws on Donovan's experience in 25 LGA projects highlighting the processes, findings and obstacles to implementation.
<b>Project Sponsors</b>	Various – the majority are funded by the DCC under the Local Government Adaptation Pathways Program (LAPP)
<b>Project Managers/ Contributors</b>	Various
<b>Funding and funding sources</b>	Ranged from 20k – 135k
<b>Scope: (and how determined)</b>	
<b>(a) Spatially</b>	Spatially defined by the council boundaries. Some councils teamed up for economies of scale and undertook general regional assessments.
<b>(b) Sectors</b>	All sectors of council. Many of the assessments focussed on operational issues only. Others also included the economic, social and environmental issues.
<b>(c) Time scale</b>	Most were 2030, 2050 and 2070. A handful went out to 2100.
<b>(d) Dimensions of Integration</b>	This varied considerably. Most of the assessments were scoping studies that did not explore confluence of impacts and multiple stressor events. Councils often wanted a scoping assessment of potential economic, social and environmental issues – but then maintained focussed on council operations.
<b>(e) Balance of biophysical and societal analysis</b>	This varied depending on council direction. Council operational costs was often the main focus of many
<b>(f) Stakeholder involvement</b>	This varied considerably. Some focussed only on council operations with no external stakeholder input. Others included state agencies, businesses and the community.
<b>(g) Specific outputs and outcomes</b>	Climate change risk matrix Workshop reports Climate change mapping (limited examples) Economic modelling (for Nambucca, Bellingen and Kempsey only) Climate reanalysis (for Nambucca, Bellingen and Kempsey only) Exploration of climate change drivers (for Nambucca, Bellingen and Kempsey only) Presentation to council
<b>Phases covered and timing (start/end years):</b>	
<b>Risk Assessment</b>	Stage 1 – risk assessments <ul style="list-style-type: none"> <li>- included workshop pre-reading</li> <li>- council and community surveys</li> </ul>

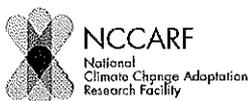


	<ul style="list-style-type: none"><li>- workshops</li><li>- climate change modelling or review of local projections</li><li>- analysis of council documents and plans</li><li>- review and summary of latest science</li></ul>
<b>Adaptation response options</b>	Stage 2 <ul style="list-style-type: none"><li>- review of current actions</li><li>- development of guiding principles</li><li>- identification of win-win actions</li><li>- some benefit cost analysis</li></ul>
<b>(d) Decision making and implementation</b>	Too early to review
<b>(e) Evaluation and learning</b>	See above
<b>Reports/ Publications References</b>	Most available online (two examples below) Darebin City Climate Change and Peak Oil Adaptation Plan <a href="http://www.cityofdarebin.biz/page/PagePrint.asp?Page_Id=7004">http://www.cityofdarebin.biz/page/PagePrint.asp?Page_Id=7004</a> Moreton Bay Regional Council Scoping Risk Assessment <a href="http://www.moretonbay.qld.gov.au/uploadedFiles/moretonbay/environment/Scoping-Climate-Change-Risk.pdf">http://www.moretonbay.qld.gov.au/uploadedFiles/moretonbay/environment/Scoping-Climate-Change-Risk.pdf</a>



## Climate Change: Whole of Landscape Analysis of the Impacts and Options for the South Coast Region of Western Australia

<p><b>Rationale and Objectives</b></p>	<p>The South Coast of Western Australia is already experiencing impacts of climate change which has been exacerbated by stressors (environmental, social and economic). The NRM community believe from their past experience that they need to progress a 'bottom up' approach to climate change adaptation, especially when a National or State framework is not currently in place.</p> <p>Objectives of the project included:</p> <ul style="list-style-type: none"> <li>• Provide a strategic assessment of climate change risks to ecosystems and the economic and social activities that are based upon them in the South Coast NRM region, given alternative scenarios for future climatic regimes. This should include an analysis of the vulnerability to climate change of natural resource management assets.</li> <li>• Guide the direction of and establish the need for future investments in natural resource assets in the Region</li> <li>• Identify priority areas for management of assets across the region and existing and future opportunities for collaboration.</li> <li>• Outline proposed best practice guidelines for management of assets vulnerable to climate change</li> <li>• Be integrated with other studies concerned with climate change and regional natural resource management carried out at a state and national level.</li> <li>• Identify areas where insufficient information or knowledge exists to make initial or clear decisions and where further investigations and research is desirable or essential.</li> <li>• Provide direction as to the type of additional investigations required to fill these deficiencies.</li> </ul>
<p><b>One Paragraph Description</b></p>	<p>Information sessions and risk assessment results indicated that the theme areas that appear to be at greatest risk, and facing the most challenges for Natural Resource Management (NRM) adaptation are biodiversity, water resources, primary production and coastal and marine (in that order). Risks relating to climate change and variability were scored and ranked. A draft Adaptation Action Plan was formulated. Information gaps were identified. Leadership, advocacy and collaboration roles were outlined. The need for monitoring so that changes can be tracked was suggested. South Coast NRM Inc. was identified as a key stakeholder for collaboration and advocacy on the South Coast. Success in adaptation is only likely to occur with a strong framework and commitment from all levels of Government and the community.</p>
<p><b>Project Sponsors</b></p>	<p>South Coast Natural Resource Management Incorporated.</p>
<p><b>Project Managers/ Contributors</b></p>	<p>Coffey Environments, Marsden Jacob Associates, MP Rogers and Associates and Gaia Resources. Support received from the WA</p>



**Funding and funding sources**

Department of Environment and Conservation, WA Department of Agriculture and Food, Local Government Authorities on the South Coast and the Australian Government.  
Approximately \$150,000  
Western Australian Government (State NRM Funding).

**Scope: (and how determined)**

The scope of works for the Study were determined by South Coast NRM in consultation with key stakeholders and included:

- (i) Conduct a literature review of climate change and seasonal variability adaptation studies relevant to the South Coast NRM region;
- (ii) Develop likely scenarios of climate change and seasonal variability in the South Coast NRM region that:
  - a. Provide context to the analysis of risks and impacts;
  - b. Cover the east, central and west areas of the South Coast NRM region, with data where possible downscaled to the local scale; and
  - c. Are consistent with the scenarios used by the IPCC in its Fourth Assessment report of 2007. These are those emission scenarios that are defined in the IPCC Special Report on Emission Scenarios: low emissions is the B1 scenario, medium is A1B and high is A1F1, projected to 2030 and 2070. The data produced for each shall be consistent with the regional projections the Commonwealth Scientific and Industrial Research Organisation (CSIRO) prepared for the Australian Climate Change Science program.
- (iii) Using the climate change scenarios developed for the South Coast NRM region:
  - a. Undertake an analysis of the vulnerability to climate change of regional natural resource management assets such as land, water, biodiversity, coasts and marine, and their associated human, economic and social activities;
  - b. Quantify and provide deeper analysis of the main ecological, social and economic impacts to natural resource management arising from climate change and season variability;
  - c. Carry out a qualitative analysis identifying key climate change and seasonal variability risks and impacts to industry, urban and rural communities, and government entities engaged in natural resource management; and
  - d. Identify options for adapting to climate change and seasonal variability within NRM including the feasibility, benefits and risks of each. Outline and prioritise actionable first steps in adaptation for industry, urban and rural communities and government entities engaged in natural resource management.

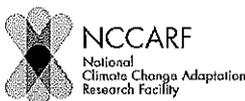


	<ul style="list-style-type: none"> <li>(iv) Document through survey and consultation across industry, urban and rural communities and government entities engaged in natural resource management:                             <ul style="list-style-type: none"> <li>a. Current understanding of climate change and seasonal variability;</li> <li>b. Perceived effects of climate change to activities in these sectors; and</li> <li>c. What responses they may be undertaking or planning.</li> </ul> </li> <li>(v) Outline a process whereby South Coast NRM Inc. can address the impacts of climate change and seasonal variability and appropriately adapt its planning for future project investment.</li> <li>(vi) Identify gaps in current knowledge of climate change and its impacts on natural resource management in the South Coast NRM region, and make recommendations on the type and scope of further investigations required.</li> <li>(vii) Present a final technical report of the project's findings.</li> </ul>
<b>(a) Spatially</b>	South Coast Natural Resource Management Region including 6 million hectares and 10 Local Government areas.
<b>(b) Sectors</b>	NRM community, State and Local Government. Theme areas included: Biodiversity, Water Resources, Primary Production and Coastal zone.
<b>(c) Time scale</b>	Generally to 2030 as scenarios appear to be most consistent to this time, plus it is a realistic planning timeframe for key stakeholders.
<b>(d) Dimensions of Integration</b>	Integration was noted as a key element required for adaptation success. However it is lacking at the present time. Silos (e.g. managers of primary production extension, water resource management) have started to consider most vulnerable assets. Themes that are currently not well catered for in terms of adaptation planning were identified (e.g. biodiversity) and examined in terms of impacts on theme areas that have a more direct adaptation focus.
<b>(e) Balance of biophysical and societal analysis</b>	Biophysical risk assessment was linked to likely social and economic risks and outcomes. Analysis was largely qualitative and based on regional experience and expertise. Stakeholders included NRM community, local professionals, farmers, community groups, Non-Government Organisations (NGO's), State and Local Government.
<b>(f) Stakeholder involvement</b>	Key stakeholders were represented on a Steering Group and other stakeholders involved in a series of forums, information sessions and a risk assessment workshop.
<b>(g) Specific outputs and outcomes</b>	Power point presentations Summary Technical Document, including: Bibliography, Literature Review, Coastal Vulnerability, Spatial Data Analysis, Meeting Notes, Posters, Media Releases, Discussion Paper, Evaluation of Workshops and Information Sessions, Outputs of Risk Assessment, Adaptation ideas for biodiversity, primary production, coastal/marine and water resources.
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Completed 2008



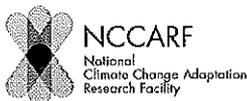
<b>(b) Vulnerability assessment phase</b>	Commenced 2009. Phase II needs to be scoped and funded.
<b>(c) Adaptation response options</b>	Completed as a starting point in Technical Report, 2009. Steering Group proposed to be set up to refine priority adaptation response options.
<b>(d) Decision making and implementation</b>	Commence 2010, if Phase II of project funded.
<b>(e) Evaluation and learning</b>	Evaluation in Technical Report (see above)
<b>Reports/ Publications References</b>	Climate Change: Whole of Landscape Analysis of the Impacts and Options for the South Coast Region.

RTI RELEASED

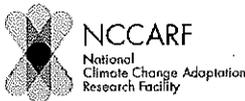


## Integrated Regional Vulnerability Assessment – South East

<b>Rationale and Objectives</b>	<ol style="list-style-type: none"> <li>1. Provide a credible basis for adaptation planning</li> <li>2. Develop Capacity within NSW Government</li> <li>3. Develop a Leading Practice Model</li> <li>4. Enhance coordination of service delivery</li> </ol>
<b>One Paragraph Description</b>	<p>The first step to effective adaptation planning is to determine where the highest vulnerability is to climate change impacts and the nature of that vulnerability. Vulnerability assessment requires integration of climate risk across a number of sectors and with a consideration of the adaptive capacity of people and communities. The NSW Government will work with local governments and communities to undertake a rolling program of regional climate change vulnerability assessments, beginning with South East and South West NSW. These assessments will be used to plan integrated adaptation responses to improve the overall resilience of those regions to climate change impacts.</p>
<b>Project Sponsors</b>	NSW Department of Environment, Climate Change and Water (DECCW)
<b>Project Managers/ Contributors</b>	Christopher Lee (DECCW); David O'Toole (DECCW); Gary Allan (DECCW); Brent Jacobs (DECCW)
<b>Funding and funding sources</b>	<p>Stephen Dovers and Robert Dyball, ANU have provided peer review of methodology and workshop support and facilitation.</p> <p>Internal funding for a project manager in Queanbeyan for two years.</p> <p>Large in-kind contribution of staff time.</p>
<b>Scope: (and how determined)</b>	<p>The South East State Plan region encompasses a diverse geographic area, cover alpine, tablelands and coastal communities. The region is being used a pilot before, we conduct similar studies in the Riverina Murray region and the Northern area of the state.</p>
<b>(a) Spatially</b>	<p>South East State Plan Region which comprises the following local government areas: Eurobodalla, Bega Valley, Snowy River, Cooma-Monaro, Bombala, Queanbeyan, Boorowa, Goulburn Mulwaree, Harden, Palerang, Upper Lachlan, Yass Valley, Young. The ACT will also be considered within the project framework.</p>
<b>(b) Sectors</b>	<p>Tourism; Water supply; Agriculture; Human settlements; Emergency Management; Human health; Major infrastructure; Natural environments and landscapes</p>
<b>(c) Time scale</b>	<p>Examines vulnerability based on climate impact projections for 2050 developed by DECCW</p>
<b>(d) Dimensions of Integration</b>	<p>Seeking to integrate assessments across sectors recognising cross cutting issues.</p>
<b>(e) Balance of biophysical and societal analysis</b>	<p>Builds upon biophysical climate change impacts and socio-economic profiles. Developing measures of adaptive capacity, through five capitals framework.</p>
<b>(f) Stakeholder involvement</b>	<p>Conducted under the oversight of the Regional Managers Network coordinated by the NSW Department of Premier and Cabinet. A multi agency steering group is managing the project. Sectoral workshops involve NSW Government agencies, representatives from the ACT Government, Local Government managers and academic partners</p>

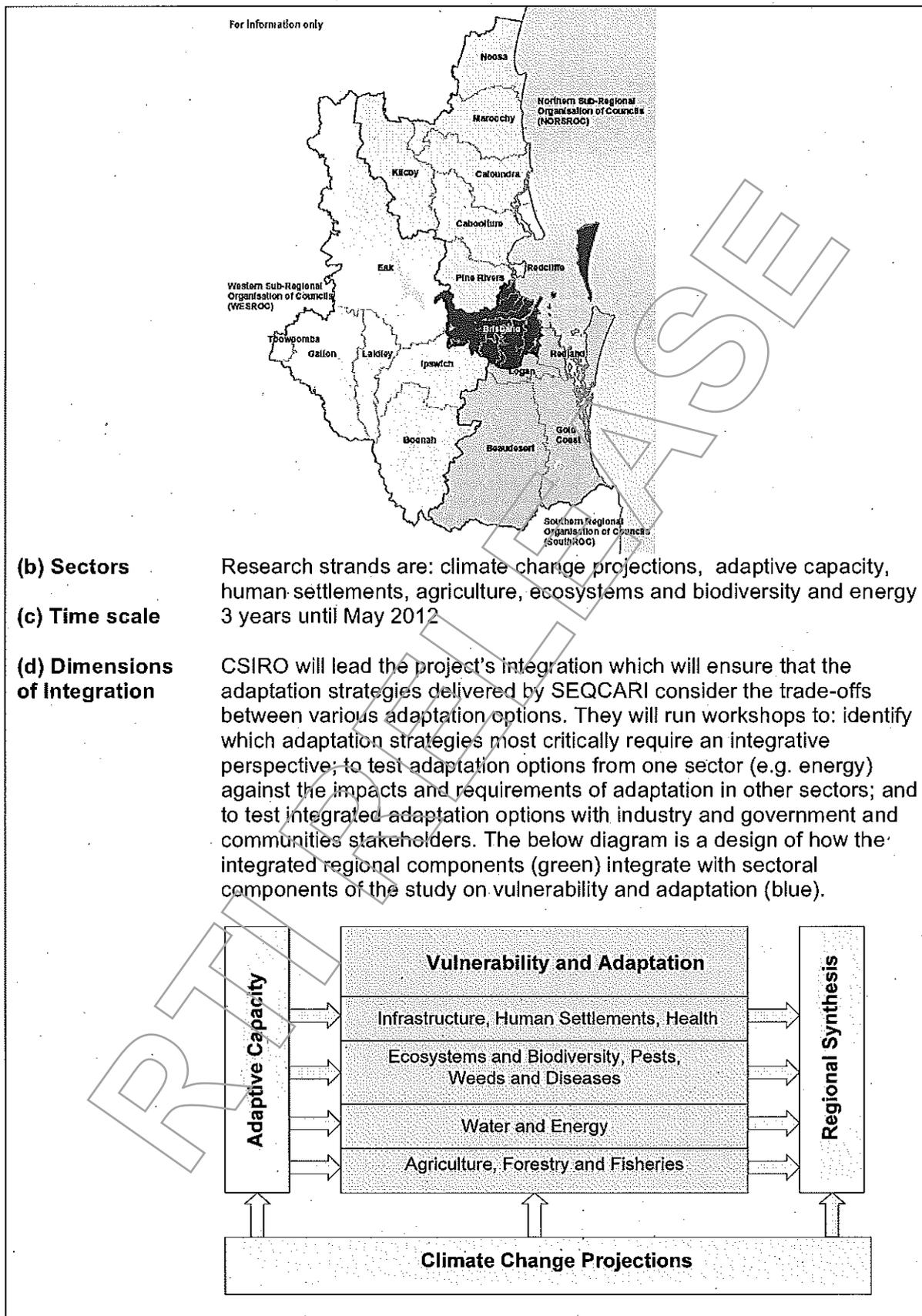
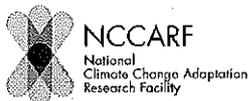


