A Regional Approach to Climate Change

CHRISTINE MATERIA, NRM COORDINATOR
Local Government Association of Tasmania

Local Government will increasingly be called upon to manage the risk of and respond to the impact of climate change. Preparing for the inevitable impact of climate change may become one of the most important issues for Local Governments.

The predicted impacts of climate change cross many functional areas of Local Government including infrastructure and property services, recreational facilities, health services, planning and development, natural resource management, and sewage and water services. Local Government’s response to climate change requires mitigation - the management and reduction of greenhouse gas emissions and adaptation - adjustments to existing activities and practices so that the vulnerability to potential impacts associated with climate change can be reduced. These two activities are complementary and should be considered simultaneously.

Climate related risks are not new to Local Government managers. Councils have existing roles and responsibilities that are influenced by climate and weather events such as storm water drainage, coastal infrastructure, roads and pavements, construction and maintenance. Local Government needs to assess the likely effects of climate change across all their activity and responsibilities, and plan appropriate responses.

Adaptation to climate change does not necessarily require a fundamental change to what is already being undertaken by Local Government. The effects of floods, droughts, storms and other extreme weather events are already addressed by Local Government when planning and providing services. The effects of climate change can be addressed as part of existing council operational, policy and planning processes (regulations on buildings, green building, water and energy efficiency initiatives, flood prone and land slip area management, energy efficiency, bushfire protection, storm water, waste water and water supply management).

The climate change mitigation and adaptation issues cross Local Government boundaries and require collaborative solutions. Cooperation between councils on a regional scale is not a new concept to Local Government and has the potential to provide substantial economic, social and environmental benefits. Partnerships enable the sharing of resources, existing knowledge and avoid the “reinvention of the wheel”.

Perhaps the most important message in climate change adaptation and mitigation is coordinating effort and resources with other organisations and levels of government. The issue of climate change is too far reaching to be attempted by one organisation on its own.

For more information, or to register your interest in being involved in Local Government’s adaptation and mitigation response to climate change, contact Christine Materia at the Local Government Association of Tasmania at christine.materia@lgat.tas.gov.au.
War on Weeds

Cradle Coast NRM released their Draft Weed Hygiene Action Plan in November 2007, which details preventative actions to be taken in order to meet two medium-term goals of the Cradle Coast NRM Strategy:

• Annual reduction in the number of new weed infestations of existing weed species within the region; and
• Annual reduction in the number of new weeds species within the region.

The plan has the potential to be used as a model for the development of similar plans in other regions. It outlines seven goals, 35 strategic actions, and identifies partner stakeholders, timing and performance targets.

The Draft Weed Hygiene Action Plan is available from Rosie Britton at rbritton@cradlecoast.com.
Training Sessions for Council Officers

The start of 2008 has been a busy period for NRM South and southern councils, with training sessions for council officers being run across a number of project areas.

Training service providers, NorthBarker Ecosystem Services, have recently presented intensive training sessions for planners and NRM staff of Huon, Kingborough, Glenorchy, Brighton and Glamorgan Spring Bay Councils on the Coastal Values Data of Southern Tasmania. Council staff can now apply data gathered during the Coastal Values project to real life scenarios including the assessment of development proposals.

The Coastal Values project was originally undertaken in 2005/2006 through NRM South with funding from the Australian Government, and managed by the Coastal and Marine Branch of the Department of Tourism Arts and the Environment. The project was intended to enhance and add to data on natural coastal values (geomorphology, flora and fauna) and to provide management tools along with data in order to assist State and Local Government in making informed and appropriate decisions on the sustainable use and development of coastal areas.

NRM South also sponsored a forum on NRM and land use planning for Southern Midlands, Central Highlands, Brighton and Derwent Valley Councils. The forum explored priority NRM issues within the subregion and discussed the role of council planning processes in achieving NRM outcomes. All four councils and NRM South anticipate that this process will lead to the development of a subregional land use strategy for the area.

For more information on the work of NRM South, visit nrmsouth.org.au, or contact Patrick Taylor on 6208 6121.

Climate Change Update

JESS TYLER, COMMUNICATIONS MANAGER
Antarctic Climate & Ecosystems Cooperative Research Centre

Climate Futures for Tasmania continued its stakeholder consultations in Tasmania with a meeting of infrastructure organisations at a special forum held in December 2007.