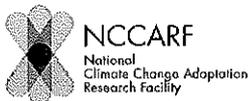
	where necessary. In the initial assessment phase public consultation will not be conducted.
<b>(g) Specific outputs and outcomes</b>	Intention is for Integrated Vulnerability Assessment Report to be the precursor to the development of regional adaptation strategies/planning
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Scoping June 08 to June 09. Steering Group established and started meeting from June 09.
<b>(b) Vulnerability assessment phase</b>	Assessment started in Dec 09 with overall workshop, sector workshops currently being held, completion by mid May. Integration workshop to be held June 10. Final Report due Sep 10.
<b>(c) Adaptation response options</b>	To be Determined
<b>(d) Decision making and implementation</b>	To be Determined
<b>(e) Evaluation and learning</b>	Sep-Dec10
<b>Reports/ Publications</b>	On going project, no reports as yet.
<b>References</b>	



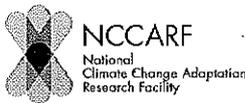
## South East Queensland Climate Adaptation Research Initiative (SEQCARI)

<b>Rationale and Objectives</b>	SEQCARI is a three year research initiative examining south east Queensland's vulnerability to climate change and developing practical and cost-effective adaptation strategies to assist decision-makers in government, industry and the community.
<b>One Paragraph Description</b>	SEQCARI is the first comprehensive, regional study of climate change adaptation in Australia, and one of just a few worldwide. The initiative will develop new, more detailed climate change projections for south-east Queensland, and assess the comparative vulnerability of each sub-region. Research will focus on the implications for agriculture, infrastructure, the environment, public health and emergency services.
<b>Project Sponsors</b>	The CSIRO Climate Adaptation National Research Flagship, Griffith University, the University of the Sunshine Coast, the University of Queensland, Queensland Government Smart State Innovation Fund, and the Australian Government Department of Climate Change and Energy Efficiency
<b>Project Managers/ Contributors</b>	The CSIRO Climate Adaptation National Research Flagship, Griffith University, the University of the Sunshine Coast and the University of Queensland Leader: Andrew Ash, Manager Ryan McAllister, Cluster leader Jan McDonald. In addition there are eight areas of research, each of with a leader.
<b>Funding and funding sources</b>	\$13M over 3 years from the CSIRO Climate Adaptation National Research Flagship, Griffith University, the University of the Sunshine Coast, the University of Queensland, Queensland Government Smart State Innovation Fund, and the Australian Government Department of Climate Change and Energy Efficiency
<b>Scope: (and how determined)</b>	The scope was determined partly by expert understandings of the vulnerabilities in the region, but also by politics/ For example, water is critical, but because there is a very large research project on SEQ water we don't cover that 'sector. So what then becomes critical is not just integration across sectors within the project, but also integration of research that is occurring outside.
<b>(a) Spatially</b>	The boundary is that of the SEQ Regional Plan



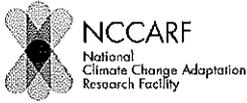


<b>(e) Balance of biophysical and societal analysis</b>	Mainly social – with about 13% being used by University of Queensland to look at Biophysical vulnerabilities and adaptation, and about 5% looking into agricultural production.
<b>(f) Stakeholder involvement</b>	The participatory nature of the project requires strong collaboration with local government, regional NRM groups and industry and the project will involve major councils from southeast Queensland, regional NRM groups, Office of Urban Management, AgForce, SEQ Healthy Waterways Partnership, Queensland Tourism Industry Council, Insurance and Finance sectors
<b>(g) Specific outputs and outcomes</b>	Scenario models, reports on socio-economic trends, design of criteria to enhance adaptive capacity, vulnerability assessments, development of detailed case studies, development and testing of adaptation options, risk assessments, analysis of impacts, regional synthesis
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	First year
<b>(b) Vulnerability assessment phase</b>	First year – but important to stress that we are not seeking on vulnerability
<b>(c) Adaptation response options</b>	Years 2-3 – we are working mainly on adaptation options – but in collaboration with stakeholders – so in fact we don't implement anything, rather we provide science into the decision making of others
<b>(d) Decision making and implementation</b>	Through out project, and extending 6mths beyond
<b>(e) Evaluation and learning</b>	
<b>Reports/ Publications</b>	<a href="http://www.csiro.au/partnerships/seqcari.html">http://www.csiro.au/partnerships/seqcari.html</a>
<b>References</b>	<a href="http://www.csiro.au/resources/sustainable-cities-brochure.html">http://www.csiro.au/resources/sustainable-cities-brochure.html</a>



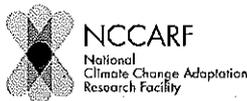
## SEQ-CARI (South East Queensland Climate Adaptation Research Initiative)

<b>Rationale and objectives</b>	The adaptive capacity component seeks to clarify capacity issues relating to the sectors identified for the project.
<b>One paragraph description</b>	South East Queensland (SEQ) is particularly vulnerable to climate change because of its growing population and coastal location. Human settlements, infrastructure, unique ecosystems, and primary industries all face threats from more extreme weather events, increased temperatures and altered rainfall patterns as a result of increased greenhouse gas emissions. Despite these risks and challenges, climate change may also bring some economic and social opportunities. SEQ-CARI aims to provide research knowledge to enable the region to adapt and prepare for the impacts of climate change. It will develop practical and cost-effective adaptation strategies to assist decision makers in government, industry and the community. The initiative is the first comprehensive regional study on climate change adaptation undertaken in Australia and one of only a few worldwide. It is exploring both vulnerabilities and adaptation options in response to climate change so that our prosperous regional economy, environment and lifestyles can be maintained into the future.
<b>Project sponsors</b>	Department of Climate Change, Queensland Australian Government, CSIRO
<b>Project managers/ contributors</b>	Prof. Tim Smith, A/Prof. Bill Carter, A/Prof. Julie Matthews, Dr. Dana Thomsen, Dr. Marcus Bussey, Dr. Anne Roiko, Dr. Jenniefer Carter, Dr. Russell Richards, Dr. Marcelo Sano, Noni Keys, Jeannette Oliver, Robert Mangoyana, Dave McNicoll, Sarah Adams, Sarah Adams, Cimmaron Corpe
<b>Funding and funding sources</b>	\$900,000 out of \$14 million across all contributors over 3 years Queensland and Australian Governments, the CSIRO Climate Adaptation National Research Flagship, the Department of Climate Change
<b>Scope: (and how determined)</b>	Largely a given based on the project brief and the vulnerability identified in IPCC reports.
<b>(a) Spatially</b>	Targets an area identified as being highly vulnerable to climate change impacts.
<b>(b) Sectors</b>	Priority areas determined by the funding organisations based on sectors not attracting much attention at the time of project design.
<b>(c) Time scale</b>	3 years starting March 2010
<b>(d) Dimensions of integration</b>	The adaptive capacity component is to integrate with sector specific studies; however, pragmatic issues of timing require the studies to proceed in parallel with the sector studies and respond integrate on a regular basis.
<b>(e) Balance of biophysical and societal analysis</b>	The adaptive capacity component focuses almost entirely on social analysis (<10% of the overall funding), although the sector studies focus on the biophysical and infrastructure issues.
<b>(f) Stakeholder involvement</b>	The adaptive capacity component will rely heavily on institutional and community informants and close cooperation with the sector study researchers.
<b>(g) Specific</b>	1. Demographic analysis, 2. Historical analysis 3.



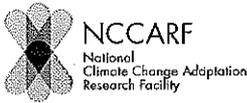
<b>outputs and outcomes</b>	
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Part of brief
<b>(b) Vulnerability assessment phase</b>	2010 -2011
<b>(c) Adaptation response options</b>	2011-2012
<b>(d) Decision making and implementation</b>	2012-2013
<b>(e) Evaluation and learning</b>	2013
<b>Reports/ Publications</b>	Roiko, A., Mangoyana, R., McFallan, S., Oliver, J., Carter, R.W. & Smith, T. (2009) Social and Economic Trends for South East Queensland 2009 and Implications for Climate Adaptation. Unpublished report to the South East Queensland Climate Adaptation Research Initiative, Sustainability Research Centre, University of the Sunshine Coast, Sippy Downs, Queensland.
<b>References</b>	

RTI RELEASED



## Adaptive Capacity Synthesis Project

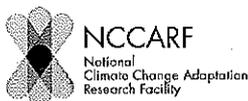
<b>Rationale and objectives</b>	<p>The goals of the project are to assess:</p> <ul style="list-style-type: none"> <li>• the interpretation and application of adaptive capacity research among a range of disciplines;</li> <li>• case studies in which an attempt is made to assess adaptive capacity of a community, region or sector; and</li> <li>• the utility of the concept for decision-making.</li> </ul>
<b>One paragraph description</b>	<p>USC's Sustainability Research Centre has received funding from the National Climate Change Adaptation Research Facility to conduct a Synthesis Project relating to adaptive capacity to identify trends and knowledge in the area.. The research methods include a literature review, online survey and key informant interviews. The final report will provide recommendations to improve synergies between climate change adaptation researchers and decision makers.</p>
<b>Project sponsors</b>	NCCARF
<b>Project managers/ contributors</b>	Prof. Tim Smith, Dr Phillip Daffara and Noni Keys.
<b>Funding and funding sources</b>	\$60,000 NCCARF – Griffith University
<b>Scope: (and how determined)</b>	Determined by NCCARF
<b>(a) Spatially</b>	Largely Australia but international academics invited to contribute to survey elements.
<b>(b) Sectors</b>	Largely academic.
<b>(c) Time scale</b>	6 months starting August 2009
<b>(d) Dimensions of integration</b>	Focuses on climate change adaptive capacity.
<b>(e) Balance of biophysical and societal analysis</b>	Largely social analysis
<b>(f) Stakeholder involvement</b>	By volunteerism in response to web based questionnaire and targeted interviews.
<b>(g) Specific outputs and outcomes</b>	Reports, see below.
<b>Phases covered and timing (start/end years):</b>	2009-2010
<b>(a) Scoping phase</b>	2009
<b>(b) Vulnerability assessment phase</b>	N/A
<b>(c) Adaptation response options</b>	2009
<b>(d) Decision making and implementation</b>	N/A
<b>(e) Evaluation and learning</b>	2010
<b>Reports/</b>	Daffara, P., Keys, N. and Smith, T. (2010) The Nature and Utility of



**Publications  
References**

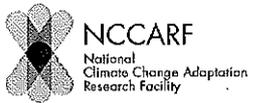
Adaptive Capacity Research. Unpublished report to the National Climate Change Adaptation Research Facility, Sustainability Research Centre, University of the Sunshine Coast, Sippy Downs, Queensland.  
Daffara, P., Keys, N. and Smith, T. (2010) *Critical Review of Adaptive Capacity Literature*. Unpublished report to the National Climate Change Adaptation Research Facility, Sustainability Research Centre, University of the Sunshine Coast, Sippy Downs, Queensland.

RTI RELEASE

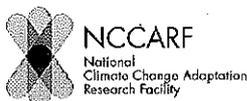


## CSIRO Tasmanian Sustainable Yields Project

<b>Rationale and Objectives</b>	The objective of the project was to undertake an assessment of the current and likely future extent and variability of surface water and groundwater resources in Tasmania. This information will help governments, industry and communities consider the environmental, social and economic aspects of the sustainable use and management of the water resources of Tasmania based on the best available information.
<b>One Paragraph Description</b>	The project aimed to estimate current and future water availability in each catchment and aquifer in Tasmania considering climate change, forestry, groundwater and irrigation development, and to compare the estimated current and future water availability to that required for meeting the current levels of extractive use.
<b>Project Sponsors</b>	This is not an adaptation project however the outcomes from the project guide adaptation and allocation of resources into the future Federal Government via COAG
<b>Project Managers/ Contributors</b>	Project manager CSIRO, Dr David Post (Project manager) Contributors CSIRO, Tasmanian State Government Hydro Tasmania, SKM
<b>Funding and funding sources</b>	Total ~\$4.8 Mil Source: Federal Government
<b>Scope: (and how determined)</b>	
<b>(a) Spatially</b>	Agricultural regions of Tasmania. West Coast future climate modelled but not assessed
<b>(b) Sectors</b>	Primary Industry, Water Resources, NRM, Economic Development
<b>(c) Time scale</b>	To 2030.
<b>(d) Dimensions of Integration</b>	<ul style="list-style-type: none"> <li>The outcomes of the Tasmanian sustainable yields project will be used to shape water allocation policy and establish water availability now and into the future.</li> <li>The future yield data combined with the irrigation and forestry development outcomes will be used to establish</li> </ul>



	<p>viability of green-field irrigation projects for Tasmania and will form the basis of inputs into modelling of proposals for further yield and reliability assessments. These outcomes are also being use to determine funding options from both Federal and State governments.</p> <ul style="list-style-type: none"> <li>• The future forestry outcomes will be used to flag regions where further study on the impacts of forestry in a future climate, and how that may impact water use and availability</li> <li>• The Flow Stress ranking results will be used in water management planning processes and also in environmental flow assessments. They will be used as initial data to establish regions of environmental concern in planning processes and also flag regions where environmental flow and other studies may need to be focused on</li> </ul>
<b>(e) Balance of biophysical and societal analysis</b>	Biophysical aspects and impacts covered (eg water availability FSR, forestry irrigation)
<b>(f) Stakeholder involvement</b>	No economic or social analysis carried out to date. Initiation workshops were held with a range of stakeholders Project scope and plan were available via WWW Results were presented to stakeholders across the state Stakeholders included TFGA, NRM, local farmers, Government staff, conservation trusts, Forest industry reps, Irrigation reps
<b>(g) Specific outputs and outcomes</b>	Regional reports and summaries. Report outlining potential impacts on various sectors. Regional presentations of project outcomes
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Project started in April 2008 and was released in Jan 2010
<b>(b) Vulnerability assessment phase</b>	Regional Reports prepared outlining future water availability
<b>(c) Adaptation response options</b>	In progress
<b>(d) Decision making and implementation</b>	Ongoing
<b>(e) Evaluation and learning</b>	Ongoing
<b>Reports/ Publications Reference:</b>	



## Tasmania Sustainable Yields Project reports

### Region reports

CSIRO (2009) Water availability for Tasmania. Report one of seven to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

CSIRO (2009) Climate change projections and impacts on runoff for Tasmania. Report two of seven to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

CSIRO (2009) Water availability for the Arthur-Ingalls-Cam region. Report three of seven to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

CSIRO (2009) Water availability for the Mersey-Forth region. Report four of seven to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

CSIRO (2009) Water availability for the Pipers-Ringarooma region. Report five of seven to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

CSIRO (2009) Water availability for the South Esk region. Report six of seven to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

CSIRO (2009) Water availability for the Derwent-South East region. Report seven of seven to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

### Technical reports

Graham B, Hardie S, Gooderham J, Gurung S, Hardie D, Marvanek S, Bobbi C, Krasnicki T and Post DA (2009) Ecological impacts of water availability for Tasmania. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

Harrington GA, Crosbie R, Marvanek S, McCallum J, Currie D, Richardson S, Waclawik V, Anders L, Georgiou J, Middlamis H and Bond K (2009) Groundwater assessment and modelling for Tasmania. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

Ling FLN, Gupta V, Willis M, Bennett JC, Robinson KA, Paudel K, Post DA and Marvanek S (2009) River modelling for Tasmania. Volume 1: the Arthur-Ingalls-Cam region. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

Ling FLN, Gupta V, Willis M, Bennett JC, Robinson KA, Paudel K, Post DA and Marvanek S (2009) River modelling for Tasmania. Volume 2: the Mersey-Forth region. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

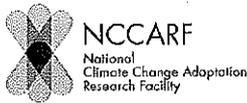
Ling FLN, Gupta V, Willis M, Bennett JC, Robinson KA, Paudel K, Post DA and Marvanek S (2009) River modelling for Tasmania. Volume 3: the Pipers-Ringarooma region. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

Ling FLN, Gupta V, Willis M, Bennett JC, Robinson KA, Paudel K, Post DA and Marvanek S (2009) River modelling for Tasmania. Volume 4: the South Esk region. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

Ling FLN, Gupta V, Willis M, Bennett JC, Robinson KA, Paudel K, Post DA and Marvanek S (2009) River modelling for Tasmania. Volume 5: the Derwent-South East region. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

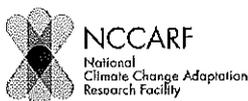
Post DA, Chiew FHS, Teng J, Vaze J, Yang A, Mpelasoka F, Smith I, Katzfey J, Marston F, Marvanek S, Kirono D, Nguyen K, Kent D, Donohue R, Li L and McVicar T (2009) Production of climate scenarios for Tasmania. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

Viney NR, Post DA, Yang A, Willis M, Robinson KA, Bennett JC, Ling FLN and Marvanek S (2009) Rainfall-runoff modelling for Tasmania. A report to the Australian Government from the CSIRO Tasmania Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

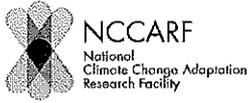


## Evaluation of Climate Change Vulnerability Assessment

<b>Rationale and Objectives</b>	A number of vulnerability assessments have been conducted at the regional and local council scale. This project seeks to understand what works, what doesn't and how we can improve the vulnerability assessment process
<b>One Paragraph Description</b>	A summative evaluation of four vulnerability assessment to identify key learning's across the projects. The researcher was not involved in undertaking the assessments themselves, only in evaluating the outcomes. Qualitative interviews with around 33 key informants were undertaken to provide primary data from which common themes were identified.
<b>Project Sponsors</b>	CSIRO – Pathways to Adaptation
<b>Project Managers/ Contributors</b>	Project Manager: CSIRO Contributors: Case Study 1 - Sydney Coastal Councils Group (SCCG), Case Study 2 - South East Councils Climate Change Alliance (SECCCA), Case Study 3 - City of Melbourne, Case Study 4 - Alpine Shire, Monash University
<b>Funding and funding sources</b>	Total: >\$100,000 Sources: CSIRO appropriation funding.
<b>Scope: (and how determined)</b>	
<b>(a) Spatially</b>	Case Study 1 – 15 Council Areas in Sydney Case Study 2 – 8 Council areas around Western Port Case Study 3 – Melbourne CBD Case Study 4 - Alpine Shire
<b>(b) Sectors</b>	Case Study 1 – Council services, infrastructure, health, ecosystems, emergency management, etc Case Study 2 – Council services, infrastructure, emergency management, etc Case Study 3 – Council services, infrastructure, emergency management, etc Case Study 4 - Primary industry, tourism, council services, emergency management etc
<b>(c) Time scale</b>	Case Study 1 – relative vulnerability in around 25 years (2033) Case Study 2 – 2030, 2070 Case Study 3 – 2030, 2070 Case Study 4 – historical vulnerability
<b>(d) Dimensions of Integration</b>	Case Study 1 – integrates exposure, sensitivity and adaptive capacity to a range of climate hazards Case Study 2 – considers exposure to a range of climate hazards Case Study 3 – considers exposure to a range of climate hazards and their cascading consequences Case Study 4 – integrates exposure, sensitivity and adaptive capacity to a small number of hazards as prioritised by community

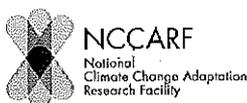


<b>(e) Balance of biophysical and societal analysis</b>	Case Study 1 – Both social and biophysical Case Study 2 – predominantly biophysical Case Study 3 – predominantly biophysical Case Study 4 – Both social and biophysical
<b>(f) Stakeholder involvement</b>	Case Study 1 – primarily council group members Case Study 2 – both council group members and external stakeholders through a reference group. Some community engagement depending on council areas Case Study 3 – primarily within council with some engagement with relevant state agencies Case Study 4 – bottom up community driven with some council engagement
<b>(g) Specific outputs and outcomes</b>	Case Study 1 – awards, progress towards adaptation Case Study 2 – awards, progress towards adaptation Case Study 3 – progress towards adaptation Case Study 4 – thesis and papers, little change in council activities
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	Case Study 1 – Project proposal for DCC funding Case Study 2 – 2006 "Climate Change Impacts and Adaptation in Western Port" Case Study 3 – Project brief developed for consultants. Case Study 4 – PhD theses proposals.
<b>(b) Vulnerability assessment phase</b>	Case Study 1 – 2008 Report available <a href="http://www.sydneycostalouncils.com.au/system-approach-to-regional-climate-change-adaptation-strategies-in-metropolises/index.php">http://www.sydneycostalouncils.com.au/system-approach-to-regional-climate-change-adaptation-strategies-in-metropolises/index.php</a> Case Study 2 – 2008 Report available <a href="http://www.wpga.org.au/ppp.asp">http://www.wpga.org.au/ppp.asp</a> Case Study 3 – 2008 Report available <a href="http://www.melbourne.vic.gov.au/rsrc/PDFs/EnvironmentalSustainability/CLIMATE_CHANGE_ADAPTATION_STRATEGY">http://www.melbourne.vic.gov.au/rsrc/PDFs/EnvironmentalSustainability/CLIMATE_CHANGE_ADAPTATION_STRATEGY</a> Case Study 4 – Flooding component 2008, Tourism component (planned 2010). Both Monash PhD theses
<b>(c) Adaptation response options</b>	Case Study 1 – ongoing - various stages in different councils Case Study 2 – ongoing - various stages in different councils Case Study 3 – 2009 <a href="http://www.melbourne.vic.gov.au/AboutCouncil/PlansandPublications/strategies/Documents/climate_change_adaptation_strategy.PDF">http://www.melbourne.vic.gov.au/AboutCouncil/PlansandPublications/strategies/Documents/climate_change_adaptation_strategy.PDF</a> Case Study 4 – none.
<b>(d) Decision making and implementation</b>	Case Study 1 – ongoing - various stages in different councils Case Study 2 – ongoing - various stages in different councils Case Study 3 – ongoing Case Study 4 – none.
<b>(e) Evaluation and learning</b>	This project is an of all four case studies but in addition the following has been undertaken Case Study 1 – SCCG & CSIRO (2008) "End of project synthesis: Systems Approach to Regional Climate Change Adaptation Strategies" Case Study 2 – Benedyka (2008) "Impacts of climate change on Settlements in the Western port Region: An integrated Assessment project" Case Study 3 – undertaken by B. Preston at CSIRO Case Study 4 – not documented.



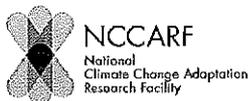
<b>Reports/ Publications References</b>	Numerous
---	----------

RTI RELEASE



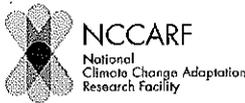
## Health impacts of climate change, Western Australia

<b>Rationale and Objectives</b>	Climate change will have impacts on the health of populations and the ability of health sectors to provide appropriate services
<b>One Paragraph Description</b>	The range of projects undertaken have been to commence identification of potential impacts and to develop appropriate adaptation responses A Health Impact Assessment (HIA) was undertaken of climate change to identify potential impacts to health from climate change. This included risk assessments of the identified impacts, consideration of current activities, development of adaptation responses and identification of key groups needed to progress the responses. Subsequent activities have included modification of the process for use by other sectors, establishment of a whole of department group responsible for progressing climate change initiatives and significant collaboration with other sectors. For example, the partners are soon to commence a similar process for Pacific Islands sponsored by the World Health Organisation
<b>Project Sponsors</b>	Department of Health WA (WA Health) and the World Health Organisation Collaborating Centre for Environmental and Health Impact Assessment, Curtin University
<b>Project Managers/Contributors</b>	Project Manager: WA Health
<b>Funding and funding sources</b>	WA Health
<b>Scope:(and how determined)</b>	
<b>(a) Spatially</b>	Whole of Western Australia
<b>(b) Sectors</b>	Human populations
<b>(c) Time scale</b>	To 2030. This is the planning horizon for local governments and other key stakeholders.
<b>(d) Dimensions of Integration</b>	Major interdependencies between all sectors identified The key values and therefore underlying principles of HIA are sustainability, democracy, equity and promotion of health. The use of these ensures that a focus on equity considers the most vulnerable community groups as well as the broader population. Potential adaptation analysis covers local, state and community interventions but not federal interventions; and cross agency coordination in those jurisdictions The projects have not covered interactions with other 'non climate adaptation' drivers eg mitigation.
<b>(e) Balance of biophysical and societal analysis</b>	The focus on health and well-being considers impacts arising from environmental change and thus covers the broader societal aspects. Specific sectors are seen as respondents in the process rather than the drivers.
<b>(f) Stakeholder involvement</b>	The projects have been undertaken with key experts in specific areas and decision making stakeholders within governments. The outcomes are used by decision makers to provide for health and wellbeing considerations within relevant climate change policy.
<b>(g) Specific</b>	Report outlining potential impacts, risks and adaptation strategies



<b>outputs and outcomes</b>	associated with specific environmental health areas Many presentations to interest and policy development groups Significant departmental internal activity addressing sustainability
<b>Phases covered and timing (start/end years):</b>	
(a) Scoping phase	Initial project completed 2007
(b) Vulnerability assessment phase	Ongoing activities
(c) Adaptation response options	
(d) Decision making and implementation	
(e) Evaluation and learning	
<b>Reports/ Publications</b>	<a href="http://www.public.health.wa.gov.au/2/705/2/climate_change.pm">http://www.public.health.wa.gov.au/2/705/2/climate_change.pm</a>
<b>References</b>	

RTI RELEASE

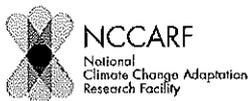


## Impacts of Climate Change on Human Settlements in the Western Port Region: an Integrated Assessment

<b>Rationale and Objectives</b>	The project was designed to provide local government with options for adaptation responses to address risks posed to infrastructure and communities as a result of the regional impacts of climate change.
<b>One Paragraph Description</b>	<p>With CSIRO modelling as the primary input for the project, local government staff, representing planning, asset management, emergency management, community services among others, assessed the risks to the community through climate change.</p> <p>They then took part in adaptation workshops to develop treatments to protect the infrastructure and to assist the communities for which they are responsible. Treatment responses include recommendations on further research for the federal government, policy advice for state government and changes in policy and practices for local government. Local government is currently working externally through communities with engagement programs and internally with engineering, planning policy and community care provision responses.</p>
<b>Project Sponsors</b>	<p>Department of Sustainability and Environment                  Department of Climate Change</p>
<b>Project Managers/Contributors</b>	<p>The then Western Port Greenhouse Alliance (now South East Councils Climate Change Alliance - SECCCA) co-managed the project with Marsden Jacob Associates (MJA).</p> <p>Contributors were:</p> <p>CSIRO - applied climate modelling to geographic data to assess expected changes for 2030 and 2070 in temperature, rainfall, storm surge, wind and sea level rise and the likely impacts of these changes in the Western Port region</p> <p>MJA applied the CSIRO data to describe the socio-economic impacts of climate change, prepare for risk assessments and lead adaptation workshops</p> <p>Broadleaf International conducted risk assessments with local government staff to describe the infrastructure and populations that are at risk</p> <p>Regional Development Company provided facilitation and evaluation services</p>
<b>Funding and funding sources</b>	<p>\$400,000 Federal Government's Department of Climate Change                  \$100,000 Victorian Government's Department of Sustainability and</p>



Environment	
<b>Scope: (and how determined)</b>	<p>The project was informed by an earlier scoping study initiated in 2005 by the Western Port Greenhouse Alliance (WPGA) and funded by the Department of Sustainability and Environment.</p> <p>The objectives of this project were to: raise awareness of the potential impacts of climate change in the region; assess natural and human vulnerabilities to climate change impacts in the region; and explore possible adaptation opportunities.</p> <p>Information about this initial study is at <a href="http://www.seccca.org.au/project_summary.asp?data_id=11">http://www.seccca.org.au/project_summary.asp?data_id=11</a></p>
<b>(a) Spatially</b>	The project was conducted through the 5 councils that surround Victoria's Western Port.
<b>(b) Sectors</b>	While most of the work was conducted through local government, regional (eg. Melbourne Water, Port of Hastings Corporation) and state (eg. Office of the Emergency Services Commissioner - Department of Justice, Department of Human Services) agencies were also involved. The federal government was also represented on the project team.
<b>(c) Time scale</b>	The project commenced in October 2006 and concluded in the formal sense in October 2008, though work internal to councils is continuing now and community engagement programs will continue over the next few years.
<b>(d) Dimensions of Integration</b>	Many favourable comments have been received regarding the level of integration across otherwise separate council functions in responding to climate change. Some councils have now established formal and ongoing interdisciplinary teams to oversee their climate change responses.
<b>(e) Balance of biophysical and societal analysis</b>	Being able to describe the socio-economic consequences that follow from the biophysical impacts of climate change was important to attracting attention to the project.
<b>(f) Stakeholder involvement</b>	The project was characterised by strong attendance and useful contributions at meetings of the reference group formed to advise on project directions and activities. Subsequent to the project reports being released, many many presentations regarding the project and its findings have been given to a wide range of audiences.
<b>(g) Specific outputs and outcomes</b>	<p>The project has generated considerable interest in the region and more broadly and has, in turn, led to further work. The WPGA/SECCCA has a number of subsequent projects either underway or now completed.</p> <ul style="list-style-type: none"> <li>Heat Wave Strategies for WPGA Councils</li> <li>Risks from Climate Change for the Phillip Island Penguin Parade</li> <li>Scenarios planning for the redeveloped Port of Hastings</li> <li>Community Engagement on Climate change</li> <li>Food access in times of climate change</li> <li>Emergency response</li> </ul> <p>Two councils now have climate change taskforces, two have specific climate change officers, all are conducting community engagement programs in conjunction with SECCCA.</p>
<b>Phases covered and timing (start/end years):</b>	



**(a) Scoping phase**

Late 2005/ mid 2006

**(b) Vulnerability assessment phase**

Mid 2007 – early 2008

**(c) Adaptation response options**

Mid 2008 - ongoing

**(d) Decision making and implementation**

Late 2008 - ongoing

**(e) Evaluation and learning**

Formal evaluation from 2007 – October 2008, with a report from RDC presented to DCC in October 2008. the learning is still occurring through formal presentations and through the development and implementation of work plans across SECCCA member councils

**Reports/  
Publications  
References**

Source reports for the biophysical impacts data are as follows:  
 Effect of Climate Change on Extreme Sea Levels in the Western Port Region, *Kathleen L. McInnes, Ian Macadam, Julian O'Grady*, CSIRO Marine and Atmospheric Research, June 2008  
 The Effect of Climate Change on Extreme Rainfall Events in the Western Port Region, *Deborah Abbs, Tony Rafter*, CSIRO Marine and Atmospheric Research, June 2008  
 Climate Change Projections for the Western Port Region, *Ian Macadam, James Ricketts, Janice Bathols*, CSIRO Marine and Atmospheric Research, June 2008

There were separate reports to each SECCCA member council on the Risk Workshops conducted by Broadleaf with their staff and there is a formal Evaluation Report, prepared by RDC, that is internal to DCC.