Sponsored by Tasmanian consulting engineers, Pitt & Sherry, the forum focused on key industry stakeholders who have significant infrastructure assets in Tasmania, to explore the climate change related risks to major infrastructure types in the state. “Climate change is a key risk to infrastructure, with the potential to disrupt services and cause substantial costs,” said John Pitt, Managing Director of Pitt & Sherry. The forum helped infrastructure and risk managers to identify, understand and quantify their climate change related risks.

Antarctic and Climate CRC CEO, Professor Bruce Mapstone, said the Climate Futures for Tasmania project is a unique collaboration across many sectors of the Tasmanian community in planning for climate change. “The strength of the project is its ability to bring the world-class expertise of the CRC and other partner research providers, to a large group of Tasmanian operations and companies in a practical way,” he said.

“Earlier work commissioned by Hydro Tasmania has established that we can provide climate projections for Tasmania at a finer scale than has been undertaken before and better represent Tasmania’s geography and its effect on the local climate,” Prof. Mapstone added. “This is going to be a critical element in making climate information locally relevant and useful,”

For further information, contact Jess Tyler on 6226 2265, or email media@acecrc.org.au.
New Biocontrol Agent to Rid Plant Pest

CSIRO’s newly refurbished containment facility for exotic insects and plant pathogens in Canberra is hosting a species of rust fungus which shows promise as a biocontrol agent for the highly invasive plant pest, boneseed.

Named as one of Australia’s 20 Weeds of National Significance, boneseed is a threat to native bushland in south-eastern Australia where it forms dense, evergreen monocultures that prevent the growth and regeneration of native plants.

Boneseed has been the target of a collaboration between CSIRO and the Plant Protection Research Institute in Stellenbosch, South Africa, to investigate the possible use of the rust species, *Endophyllum osteospermi*, as a biocontrol agent. The research is funded by the Research and Development component of the Australian Government’s Defeating the Weed Menace Program, administered by Land and Water Australia.

“In its home range in South Africa, boneseed is attacked by a naturally occurring species of rust fungus,” says Dr Louise Morin from CSIRO Entomology and the Cooperative Research Centre (CRC) for Australian Weed Management. “Boneseed rust is highly promising as a biocontrol agent for boneseed because it reduces growth and reproduction of the plants, deforming infected branches into ‘witches brooms’,” she said. Initial host specificity testing has been conducted in South Africa and the rust is now in quarantine in Canberra for the final testing that is required before an application to release can be made.

Boneseed is currently confined to the south-east of Australia, in particular, the Mornington Peninsula and the You Yangs in Victoria, and the Mount Lofty Ranges in South Australia. Other small, scattered infestations occur throughout Victoria, Tasmania and South Australia. The plant has the potential to invade much of southern Australia, endangering native flora and fauna wherever it establishes.

Boneseed (*Chrysanthemoides monilifera* subsp. *monilifera*) was introduced into Australian gardens around 150 years ago and is frequently confused with its close relative, the bitou bush (*Chrysanthemoides monilifera* subsp. *rotundata*), targeted in an earlier biological control program.
To Flush Isn’t the End of the Line

A new information resource designed to educate homeowners on how to better manage their on-site waste water management system and protect the environment, is now available. Waste water management systems include all domestic septic tanks and ‘packaged’ treatment plants.

To flush isn’t the end of the line, is a new toolkit available on compact disc, that can be viewed on a personal computer. The kit helps homeowners identify what type of system they have, provides tips on how to keep their system working well, and how to record maintenance. Each toolkit contains an interactive CD and an information booklet.

All Tasmanians produce domestic sewage waste that needs to be managed to reduce the impact on the environment and our health. People who live in non-sewered parts of Tasmania have a greater responsibility.

Failure of on-site waste water management systems, in particular septic tank systems, has been recognised as contributing to environmental harm and the declining health of some of our waterways. Property owners and occupiers need to take an active role in the management of their on-site waste water management system. In order to do this, it is essential that property owners and occupiers are aware of their responsibilities and have access to appropriate information and other resources to understand their role. The objectives of the new toolkit are to:

- Increase protection of waterways and groundwater;
- Increase protection of land and vegetation;
- Maintain and improve community amenity; and
- Prevention of public health risks.