The major reports from the project are as follows:

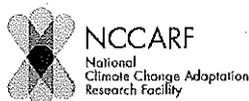
People, Property and Places: Impacts of Climate Change on Human Settlements in the Western Port Region <http://www.seccca.org.au/ppp.asp>

Impacts of Climate Change on Human Settlements in the Western Port Region: Climate Change Risks and Adaptations  
[http://www.seccca.org.au/projects/Final\\_Risks\\_and\\_Adaptation.pdf](http://www.seccca.org.au/projects/Final_Risks_and_Adaptation.pdf)

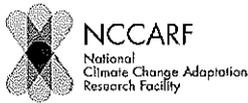


## South West Water Supply: Climate Impacts and Adaptation

<b>Rationale and Objectives</b>	<p>SW WA has experienced a shift toward a drier climate over the last 30 years that has altered the regional water balance and dependent systems including public and private water supply. Further drying is anticipated to 2030 and beyond.</p> <p>A series of adaptive measures were implemented through a progressive learning and reflection cycle that has now advanced and aligned several strategic water initiatives that consolidated water security.</p>
<b>One Paragraph Description</b>	<p>The SW WA Water Supply experience has brought about a cascading series of reactive and then adaptive actions since the late 1970s. Key elements in the journey include: the establishment of baselines and monitoring (generating evidence of change); investing in understanding climate change; importance of knowledge transfer; establishing a meaningful regional focus; clear communication on key issues; establishing a leading policy driver; developing a range of solutions; formal reflection of changes and the change process; the art of establishing business cases, and; alignment of understanding and effort across agencies and major stakeholders.</p>
<b>Project Sponsors</b>	<p>WA State Government; Water Corporation; Department of Water; support from other agencies and groups.</p>
<b>Project Managers/Contributors</b>	<p>Various aspects of this extended project were managed by different groups that functioned in the Water Corporation and Dept of Water (or predecessors) with major contributions from the Dept Agriculture and Food; Dept of Planning and Infrastructure; Dept of Environment and Conservation; Forest Products Commission, and; CSIRO and BoM. Valuable contributions were also made by local government.</p>
<b>Funding and funding sources</b>	<p>State Government funding can be represented or accounted for from different perspectives and through expenditure on specific initiatives: -</p> <ul style="list-style-type: none"> <li>- large expenditures on source development (e.g. desalination plants - \$1.55b);</li> <li>- numerous government programs (e.g. WC Security through diversity; Waterwise rebates; specific water resource management efforts, e.g. SW Yarragadee groundwater investigations - \$15m; ...)</li> <li>- Gnamagara Sustainability Strategy (GSS) - \$7.5 m</li> </ul>
<b>Scope: (and how determined)</b>	<p>A number of major initiatives were scoped over a 30 year period: -</p> <ul style="list-style-type: none"> <li>- Perth's Water Future (1995) – WAWA in response to growing recognition for water source augmentation in a drying climate</li> <li>- Support for Indian Ocean Climate Initiative (IOCI) Stage 1 and 2 – Under direction of a champion; collaboration with government agencies with vested interests, and; CSIRO and BoM.</li> </ul>



	<ul style="list-style-type: none"> <li>- South West Yarragadee groundwater source investigation – Water and Rivers Commission and Water Corporation in response to a run of very dry years around 2001</li> <li>- WaterWise Rebate Scheme – response recognised that demand side management was one of a number of approaches that needed to be encourage</li> <li>- State Water Plan 2007 – scoped initially from Department of Premier and Cabinet with Water Corporation and Dept Water input</li> <li>- WaterForever – Water Corporation source development plan</li> <li>- Gngangara Sustainability Strategy – Coordinated by Dept of Water with input from a range of government departments, with recognition of the opportunity for an aligned effort to meet multiple land and water planning objectives</li> </ul>
<b>(a) Spatially</b>	Primarily the Perth metropolitan area and south west regional communities potentially affected by inter-regional water transfers.
<b>(b) Sectors</b>	Water resources, water services, primary industry, biodiversity, forest products.
<b>(c) Time scale</b>	To 2030.
<b>(d) Dimensions of Integration</b>	Initially (1980- 2000+), water supply and biodiversity issues were a central focus. From 2005 onward a broader and more integrated focus developed to align the primary water supply objective with related but otherwise constraining land planning, urban development, industry and environment planning objectives.
<b>(e) Balance of biophysical and societal analysis</b>	Biophysical aspects were dominant considerations in the early stages. A more rounded societal analysis evolved as experience accumulated and analysis was undertaken on how best to influence behavioural change, particularly on demand side management. The later stages included a reasonably comprehensive social analysis.
<b>(f) Stakeholder involvement</b>	Various phases of the SW Water experience involved intense stakeholder involvement that ranged from environmental assessment processes, community involvement in water source evaluation and integrated land and water planning. Stakeholder involvement was very political through some phases and this drove catalytic elements at key junctures of the adaptation process.
<b>(g) Specific outputs and outcomes</b>	<p>Strategic water planning and water source development planning was advanced considerably.</p> <p>A large government investment in water source development was procured (including the 1<sup>st</sup> desalination plant in Australia)</p> <p>Water supply security was maintained and improvements were achieved in water conservation awareness and practice</p> <p>Institutional and community knowledge on water resources and climate change were advanced significantly, as were concepts of trade-offs and adaptive management.</p> <p>An adaptive approach to water and environmental was progressed.</p>
<b>Phases covered and timing</b>	Various information sources can be referenced
<b>(start/end years):</b>	Dept of Water <a href="http://www.water.wa.gov.au">www.water.wa.gov.au</a>



	waterforever (Water Corporation) - <a href="http://www.thinking50.com.au/">www.thinking50.com.au/</a> Gnangara Sustainability Strategy – <a href="http://www.water.wa.gov.au/portal/page/portal/gss">www.water.wa.gov.au/portal/page/portal/gss</a>
<b>(a) Scoping phase</b>	-
<b>(b) Vulnerability assessment phase</b>	-
<b>(c) Adaptation response options</b>	-
<b>(d) Decision making and implementation</b>	-
<b>(e) Evaluation and learning</b>	-
<b>Reports/ Publications References</b>	Numerous publications on the above web sites.

RTI RELEASE ASSE



## Victorian Centre for Climate Change Adaptation Research

### Overview March 2010

#### Rationale

Climate change has emerged as a major challenge for societies and governments. Climate change will impact on natural ecosystems, food and fibre production, cities and infrastructure. It has consequences for human health and biodiversity conservation. Efforts to reduce greenhouse gas emissions may result in avoidance of potentially catastrophic climate change impacts. However, even under the most optimistic climate mitigation scenarios, we are likely to experience changes in the global climate system that will have significant implications for natural ecosystems, communities and industries.

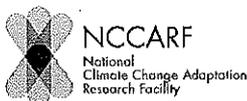
The Victorian Government recognised this challenge and since the launch of the 2002 *Victorian Greenhouse Strategy*, has actively invested in research programs to assess the impacts of climate change for a number of key sectors and regions. To date, these efforts have primarily related to the biophysical impacts of climate change.

The Government acknowledged the need for additional investment to address key knowledge gaps associated with adaptation challenges, including the need to integrate social and economic aspects of adapting to changing climate and natural environment. In the 2006 *Our Environment Our Future Sustainability Action Statement (ESAS)* it announced the establishment of a Centre for Research Excellence in climate change adaptation with \$5 million over 5 years committed for Centre in the 2008-09 State Budget.

The Centre was also flagged in the DSE 2008-2011 Corporate Plan, under the strategic priority of '*Adapting effectively to the impacts of climate change*'. This reinforced the need for a climate change adaptation research centre as an important part of responding to climate change impacts.

Adapting to climate change presents new challenges for policy makers and the community. It involves more than just consideration of climate-related hazards. Responding to the risks of climate change involves consideration of the vulnerability, exposure and adaptive capacity in communities, industries and ecosystems and consideration of the implications of climate change in the context of other social, economic or biotic changes impacting on our society and our natural systems. The implications of climate change are highly uncertain. The role of this Centre is to provide decision makers with an improved understanding of potential climate change impacts and investigate options and opportunities for climate change adaptation that acknowledge and account for uncertainty about future climate conditions.

The intended approach is to address identified research priorities for Victoria using multi-disciplinary and multi-institutional teams. The Centre has initially been formed as a partnership between Latrobe University, Monash University, RMIT University and the University of Melbourne. The Centre will provide the opportunity for researchers from all Victorian universities to participate in its activities. The development of the Centre is intended to provide a mechanism for improved coordination of research investment by the Victorian Government in climate change adaptation.



## Centre Objectives

- To increase State Government decision-making capacity about Victorian specific climate change impacts;
- To encourage the inclusion of adaptation needs into Government strategic planning;
- To bring together expertise to work on the provision of multi-disciplinary advice to Government, industry and the community; and
- To expand funding for the Centre's research program from other organisations, including the Commonwealth Government.

## University partner objectives

- Provide state and national leadership in climate change adaptation research;
- Support effective collaboration within Victorian universities on climate change adaptation research;
- Support collaboration with other Australian and international partners in adaptation research;
- Foster the development of Victorian expertise and capacity in adaptation research;
- Actively pursue further funding and resources for adaptation research.

## Centre Activities

### 1. A research grants project

Research projects will be developed and commissioned through an open (and competitive/transparent) process that provides for potential participation of all Victorian universities and their collaborators, covering key research issues in climate change adaptation and complementing existing or proposed state and national research. Research projects will include short and longer duration projects to address key government issues and involve cross-disciplinary and cross-institutional approaches as appropriate. Research projects are currently being agreed and the first round will commence in April 2010.

Research priority themes.

- *Opportunities and needs for long term adaptation in the short term*
- *Using future scenarios to adapt to climate change*
- *Future landscapes under climate change*

### 2. Think Tanks

At least four regional or thematic workshops or 'think tanks' will be co-ordinated and delivered each year. These workshops will facilitate the understanding of potential climate change impacts and the development of adaptation and resilience in different regions or thematic areas and present research relevant to a region and its adaptation challenges. They will provide a forum for discussion of climate change adaptation issues and strategies with local decision-makers and share learnings across sectors and communities. Outputs from the workshops will inform the development of research priorities and projects specific to different regions or thematic areas.



Four think tanks have been approved for 2009-10

Climate change and health in rural Victoria	Dr Darryn McEvoy RMIT and Prof Jeni Warburton La Trobe University	April 2010
<b>Adaptation and mitigation actions driving change in dryland farming systems</b>	Dr Pam McRae-Williams WIDCORP, Horsham Professor Peter Gell, U Ballarat	April 2010
<b>Incorporating climate change impacts into capital investment decision making</b>	Professor Carol Adams, La Trobe University	May 2010
<b>Adaptive learning – international experiences in climate adaptation for local and regional planning</b>	Assoc Prof Simon Batterbury MSLE University of Melbourne	June 2010

### 3. Annual Forum

An annual forum will be coordinated and managed by the Centre in each year of its operation. This will bring together researchers and policy makers from across adaptation sectors and showcase and present adaptation research and the outputs of Centre research projects. The forum will contribute to the identifications of knowledge gaps and priorities and opportunities for multi-disciplinary or multi-sectoral research. The first annual forum will be held on 28 April.

### 4. A visiting fellowship

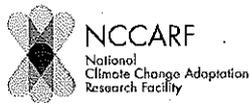
The Centre will establish and manage a visiting climate change adaptation fellowship. It is envisaged that the annual fellowship will be up to three months duration in any given year. The timing of the fellowship could be arranged to coincide with an Annual Forum and/or Regional Think Tanks. This will facilitate international collaboration and advise on best practice climate change adaptation in the Victorian context.

## Management and Governance

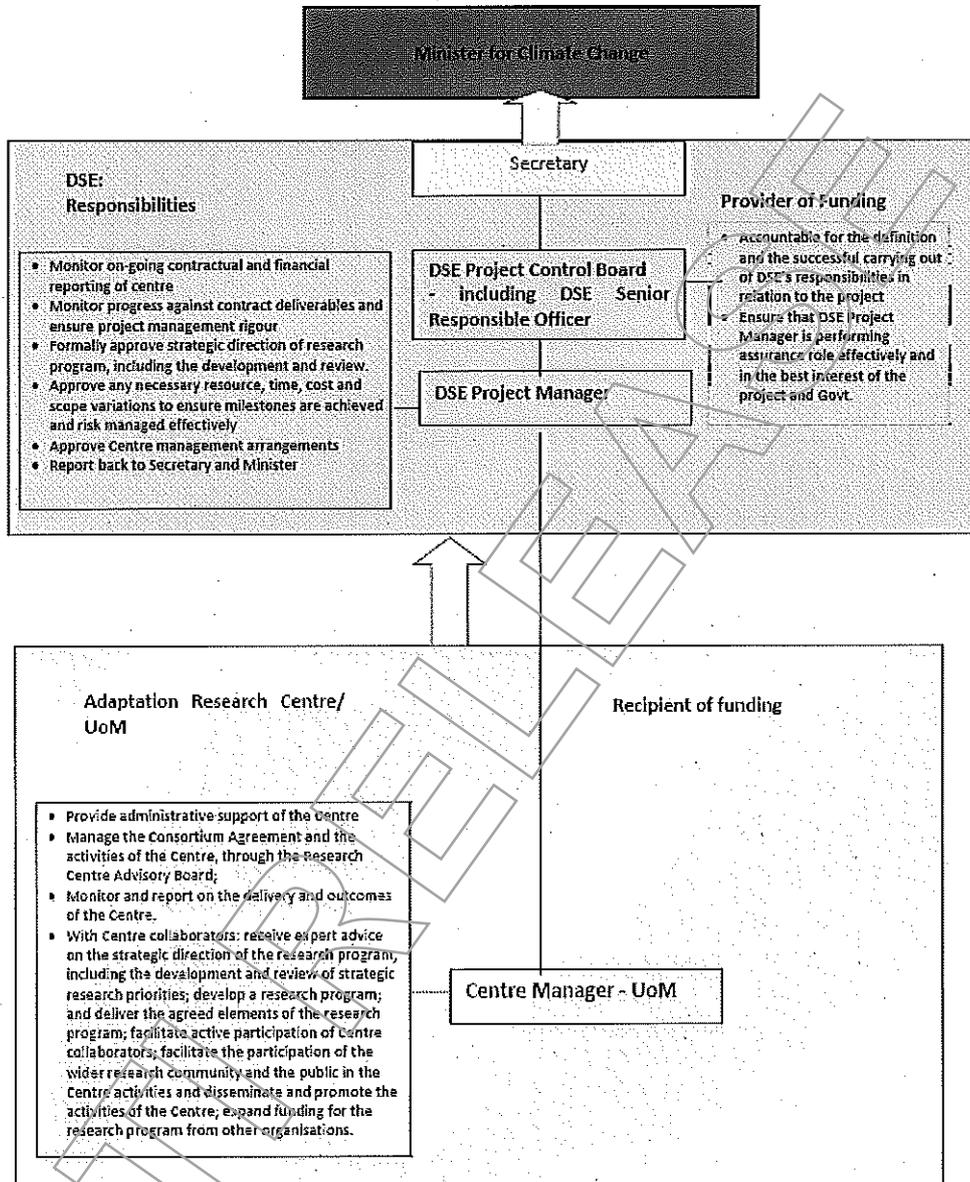
An Agreement was signed between the State Government (through the Department of Sustainability and Environment) and University of Melbourne for management of the Centre in July 2009 and the four partner universities completed an Agreement in October 2009. There is provision for other Victorian universities to formally become Centre members in the future.

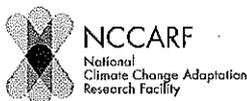
The Victorian Government has formed a Research Investment Panel to provide advice on research priorities and to approve the research program and other centre activities.

The strategic directions of the Centre will be guided by an Advisory Board consisting of members from the partner universities and an independent chair (Dr John Zillman). The activities of the Centre are being directed by an Implementation Committee with members from the partner universities.



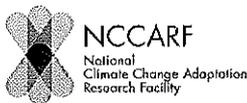
Governance Arrangements for Climate Change Adaptation Research Centre





## Lower Murray Landscape Futures

<b>Rationale and Objectives</b>	<p>A tri-catchment, multi state collaborative research project</p> <ul style="list-style-type: none"> <li>• <b>Analyse the impact of existing regional NRM plans and consider:</b> <ul style="list-style-type: none"> <li>o Improving natural resource condition</li> <li>o Economic arrangements</li> <li>o community well-being</li> </ul> </li> <li>• <b>Explore future options and scenarios</b> <ul style="list-style-type: none"> <li>o Partner with stakeholders</li> </ul> </li> </ul>
<b>One Paragraph Description</b>	<p>The Lower Murray Landscape Futures project examined future scenarios where policy innovations encourage the widespread adoption of natural resource management actions in the form of carbon and water trading and the establishment of new industries such as biomass and biofuels production. Simultaneously, scenarios were examined where climate change drives changes in water availability, agricultural production and associated environmental impacts.</p>
<b>Project Sponsors</b>	<p>South Australian Government, Australian Government NAP, Victorian Dept of Primary Industries, CSIRO Water for a Healthy Country, University of Adelaide</p>
<b>Project Managers/Contributors</b>	<p>Bryan, B.A., Connor, J., Meyer, W., Crossman, N.D., King, D., McNeill, J., Wang, E., Barrett, G., Ferris, M.M., Morrison, J.B., Pettit, C., Freudenberger, D., O'Leary, G.J., Fawcett, J., Elmahdi, A., Doble, R., Stenson, M., Walker, G., Jolly, ID., Pickett, T., Dalby, P.R., Mech, T</p>
<b>Funding and funding sources</b>	<p>Total ~\$3.764m over 4 years</p> <p>South Australian Government, Australian Government NAP, Victorian Dept of Primary Industries, CSIRO Water for a Healthy Country, University of Adelaide</p>
<b>Scope: (and how determined)</b>	<p>Objective for biophysical research:</p> <ul style="list-style-type: none"> <li>• Provide options and assessment of land use changes that have higher water use and environmental benefits:             <ul style="list-style-type: none"> <li>- decrease discharge, improve environmental and water quality management, sustain profitability</li> <li>- assess impact of environmental allocations of water on the system.</li> </ul> </li> </ul> <p>Critical questions to be addressed are:</p> <ul style="list-style-type: none"> <li>• Determine the combination of land uses (space and time) that will be economically feasible and socially acceptable</li> <li>• what effects will there be on key assets and regional values</li> <li>• what effects will environmental allocations of water have on the Lower Murray region (biophysical, economic and social).</li> </ul>
<b>(a) Spatially</b>	<p>3 regions – Wimmera and Mallee CMA's in Vic - SA MDB NRM region</p>
<b>(b) Sectors</b>	
<b>(c) Time scale</b>	<p>4 years</p>



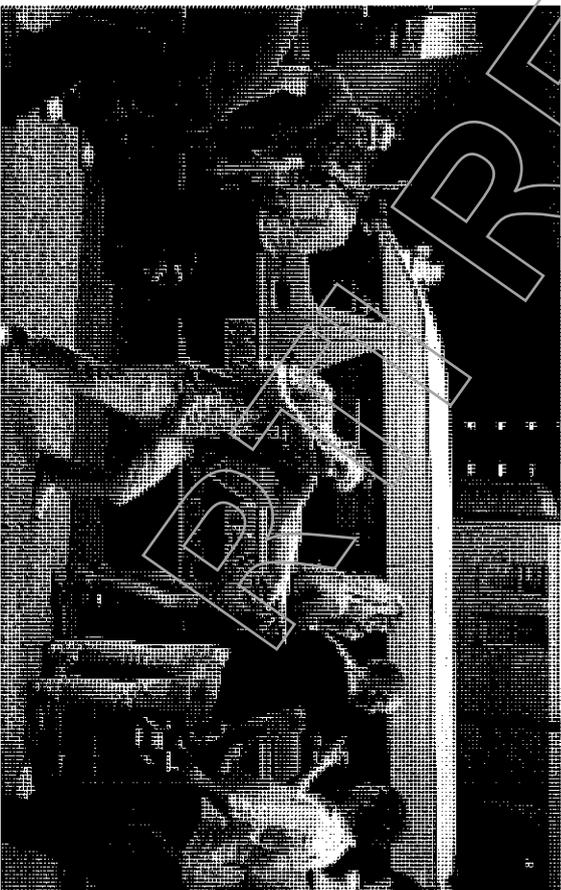
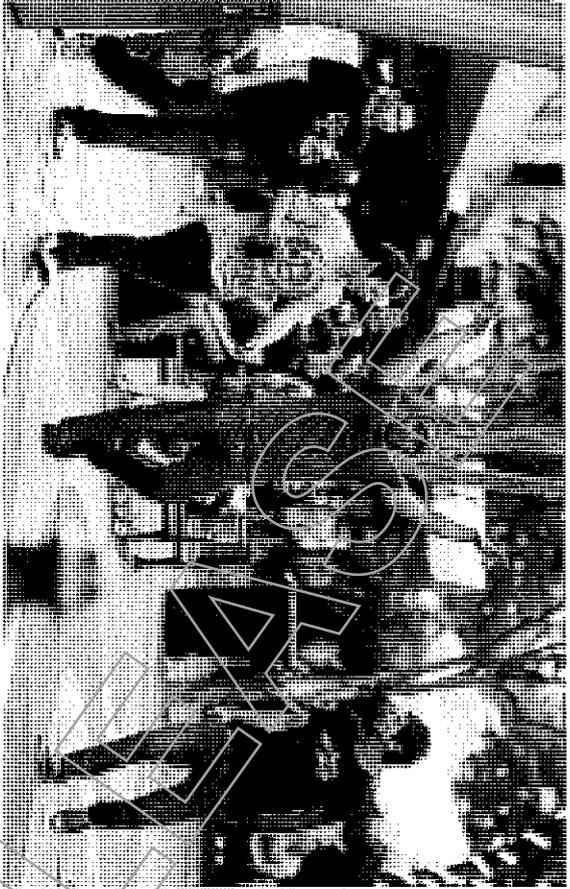
<b>(d) Dimensions of Integration</b>	This was a comprehensive analysis of regional systems -
<b>(e) Balance of biophysical and societal analysis</b>	While biophysical analysis made up 70%, consideration of economic and social components made up 30%
<b>(f) Stakeholder involvement</b>	Extensive consultation with CMA and NRM regional 'technocrats' – fewer meeting with a wider range of community members.
<b>(g) Specific outputs and outcomes</b>	An extensive documentation of the methods used and analyses done. 3 key messages: <ul style="list-style-type: none"> <li>• Business as usual is not an option</li> <li>• The future is in our hands                         <ul style="list-style-type: none"> <li>• The look and function of our future landscapes are determined by the decisions we make today</li> </ul> </li> <li>• Build smarter, greener economies</li> </ul>
<b>Phases covered and timing (start/end years):</b>	
<b>(a) Scoping phase</b>	1.5 years and at least 2 iterations
<b>(b) Vulnerability assessment phase</b>	3.5 years
<b>(c) Adaptation response options</b>	Final 6 to 12 months
<b>(d) Decision making and implementation</b>	Never finalised - ongoing
<b>(e) Evaluation and learning</b>	At least 2 years up until present
<b>Reports/ Publications</b>	<a href="http://www.landscapefutures.com.au/publications.html">http://www.landscapefutures.com.au/publications.html</a>
<b>References</b>	Bryan, B.A., Crossman, N.D., King, D. and MEYER, W.S. (2010). Landscape futures analysis: assessing the impacts of environmental targets under alternative spatial policy options and future scenarios. Environmental Modelling and Software. In press, 7Mar10.



## Development of South Australian Adaptation Framework

<b>Rationale and Objectives</b>	An Adaptation Framework for South Australia is currently being developed. This Framework will guide cohesive action by State Government agencies, local government, non-government organisations, the research sector, business and the community to develop well-informed and timely adaptation responses that will maximise opportunities and build resilience to the impacts of climate change.
<b>One Paragraph Description</b>	<p>The Framework is still under development. However, it is proposed that the Framework be based on a three-tiered integrated approach:</p> <ol style="list-style-type: none"> <li>1. <b>The Framework will identify State-wide priorities</b> to guide the overarching adaptation responses.</li> <li>2. <b>The Framework will adopt a Regional approach</b> which outlines the process and governance mechanisms for developing regional adaptation responses that take into account the impacts on communities, key sectors and the natural environment.</li> <li>3. Informed by the regional assessments, <b>key sectors will develop adaptation responses</b> that build resilience to climate change. These may either be broad, State-wide responses or regional responses that take into account more localised impacts.</li> </ol>
<b>Project Sponsors</b>	The Framework is being developed by the Department of the Premier and Cabinet in partnership with the Premier's Climate Change Council and the Natural Resource Management Council.
<b>Project Managers/ Contributors</b>	<ul style="list-style-type: none"> <li>• Andrew Klos, Principal Policy Adviser, Department of the Premier and Cabinet, SA.</li> <li>• Key South Australian Government Agencies.</li> </ul>

# Alcohol Management & Community Safety BCC - State Data & Mapping Workshop



## Background

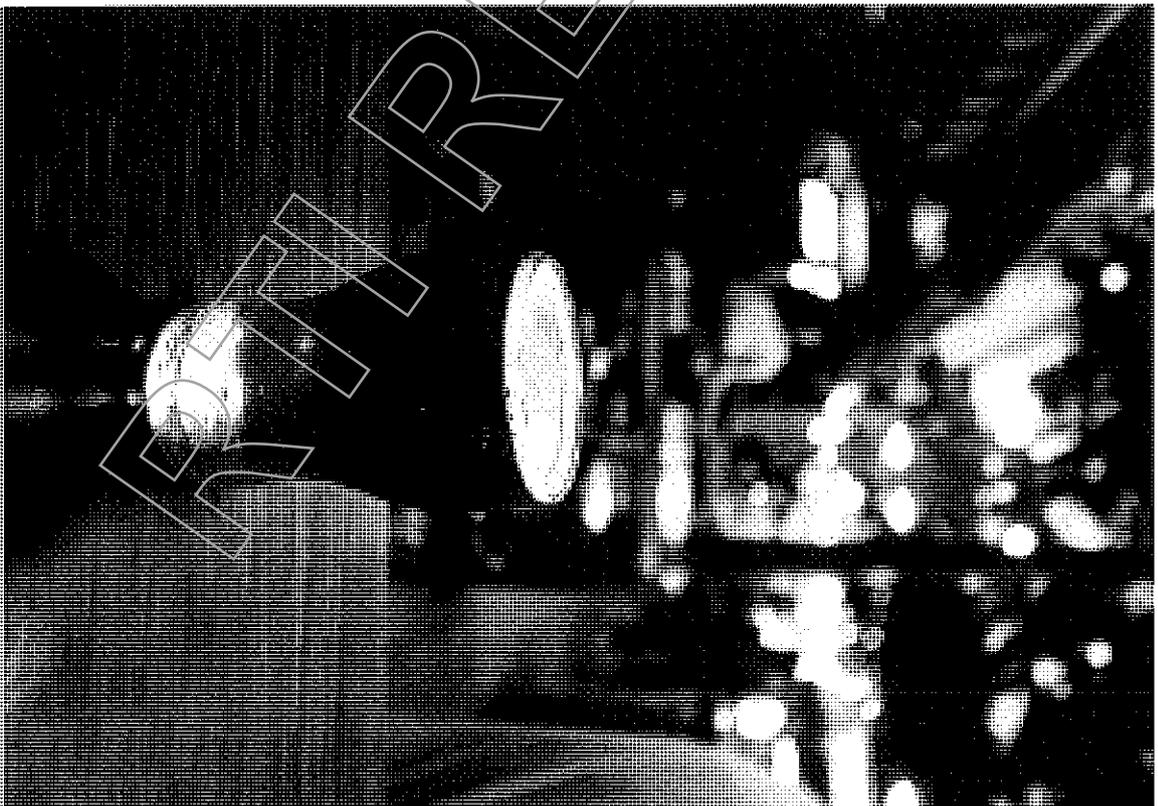
There are 1600 to 1700 licensed venues across Brisbane. This includes:

- Approx 220 detached bottle shops;
- Around 430 of licensed venues located in the inner city & 1200 in the suburbs
- City-wide, around 200 hotels, bars and nightclubs close between midnight & 5am on Fri & Sat nights
- 80% of the venues which close between 3am & 5am on Fri & Sat are located in the inner city precincts



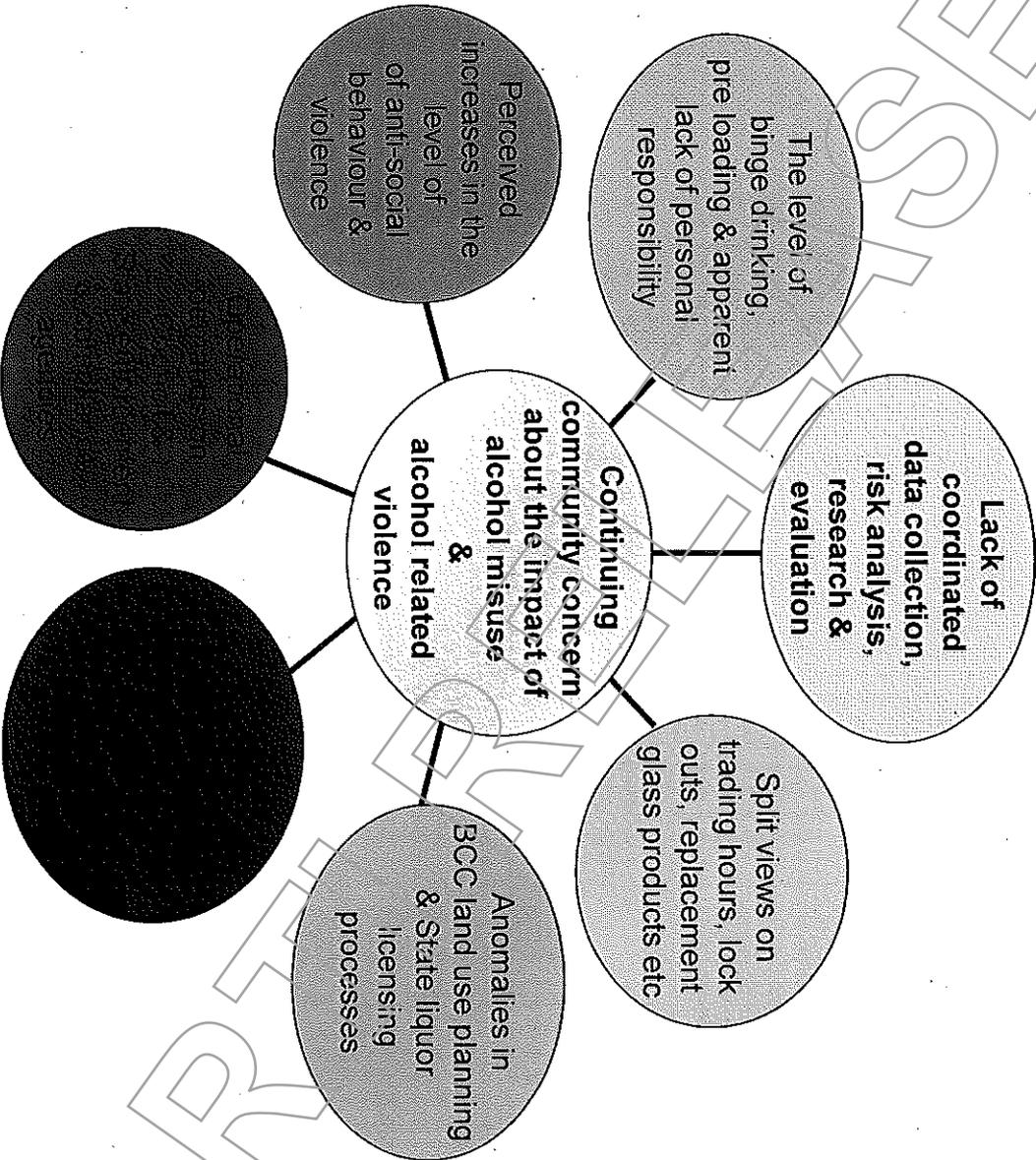
## Background (cont'd)

- 70,000+ patrons visit the inner city every Fri and Sat night;
- Over 50% of all police activity in the central city district involves alcohol related incidents;
- The challenge for government is how to achieve a balance between:
  - economic development & individual choice on the one hand, and
  - 'protecting the public good' on the other hand.



# Current Issues

A range of challenges underpin our current alcohol management activities – For example:



## **How is BCC responding to these issues**

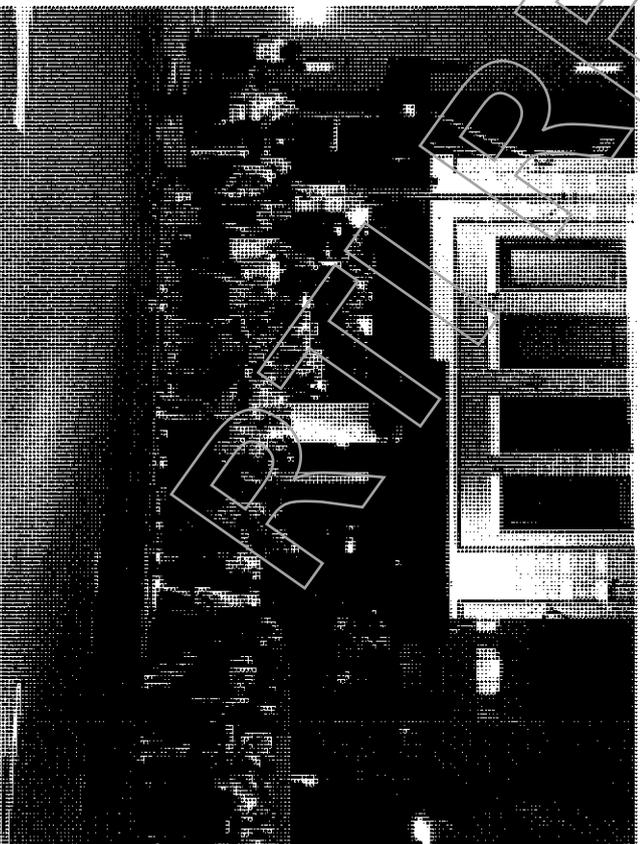
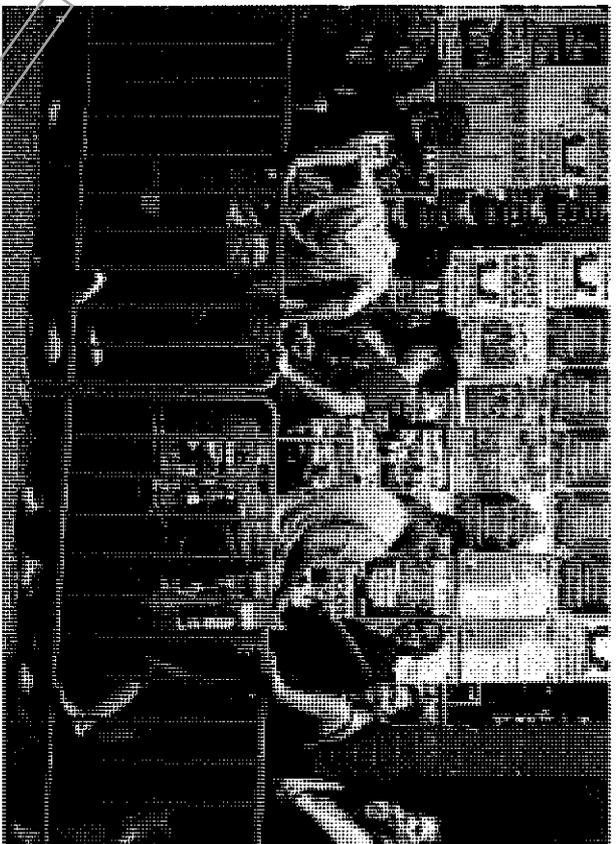
BCC is actively pursuing a whole-of-council approach to its alcohol management work. This includes:

- Establishing a strategically focused Alcohol Management Project Control Group (PCG). The PCG now oversees five operationally focused Working Groups:
  - Research, Data, Mapping & Engagement
  - Economic Development and Planning
  - Operations
  - Access (Traffic and Transport)
  - Community Services
- Developing a detailed PCG Implementation Plan & Working Group Action Plans to drive whole-of-council action
- Drafting a Brisbane Alcohol Management Strategy to guide Council's future alcohol management responses

## How is BCC responding to these issues (con't)

BCC is also actively pursuing partnerships with the State & C'with, business & community stakeholders, including:

- Data collection & analysis work with Gold Coast City Council and ICLEI Oceania examining alcohol management costs & processes
- Research with tertiary institutions (eg queuing & crowd control research with Griffith Uni)
- Inviting State Gov't, participation on the Alcohol Management PCG & State Gov't, business & community participation on the PCG Working Groups



## **Current Considerations & Future Directions**

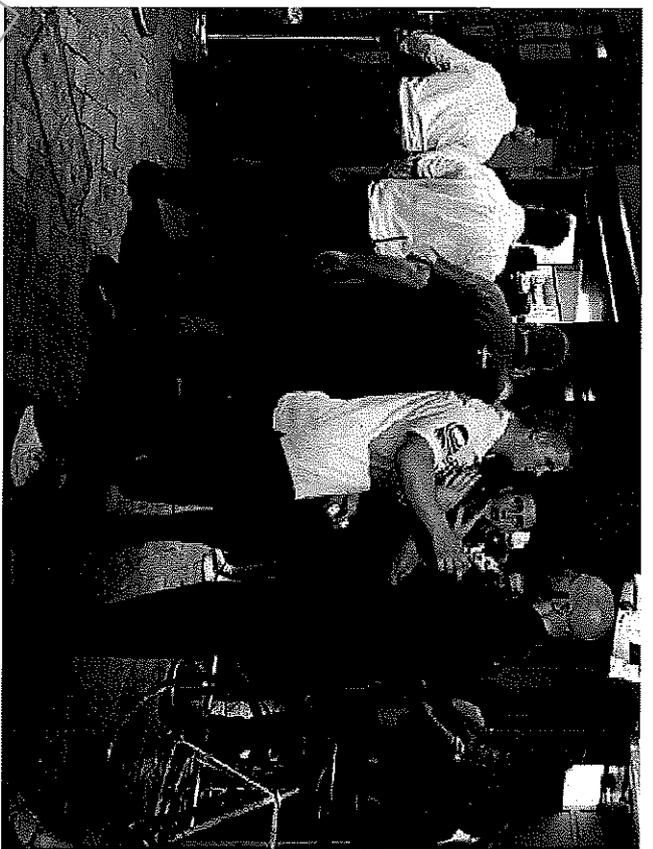
- BCC & a number of State agencies are already gathering a range of data relevant to alcohol management
- BCC has already established data sharing agreements with external stakeholders (eg EnergeX; Telstra)
- Council has excellent mapping capability and has recently produced an initial series of maps of licensed venues across the city, based on OLG R data.
- BCC is keen to explore opportunities for joint data collection, data analysis & mapping to assist future strategic planning & operational activity – hence today's gathering

## Recommendations

- BCC recommends the initiation of a joint BCC-State data sharing and mapping process, utilising alcohol management, crime & health data.
- It is recommended that this work be undertaken in two phases:
  - In the short term, doing some 'in house' data sharing & mapping to test system compatibility & explore potential opportunities & challenges, and
  - In the medium term, establishing appropriate MOUs to ensure longer term data access & information distribution to external stakeholders
- It is also recommended that the above work be linked to both the Alcohol Management PCG through the Data/Mapping Working Group & to the data analysis work being undertaken by BCC, the Gold Coast City Council & ICLEI Oceania

## **This approach would:**

- Assist the future delivery of well targeted & well integrated, whole-of-gov't responses to alcohol misuse and alcohol related violence in Brisbane
- Be supported by strong cross sector partnerships (ie it would include key business & community stakeholders)
- Reinforce public confidence in the BCC's and the State's commitment to address alcohol management issues in a proactive, timely and well considered manner



## Ashleigh Edwards

---

**From:** Zoe Ellerman  
**Sent:** Monday, 4 October 2010 5:25 PM  
**To:** Katherine Pike  
**Subject:** FW: BCC presentation re Alcohol Management Strategy - small change remeeting room  
**Attachments:** Brisbane\_CC\_Baseline\_Report\_2010\_(2).doc

-----Original Message-----

From: John Beirne [mailto:John.Beirne@brisbane.qld.gov.au]  
Sent: Monday, 4 October 2010 1:54 PM  
To: Zoe Ellerman  
Cc: Marnie Alefosio  
Subject: RE: BCC presentation re Alcohol Management Strategy - small change remeeting room

Thanks Zoe. We'll be providing electronic copies of our documents to everyone so I'll send stuff to both you and Jenny Newton as well as to Kyla.

By the by, I've attached the preliminary draft report by ICLEI, the consultants who've done some data work for us. The document is fairly basic and we need time to follow it up with more detailed analysis, but we thought you might like a copy. Can you keep it 'in confidence' at this stage, because it's a bit rough around the edges and it does need additional work. I'm happy to discuss further.

regards

John Beirne  
Program Officer Alcohol Management  
Community Safety Branch  
Families and Community Services Division Brisbane City Council GPO Box 1434 Brisbane Qld 4001  
Ph: (07) 3403 6799 or CTPI  
Fax; (07) 3334 0021  
Email: [john.beirne@brisbane.qld.gov.au](mailto:john.beirne@brisbane.qld.gov.au)

>>> Zoe Ellerman <[Zoe.Ellerman@premiers.qld.gov.au](mailto:Zoe.Ellerman@premiers.qld.gov.au)> 4/10/2010 1:37 pm  
>>> >>>

Apologies John but I am unable to attend this afternoon's meeting as I have a pre-existing commitment. Kyla will of course fill me in on the discussions afterwards.

Many thanks

Zoe

-----Original Message-----

From: John Beirne [mailto:John.Beirne@brisbane.qld.gov.au]  
Sent: Monday, 4 October 2010 10:15 AM  
To: Kyla Hayden; Zoe Ellerman  
Subject: BCC presentation re Alcohol Management Strategy - small change re meeting room  
Importance: High

**\*\* High Priority \*\***

Kyla, Zoe,

The meeting at 3.30pm today has been moved to Room 1B on Level 10 of our Brisbane Square building.

I look forward to seeing you.

regards.

John Beirne  
Program Officer Alcohol Management  
Community Safety Branch  
Families and Community Services Division Brisbane City Council GPO Box 1434 Brisbane Qld 4001  
Ph: (07) 3403 6799 or CTPI  
Fax: (07) 3334 0021  
Email: [john.beirne@brisbane.qld.gov.au](mailto:john.beirne@brisbane.qld.gov.au)

\*\*\*\*\*  
This message has passed through an insecure network.  
Please direct all enquiries to the message author.  
\*\*\*\*\*

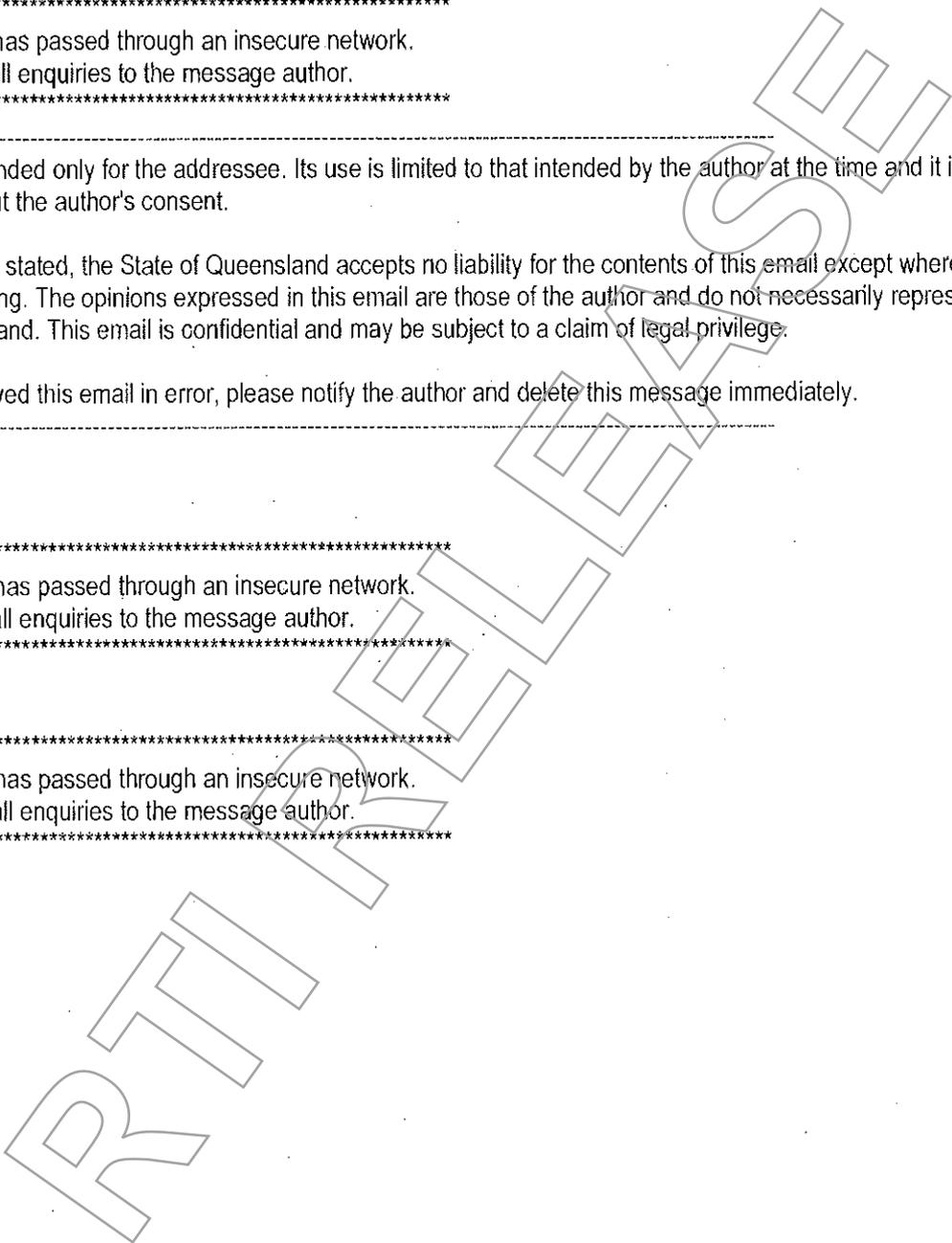
-----  
This email is intended only for the addressee. Its use is limited to that intended by the author at the time and it is not to be distributed without the author's consent.

Unless otherwise stated, the State of Queensland accepts no liability for the contents of this email except where subsequently confirmed in writing. The opinions expressed in this email are those of the author and do not necessarily represent the views of the State of Queensland. This email is confidential and may be subject to a claim of legal privilege.

If you have received this email in error, please notify the author and delete this message immediately.

\*\*\*\*\*  
This message has passed through an insecure network.  
Please direct all enquiries to the message author.  
\*\*\*\*\*

\*\*\*\*\*  
This message has passed through an insecure network.  
Please direct all enquiries to the message author.  
\*\*\*\*\*



Pages 72 through 116 redacted for the following reasons:

-----  
Contrary to the Public Interest

## Ashleigh Edwards

---

**From:** QRA Correspondence - QLDRA  
**Sent:** Tuesday, 5 April 2011 7:27 AM  
**To:** Herve Carlos  
**Subject:** FW: Speaking at Sustainable Council 2011  
**Attachments:** SSC\_Conference Handbook\_web.pdf

---

**From:** INFO (QRA)  
**Sent:** Monday, 4 April 2011 4:46 PM  
**To:** Correspondence (QRA)  
**Subject:** FW: Speaking at Sustainable Council 2011

---

**From:** Emily Hollosy [mailto:ehollosy@gs-press.com.au]  
**Sent:** Monday, 4 April 2011 4:13 PM  
**To:** INFO (QRA)  
**Subject:** Speaking at Sustainable Council 2011

Hi Richard,

Thanks for your time on the phone this morning.

As I said, I'm organising the Sustainable Councils Conference at the Brisbane Convention and Exhibition Centre from **5 – 6 September**, and I would like to invite a senior representative from the Queensland Reconstruction Authority to give a presentation.

Sustainable Councils 2011 will bring local governments together to share their knowledge, present case studies of their initiatives, hear from leaders in sustainability and environment practice, and work to build a sustainable future. With a strong local government focus, the event is a prime opportunity to promote and develop sustainability initiatives within Australia. Sustainable Councils 2011 will also be co-located with EcoGen2011, Australia's clean energy industry conference and exhibition.

Given your pivotal role in the development and direction of environmental management for Queenslanders, it would be of great interest to our expected delegates to hear your views on sustainability and environmental management, focusing on projects, strategies and policies and how they might impact the work of local councils in these fields. I also welcome any additional suggestions for topics that you would like to cover.

### About Sustainable Councils

Sustainable Councils is now in its third year. Last year the event was endorsed by LGSA (NSW) and ICLEI Oceania, and saw over 500 delegates, making it one of the largest events of its kind. I have attached the 2010 Conference Handbook for further information, and you can visit our [website: www.sustainablecouncils.com.au](http://www.sustainablecouncils.com.au)

Presenters at previous Sustainable Councils have included:

- Local Government and Shires Association (NSW) Managers Claire Huckerby and Niki Carey
- The Hon. Gavin Jennings, Victorian Minister for Sustainability and Environment
- Senator Christine Milne, Deputy Greens Leader
- Arron Wood, Prime Minister's Environmentalist of the Year
- Bill Forrest, CEO of ICLEI Oceania
- Dr Bakti Devo, Manager Water Strategy, City of Sydney

- Professor Stuart White, Director, Institute for Sustainable Futures, University of Technology Sydney
- Dr Mark Diesendorf, Institute of Environmental Studies, University of NSW

### 2011 program

This year, we have responded to feedback and are introducing a number of very exciting initiatives:

- A greater focus on councils' case studies
- Presentations on trends in sustainability
- Presentations on strategic policy and future directions for councils
- In a first, we are offering one free registration for every local council, which is sure to make the event highly accessible for local councils and result in a record number of delegates.

I am in the preliminary stages of organising a program. We have already confirmed Allan Jones, Chief Development Officer, Energy and Climate Change, City of Sydney, David Hood, President, Australia Green Infrastructure Council and a representative from the Lord Mayor's Office at the Brisbane City Council.

Located in Brisbane, it would be highly appropriate and of great interest to our expected delegates to hear from the Queensland Reconstruction Authority, their work with local councils and new projects and policies that will effect or aid councils.

We are moving forward quickly with our programming and planning, and I look forward to speaking with you further about your involvement. I understand the Authority must be very busy at this time - Our expressions of interest are due 15 April, but please call me to discuss if you would like more information.

Best regards  
Emily

Emily Hollosy  
Conference Convenor

Great Southern Press  
GPO Box 4967 Melbourne VIC 3001 Australia  
Tel: +61 3 9248 5100 Fax: +61 3 9602 2708  
ABN: 28 096 872 004  
Mail to  CTPI  
Website: [www.gs-press.com.au](http://www.gs-press.com.au)



**SUSTAINABLE COUNCILS 2011**  
A PRACTICAL APPROACH TO LOCAL GOVERNMENT AND SUSTAINABILITY

*Sustainable Councils* is Australia's national sustainability conference and exhibition bringing local governments together to build a sustainable future.

[www.sustainablecouncils.com.au](http://www.sustainablecouncils.com.au)

---

Unless stated otherwise, this email, together with any attachments, is intended for the named recipient(s) only and may contain privileged and confidential information. If received in error, you are asked to inform the sender as quickly as possible and delete this email and any copies of this from your computer system network.

If not an intended recipient of this email, you must not copy, distribute or take any action(s) that relies on it; any form of disclosure, modification, distribution and/or publication of this email is also prohibited.

Unless stated otherwise, this email represents only the views of the sender and not the views of Queensland Reconstruction Authority

# SUSTAINABLE COUNCILS 2010

A PRACTICAL APPROACH TO LOCAL GOVERNMENT AND SUSTAINABILITY

6-7 SEPTEMBER 2010

SYDNEY CONVENTION and EXHIBITION CENTRE, Darling Harbour



Sustainable Councils Conference and Exhibition 2010 will be co-located with EcoGen 2010 Conference and Exhibition – uniting the clean energy industry.

Platinum Sponsor



Silver Sponsors



Endorsed by



## CONFERENCE HANDBOOK

[www.sustainablecouncils.com.au](http://www.sustainablecouncils.com.au)

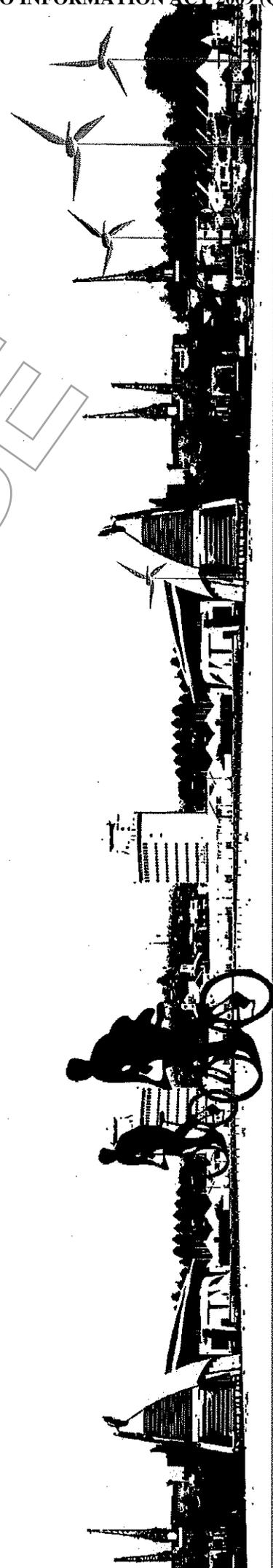


PROGRAM

TUESDAY 7 SEPTEMBER	
TIME	PLENARY SESSION
8.45 am - 9.00 am	Delegate Welcome Senator Christine Milne Greens Deputy Leader
9.00 am - 9.45 am	<i>Achieving sustainable targets through collaboration of local government and community sectors</i> Arron Wood Director, Finstarstar and 2007 Prime Minister's Environmentalist of the Year
9.50 am - 10.15 am	<i>Community engagement and social capital</i> Peter McLean CEO, Keep Australia Beautiful - Sustainable Cities NSW
10.15 am - 10.30 am	<i>Beyond the spin - real greenhouse performance of Australian local government</i> Andrew Wales Planet Footprint
10.30 am - 11.00 am	MORNING TEA
11.00 am - 11.25 am	<i>Sustainable Choice - moving councils beyond recycled paper</i> Claire Huckerby Project Manager, Sustainable Choice, LGSSA NSW
11.25 am - 11.50 am	<i>Institutionalising sustainability in local government - overcoming barriers and applying tools</i> Niki Carey Assistant Strategy Manager Environment, LGSSA NSW
11.50 am - 12.15 pm	<i>Green ratings for buildings and appliances: the critical imperative for local government</i> Alan Pears Professor, Centre of Design RMIT University and Co-director Sustainable Solutions
12.15 pm - 1.00 pm	Networking Session: Speed Exhibitor Presentations
1.00 pm - 2.00 pm	LUNCH
2.00 pm - 3.00 pm	Panel session: <i>Sustainable planning and urban design</i> Chair: Niki Carey Assistant Strategy Manager Environment, LGSSA NSW Wayne Wescott Sustainability Consultant, Green Building Council of Australia (GBCA) Muriel Watt Chair, Australian PV Association; Senior Lecturer, School of Photovoltaics and Renewable Energy Engineering, University of NSW Dr Bhakti Devi Manager Water Strategy, City of Sydney
3.00 pm - 3.30 pm	AFTERNOON TEA
3.30 pm - 3.50 pm	<i>The design and evaluation of sustainability programs at the local level</i> Professor Stuart Whitts Director, Institute for Sustainable Futures University of Technology Sydney
3.50 pm - 4.15 pm	<i>Case study: practical efforts to respond to the ecological footprint of Sydney's eastern suburbs</i> Peter Maganoy Manager, Sustainability, Randwick City Council

PROGRAM

MONDAY 6 SEPTEMBER	
TIME	PLENARY SESSION
8.45 am - 9.00 am	Delegate Welcome Monica Barone CEO, City of Sydney
9.00 am - 9.50 am	<i>Imagination in Sustainability</i> Todd Sampson CEO, Leo Burnett, Creator of Earth Hour
9.50 am - 10.15 am	<i>National and international perspectives on the sustainability agenda for local government</i> Bill Forrest CEO / Regional Director (CLE) Oceania
10.15 am - 10.30 am	<i>Innovative renewable technologies and energy efficiency in local government</i> Richard Smailino General Manager, Victoria, eco-Kinetics
10.30 am - 11.00 am	MORNING TEA
11.00 am - 11.30 am	<i>Sustainability Scorecard: targets and objectives in Cairns Regional Council</i> Marnee Grenfell Sustainability Officer, Cairns Regional Council Su Groome Sustainability Consultant, Anup
11.30 am - noon	<i>Case Study: The Sunshine Coast's energy conservation</i> Philip Woods Strategic Planner, Environmental Planning
Noon - 12.30 pm	<i>Sustainable policy and practice for local government</i> Dr Mark Diesendorf Institute of Environmental Studies, University of New South Wales
12.30 pm - 1.00 pm	<i>Sustainability in stormwater: City of Sydney case study</i> Dr Bhakti Devi Manager Water Strategy, City of Sydney
1.00 pm - 2.00 pm	LUNCH
2.00 pm - 2.30 pm	<i>Measuring carbon in the supply chain: best practice approaches of local government in the UK</i> Richard Mattison CEO, Tubcoast
2.30 pm - 3.00 pm	<i>Best practice turf renovations for sustainable water use</i> Geoff Hutton Director, Sustainable Turf Renovations
3.00 pm - 3.30 pm	AFTERNOON TEA
3.30 pm - 4.15 pm	<i>International Kynrole</i> Janice Larson Director, Renewable Energy Development, Province of British Columbia Ministry of Energy, Mines and Petroleum Resources, Province of British Columbia
4.15 pm - 5.00 pm	Networking Session: Speed Exhibitor Presentations
5.00 pm - 7.00 pm	Cocktail Party



ABSTRACTS

Ordered alphabetically by presenters surname



**INSTITUTIONALISING SUSTAINABILITY IN LOCAL GOVERNMENT – OVERCOMING BARRIERS AND APPLYING TOOLS**  
**NIKI CAREY, LGSA, NSW**  
 Tuesday 7 September 11:25 am, Bayside 202

This session will consider lessons learnt by New South Wales councils through practical application of a range of evaluation, decision making and performance indicator tools to progress sustainability at a project and organisational level within local government. These lessons will be considered in light of rigorous research into the key barriers and drivers to sustainability in local government conducted in 2009 with 32 NSW councils.



has been undertaken in collaboration with Arup Pty Ltd and has involved staff in developing a suite of tools to deliver and report on targets and objectives in council's Corporate Sustainability Policy and Carbon Emissions Reduction Policy.

The innovative framework is founded on a sustainability assessment tool that can be used by all areas of council to assess a project or activity against a quadruple bottom line measures: namely, resource efficiency, biodiversity protection, community wellbeing, and good governance and economic management. The resulting graphical outcome provides a rapid assessment of the project which can be used in council reporting or to assist project formalisation. The outcomes provide lead indicators to be used in monthly reporting to council and an annual scorecard for public reporting.

**SUSTAINABLE CHOICE – MOVING COUNCILS BEYOND RECYCLED PAPER**  
**Charm Huckerby, LGSA NSW**  
 Tuesday 7 September 11:00 am Bayside 202



Sustainable procurement is about more than just purchasing recycled paper – it requires a change in the way we think and operate.

Sustainable Choice is a Local Government and Shires Associations (LGSA) program, funded by the NSW Department of Environment, Climate Change and Water, that assists councils in New South Wales to make this change and move forward to adopt sustainable procurement policies and practices.

Sustainable product and service alternatives exist to meet the needs of all areas of council operations – indoors and outdoors, small, one-off purchases, in large scale tenders and contracts.

Examples presented will cover a wide range of actions implemented. Such as retrofitting council properties with water efficient fixtures and fittings; installing rainwater tanks in community centres and amenities; implementing stormwater harvesting schemes to irrigate parks and playing fields; integrating rain gardens, and other water sensitive urban design elements into major infrastructure upgrades and capital works projects.

**PRACTICAL EFFORTS TO RESPOND TO THE ECOLOGICAL FOOTPRINT OF SYDNEY'S EASTERN SUBURBS**  
**Peter Maganov, Randwick City Council**  
 Tuesday 7 September 2:50 pm Bayside 202



Organisations globally continue to collect data and report on the impact they have in terms of their carbon and ecological footprints. These efforts are not always aligned to the practical work programs and activities underway to address the organisational or community contribution to climate change or the over consumption of natural resources such as water and energy.

Randwick City Council, in collaboration with neighbouring Waverley and Woollahra Councils, and supported by grants from the NSW Environmental Trust and other agencies, have attempted to integrate the implications of their ecological footprint with a number of practical on-ground projects aimed at addressing issues related to energy and water consumption, sustainable transport and waste avoidance.



**MEASURING CARBON IN THE SUPPLY CHAIN: BEST PRACTICE APPROACHES OF LOCAL GOVERNMENT IN THE UK**  
**Richard Mattison CEO Truroc**  
 Monday 6 September 2:00 pm, Bayside Terrace

Richard Mattison, having recently worked with 33 London boroughs to measure the city's supply chain environmental impacts. Mr Mattison will be talking about the most efficient and cost effective way to systematically measure and capture supplier environmental data using practical examples from this project.



**THE DESIGN AND EVALUATION OF SUSTAINABILITY PROGRAMS AT THE LOCAL LEVEL**  
**Professor Stuart White, Director, Institute for Sustainable Futures University of Technology Sydney**  
 Tuesday 7 September 3:30 pm, Bayside 202

The presentation will provide an overview of the potential for the local government to influence pathways to sustainability in their areas, across a range of issues including energy, water, transport, materials, land-use and the human dimensions of sustainability. It will include examples from the work of the Institute for Sustainable Futures and highlight the importance of good program design, as well as monitoring and evaluation. Best-practice approaches to determining cost-effectiveness of options, as well as innovative methods for community engagement will be explored.



**THE SUNSHINE COAST'S ENERGY CONSERVATION COMMUNITY**  
**Philip Woods, Sunshine Coast Regional Council**  
 Monday 6 September 11:30 am, Bayside Terrace

In tackling and mitigating the challenges of climate change and peak oil it is critical for the Sunshine Coast region to begin in earnest its transition to a low carbon, and low oil future.

As part of this transition the Sunshine Coast Council is the first council in Queensland to participate in the Energy Conservation Communities Program – an energy conservation and demand management initiative in joint partnership with Energy – the regional electricity provider.



**BEYOND THE SPIN – REAL GREENHOUSE PERFORMANCE OF AUSTRALIAN LOCAL GOVERNMENT**  
**Andrew Wales, Planet Footprint**  
 Tuesday 7 September 10:15 am Bayside 202

Through the provision of scorekeeping to local government, Planet Footprint has compiled a massive database of energy, water and greenhouse performance information for over 3,000 municipal properties across Australia, these properties are as diverse as administration buildings, aquatic centres, works depots, libraries, golf courses, and airports. The energy and water performance for each of these properties has been tracked over several years, and benchmarked against the performance of similar properties nationally.

In this presentation Planet Footprint will share its insights on the energy, water and greenhouse performance of councils nationally and internationally, including:

- What are the characteristics of a well-performing council in regards to energy, water and greenhouse? What are they doing that is different to others?
- Which municipal properties are achieving the best environmental and financial returns for councils in terms of energy, water and greenhouse project investment?
- How are regional councils performing in regards to energy, water and greenhouse performance compared to metropolitan councils?
- Which states have the leading councils for environmental performance and how do these compare to leading local governments in the US?

The presentation will be a showcase of what is actually happening in Australian councils, and the actual results that have been achieved.

Note: The anonymity of individual councils will be protected in this presentation, unless a council has granted permission to Planet Footprint to have its identity disclosed.

As an advisor to the Global Reporting Initiative and The Economics of Ecosystems and Biodiversity initiative, as well as being a member of the UK Government's Sustainable Development Panel, Mr Mattison brings a wealth of knowledge to this topic. His session will provide insight into the process adopted by the London boroughs including how they identified carbon and resource intensive hot spots across their public sector spend categories and the engagement process they have subsequently adopted.



**GREEN RATINGS FOR BUILDINGS AND APPLIANCES: THE CRITICAL IMPERATIVE FOR LOCAL GOVERNMENT**  
**Alan Pears, Professor Centre of Design RMIT University and Co-director Sustainable Solutions**  
 Tuesday 7 September 11:50 am, Bayside 202

Buildings, and the appliances and equipment in them, are major contributors to both community and corporate local government energy costs and greenhouse gas emissions. Buildings are long-lived infrastructure that are expensive to upgrade. They also influence health and productivity, while cooling requirements drive massive investment in energy supply infrastructure that drives up energy bills.

To manage the environmental impacts of buildings like most other issues, we need to monitor and report on performance, and apply a range of strategies to improve performance. We also need to ensure that new buildings and renovations are environmental assets, not liabilities. Thus effective rating schemes are critical. They must be meaningful, valid, adequately supported, and deliver real outcomes. This paper will briefly review some major environmental rating tools and schemes, and discuss emerging directions and issues.

**SUSTAINABLE PLANNING AND URBAN DESIGN**  
**Panel Session**  
 Tuesday 7 September 2:00 pm, Bayside 202

The discussion will revolve around sustainable planning and urban design, with Niki Carey, Assistant Strategy Manager for Environment with Local Government and Shires Association, NSW as chair person.

**Panelist**  
**Wayne Wescott, Sustainability Consultant with the Green Building Council of Australia.** Mr Wescott has worked in not-for-profits, for local and state governments and as a consultant in the area of telecommunications, environmental management and local governance.

**Dr Muriel Watt, Chair of the Australian PV Association and Senior Lecturer at the School of Photovoltaics and Renewable Energy Engineering at the University of NSW.** Dr Watt is currently the Head of Energy Policy and PV at the Renewable Energy consulting company IT Power-Australia.

**Dr Bhakti Devi, Manager Water Strategy for the City of Sydney.** Dr Devi is a qualified civil and environmental engineer who is currently overseeing the development of a decentralised water master plan for the City of Sydney.

**EXHIBITORS**

**Ordered alphabetically**

**BLADE ELECTRIC VEHICLES**

Contact: Doug Falconer  
 EMAIL: doug.falconer@bev.com.au  
 STAND: 13A and 14A  
 PHONE: 03 5472 2009

Blade Electric Vehicles (BEV) is Australia's leading manufacturer of plug-in all-electric vehicles.

The Blade Electron four seater passenger car has been sold to councils government departments, businesses and private customers since 2008, making it Australia's first commercial EV.

Licensed by the Commonwealth Department of Transport as a second stage manufacturer, BEV has over 30 vehicles on the road in Australia and New Zealand.

Blade is also expanding into the field of light commercial vehicles, with a Lite and light truck variant available in a variety of battery configurations and usable ranges.

**ECO KINETICS**

Contact: David Enright  
 EMAIL: info@eco-kinetics.com  
 STAND: 1A and 2A  
 PHONE: 07 3386 3500

eco-Kinetics maintains a recognised position as the leading provider of engineering solutions to the sustainable clean and renewable energy markets throughout Australia, New Zealand and the South Pacific region.

The company provides innovative design, development and project management solutions for renewable energy projects including wind energy, solar energy, photovoltaic solar thermal, bio-energy and geothermal.

eco-kinetics is a subsidiary of ASX listed, CBD Energy.

At eco-kinetics both you will access to the following technologies:

- Solar photovoltaic residential and commercial systems
- Wholesale solar components including PV panels, inverters and mounting systems
- Solar air-conditioning
- Large scale fixed and tracked solar photovoltaic and solar thermal farms.

**ENVIROGROUP**

Contact: Karl Edmondson  
 EMAIL: sustainable@envirogroup.com.au  
 STAND: 5A  
 PHONE: 0420 971 905

Sustainable Suburbs is Australia's most comprehensive environmental home assessment and retrofit program.

Already offered to over 500,000 residents across Victoria, the program aims to dramatically reduce CO2 emissions and reduce energy and water costs for consumers.

The program was developed by The Western Alliance for Greenhouse Action (WAGA), and facilitated by Envirogroup, a provider with five years in the sustainability industry.

The program includes home sustainability assessments, free light, globe and showerhead exchange, efficient whitegoods, blinds and awnings for windows, dual flush toilets, solar cover solar hot water, rainwater tanks, ceiling insulation, wireless energy meters, draft sealing products and more.

Let us help you meet your local carbon reduction targets and protect your community from increasing utilities prices at the same time.

**NET BALANCE**

Contact: Mark Lyster  
 EMAIL: mark@netbalance.com  
 STAND: 8A  
 PHONE: 02 9249 2100

Net Balance is Australia's leading dedicated sustainability consultancy with over 40 consultants based in Sydney, Melbourne, Brisbane and London. We work with our clients on environmental, social and governance issues to build organisational resilience and long-term value for stakeholders.

As trusted advisors to some of Australia's largest organisations, we work with our clients to:

- Reduce operational and regulatory risks
- Increase efficiencies
- Enhance reputations and brand value
- Maintain social licences to grow.

Our deep knowledge and experience of business, coupled with our proven strategic and technical expertise allows us to understand your need to be both profitable and sustainable.

For more information visit: <http://www.netbalance.com>

**PLANET FOOTPRINT**

Contact: Andrew Wales  
 EMAIL: andrew.wales@planetfootprint.com  
 STAND: 7A  
 PHONE: 0412 395 008

Planet Footprint is the world's only independent environmental scorekeeper. Planet Footprint delivers a complete end-to-end service that independently monitors and reports the energy, water, fleet, waste and greenhouse performance of 200 organisations nationally, including 150 councils.

This service:

- Continuously measures each council's energy, water and greenhouse performance, including consumption, costs, and emissions. The majority of data is captured directly by Planet Footprint from energy, water and fleet providers.
- Flags potential problems to council when the trends warrant management attention (too high, too low, or if they don't change over time).
- Tracks organisational performance towards meeting targets and budgets.
- Presents each council's performance in independent reports that are updated continuously and made available to staff online 24/7.
- Benchmarks the energy, water and greenhouse performance of councils and individual properties with similar properties nationally and internationally.
- Allows each council to learn from the best performers to save money and avoid waste. Planet Footprint not only compares councils to the best and most improved, but also shows what actions they implemented to achieve their results.
- Allocates engineers, analysts and sustainability experts to work with each council to interpret and apply the reports and datasets to identify and act on wastage and opportunities.

Councils use the Planet Footprint Environmental Scorekeeping Service to accurately and independently monitor performance. Identify savings from projects, strengthen asset management and increase their capacity for efficient environmental performance improvement. Most importantly, by listing an independent scorekeeper manage the task of data collection and reporting, staff are free to focus more of their time on actions to reduce energy and water costs and improve environmental performance.

**SOLGEN ENERGY**

Contact: Chris Taylor  
 EMAIL: chris@solgen.com.au  
 STAND: 10A  
 PHONE: 02 8424 3800

Solgen Energy is an award winning industry leader in the design and installation of solar electric systems.

As a contracted supplier to the New South Wales Government for solar installations, Solgen Energy has installed hundreds of solar systems for government bodies. Recent projects include: Cockatoo Island, a heritage-listed island in Sydney Harbour, one of Australia's largest local government installations at Randwick Council, multiple TAFE Western Sydney Campus sites and projects for Warringah Council and the University of Wollongong.

Our emphasis on design and engineering makes us the perfect partner - from project scoping and design through to installation and monitoring. Through our exclusive relationship with SCOTT Solar, we deliver the highest quality systems on the market to government and commercial customers.

**STEPLIGHT PTY LTD**

Contact: Ryan McCarthy  
 EMAIL: ryan.mccarthy@steplight.com.au  
 STAND: 3A  
 PHONE: 1300 139 996

Steplight assists communities in reducing their ecological footprint. Steplight's core activities include:

- Conducting household and business sustainability assessments, providing advice to participants about what improvements they can make to cut their environmental impact and save money;
- Providing software solutions and equipment to individuals and organisations, enabling them to carry out their own sustainability assessments. This includes supporting the national iGreen ([www.igreen.org.au](http://www.igreen.org.au)) and Y Green ([www.ygreen.com.au](http://www.ygreen.com.au)) youth development initiatives; and
- Conducting training programs and community workshops in the area of environmental sustainability.

**SULO MCB AUSTRALIA**

Contact: Kaylah Stanford  
 EMAIL: info@sulo.com.au  
 STAND: 11A  
 PHONE: 1300 364 382

SULO MCB Australia operates one of the largest plastic injection moulding facilities in Australia at Somersby, on the Central Coast of New South Wales. The SULO facility is the most highly automated 'large tonnage' injection moulding plant in Australia.

SULO has been the technological leader in the manufacture of mobile garbage bins for over 100 years. With extensive experience in the waste management industry, SULO Australia has advanced production and delivery capabilities combined with a strong focus on quality and innovation. SULO is continually delivering value through integrated solutions. SULO's service solutions include manufacture and supply, assembly and distribution and in-field repairs and maintenance.

**SUNSHINE COAST REGIONAL COUNCIL**

Contact: Sally Wright  
 EMAIL: sally.wright@sunshinecoast.qld.gov.au  
 STAND: 6A  
 PHONE: 07 5441 8010

The Sunshine Coast Council is the fourth largest council in Australia. It has a vision to be Australia's most sustainable region - vibrant, green, diverse. To help achieve this vision, the council has recently released a number of sustainability policy documents which are displayed at the conference exhibition. These include a Climate Change and Peak Oil Strategy, a Biodiversity Strategy, a Wareways and Coastal Management Strategy, an Affordable Living Strategy and others. All these documents focus on delivering a more sustainable future for the Sunshine Coast.

**SUSTAINABLE TURF SOLUTIONS**

Contact: Geoff Hutton  
 EMAIL: info@mannow.com.au  
 STAND: 9A  
 PHONE: 02 4651 2229

Sustainable Turf Renovations and Equipment specialises in all facets of Turf Construction, Turf Renovation and Turf Equipment enabling you to achieve the best possible results for your Turfed Surface.

The company provides services for sports field and large areas and distributes a range of sustainable turf renovation equipment from Koro and Blec Landscaping Equipment.

- Our specialised equipment can
- Recycle topsoil from with the existing profile
- Shave the turf to a desired depth, great for replacing turf or removing thatch
- Relieve compaction and improve drainage.

Our range of environmentally friendly equipment includes the Koro Fieldtopmaker, Koro Recycle Dresser, Koro Topdainer, Blec Blecavator, Blec Seeders and Blec Groundbreakers as well as a huge range of other Blec Equipment.

For more information visit [www.sustainableturf.com.au](http://www.sustainableturf.com.au)

**TRUCOST**

Contact: Richard Marttison  
 EMAIL: info@trucost.com  
 STAND: 8A  
 PHONE: +44 (0) 20 7160 9800

Trucost helps organisations measure and manage the environmental impacts associated with their own operations, supply chains and investment portfolios. Key to our approach is that we not only quantify environmental impacts, but we also put a price on them, helping organisations understand environmental risk in business terms.

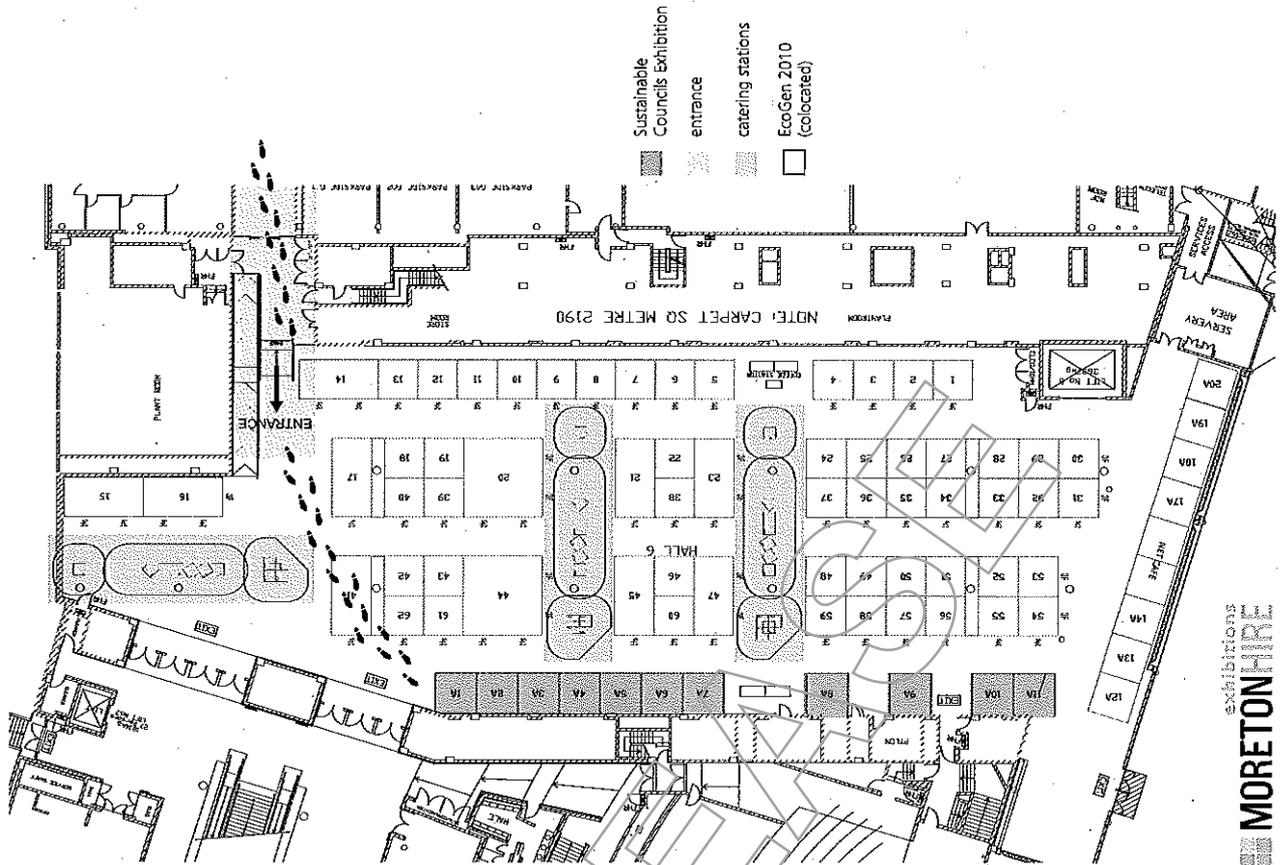
In this way, Trucost helps its customers manage financial risk from environmental issues such as climate change regulation and natural resource dependency, meet environmental reporting requirements, demonstrate robust environmental credentials and give cost and efficiency improvements through their operations.

Trucost is the world's leading environmental data base provider and has developed a leading-edge model for assessing the environmental impacts of supply chains.

For more information visit <http://www.trucost.com/>

EXHIBITION SPACE

SYDNEY CONVENTION CENTRE, EXHIBITION SPACE



EXHIBITORS

SUSTAINABLE COUNCILS 2010 EXHIBITORS

Exhibitor	Booths number
Blade Electric Vehicles	13A 14A
eco-Kinetics	1A 2A
Envirogroup	5A
Net Balance	8A
Planet Footprint	7A
Solgen Energy	10A
Steplight Pty Ltd	3A
Sulo	11A
Sunshine Coast Regional Council	6A
Sustainable Turf Renovations	9A
TRUCOST	8A

ECOGEN2010 EXHIBITORS

The co-location of EcoGen2010 with Sustainable Councils 2010 offers delegates and visitors ample opportunity to learn about the clean energy industry.

Company Name	Booth numbers	Company Name	Booth numbers
Aero-Sharp	54	Materials Handling	24
Alco Battery Sales	1	MWM Energy Australia Pty Ltd	42, 43
Australian Solar Energy Society (AUSES)	29	Office of the Renewable Energy Regulator	37
Austrabun	25, 26	Ozoll Pty Ltd.	30
Beyond Building Energy	60, 46	Phoenix Contact.	57
Bradman Recruitment Group	61	Prestige Consulting	22
Campbell Scientific Australia	5	Recharge	56
Canadian Consulate General	14	RenewUnder	36
Canadian Consulate General	16	Rotax Australia	45
CEEG (Nanjing) International Corporation.	62	Sealite Pty Ltd	40
Clarke Energy	20	Selectronic	41
Clenergy	32, 33	Shenzhen Sungold Co., Ltd.	35
CMA Solar	49, 50	Snooda New Energy Co., Ltd	34
Colexon Australia Pty Ltd	18	SMA Australia	47
Conergy Pty Ltd	44	Solar Energy Australia (SEA)	39
Cummins Power Generation Pty Ltd	58	Solar Inception Pty Ltd	7
Easton Electric Systems Pty Ltd	10	Solar Inverters	17
Enerdrive Pty Ltd	6	Solarmatrix Pty Ltd	1, 2
Enerflex Service Pty Ltd	11	Sun-Earth Solar	23
Energy Efficiency Council	51	SunPower Corporation	8, 9
Enterprise Connect	27	Tina Solar Ltd	21
Goldwind Australia	15	Tyco Flow Control Pacific	53
Green Energy Trading	19	Weidmuller Pty Ltd	3
HATCH	12, 13	Western Australian Sustainable Energy Association	55
Hays Specialist Recruitment	48	Windflow Technology Ltd	28
Ingenero	31		
Latronics	38		

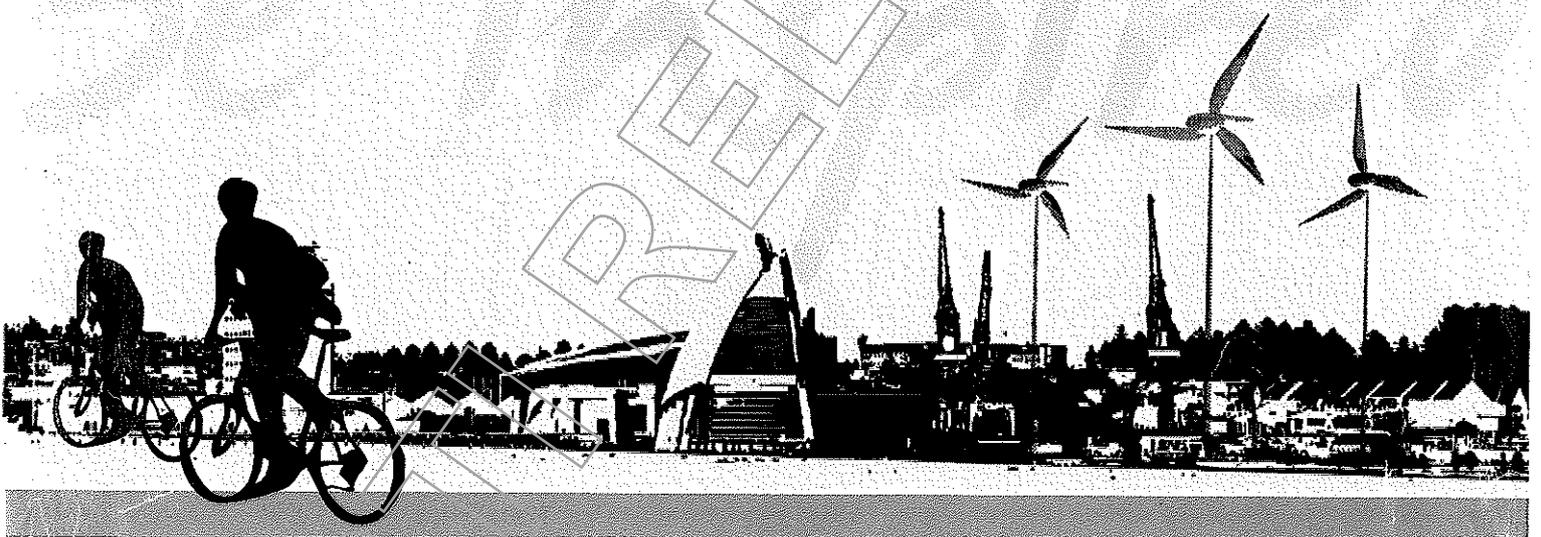
# SUSTAINABLE COUNCILS 2011

## A PRACTICAL APPROACH TO LOCAL GOVERNMENT AND SUSTAINABILITY

Brisbane Convention and Exhibition Centre | 5-6 September 2011

Build on your experiences in Sydney; visit Sustainable Councils 2011, to be held in Brisbane 5-6 September.

The event is shaping up to be a fantastic forum offering solutions and practical know-how on the sustainability issues facing local government. Visit the Sustainable Councils 2011 conference and exhibition website and register your interest to come along, get involved and be inspired.



For more information or to register your interest for Sustainable Councils 2011 call (03) 9248 5172 or email [conferences@sustainablecouncils.com.au](mailto:conferences@sustainablecouncils.com.au)

Or visit

[www.sustainablecouncils.com.au](http://www.sustainablecouncils.com.au)

The Sustainable Councils team looks forward to seeing you in Brisbane in 2011!

Pages 126 through 167 redacted for the following reasons:

-----  
Contrary to the Public Interest