The toolkit will assist in mitigating the impacts of on-site waste water management systems, achieving environmentally sustainable development, and protecting water catchments.

A working group, with representatives from State and Local Government, developed the Tasmanian toolkit, based on a successful toolkit developed by regional councils in northern Queensland. The Tasmanian version of the toolkit has been endorsed by the Departments of Health and Human Services, Tourism Arts and the Environment, and the Local Government Association of Tasmania.

To flush isn’t the end of the line is available from local councils for homeowners with on-site wastewater management systems.

New Litter Laws Target Frequent Fingers

Fingers of rubbish onto our streets, roadsides and bushland areas risk being reported by the public to Tasmania’s new telephone and Internet litter hotlines.

As part of the Look Who’s Littering campaign, a series of press advertisements, titled the Look Who’s Littering Spotter’s Guide, encourages the community to report littering to the State Government’s hotline on 1300 135 513.

The initiative enables community members to report a litterer’s vehicle registration number to the telephone hotline, or online at www.environment.tas.gov.au/litter. Discarding a cigarette butt can result in an on-the-spot fine of $120 and littering large amounts can attract up to a $6,000 court-imposed fine.

Under the new laws, people delivering advertising material will be required to make sure their leaflets are deposited securely in letter boxes and not tossed into a driveway, or over a front gate where they can become litter. Depositing fliers on windscreens will be outlawed to curb littering in car parks, and rubbish on building sites and on trailers will have to be properly secured.

A stringent follow-up procedure offers a safeguard against malicious reports. People making reports may be required to sign an affidavit or attend a court hearing. A completed ‘littering report’ will be followed up by

At the launch of the Look Who’s Littering campaign are (L-R) Environment Division Senior Policy Officer Derek Walter, Chairman of Keep Australia Beautiful Tasmania Ken Stewart, Environment Minister Michelle O’Byrne and Environment Division Deputy General Manager John Mollison.

a written warning, an infringement notice or, where appropriate, prosecution.

The Look Who’s Littering campaign follows extensive consultation with local councils and other stakeholder groups, and the introduction of new litter laws in 2007. As well as the public looking out for litterers, Tasmania Police, the Parks and Wildlife Service and Local Government are now empowered to issue on-the-spot fines.

For more information about the new laws and how to report littering offences, visit www.environment.tas.gov.au/litter/.
Climate Change a Major Challenge for the Water Industry

DR CHRISTINE MUCHA, CHIEF EXECUTIVE OFFICER
Hobart Water

Right across Australia, one of the biggest emerging issues in the water and wastewater industry is how we will cope with climate change.

Water utilities and their representative bodies are giving increasing attention to the subject, as a growing body of local and international reports conclude that water and sewerage service providers will need to adapt their infrastructure to cope with future consequences.

Let’s consider some of the possibilities of climate change in Australia, as listed by the Intergovernmental Panel on Climate Change (IPCC) in 2007:

- Probable temperature rises of between 0.4 to 2 degrees celsius by 2030 and up to 6 degrees celsius by 2070;
- A decrease in annual rainfall in the south and the east;
- Wetter summers in some inland and eastern coastal areas; and
- More frequent extreme rainfalls.

So what does this mean for suppliers of water, sewerage and stormwater services? In 2006, the Victorian Government commissioned a preliminary examination of potential risks to infrastructure caused by likely future climate changes. Using the Australian Standard approach for identifying and assessing risks, they developed worst and best case scenarios for 2030 and 2070, assuming nothing is done now to counteract these risks.

The study looked at five industries - water, power, telecommunications, transport and buildings - and considered a range of climatic possibilities. In the water industry, the study encompassed storage reservoirs, waterways and irrigation channels, reticulated sewage systems, trunk sewers and treatment plants, stormwater drains and land prone to flooding.

The results showed that in the low climate change scenario, in 2030 the water sector is the only one at significant risk. By 2070, while all sectors would be exposed to high levels of potential risk, the water industry is considered to be at extreme risk. The report’s main message is that it is vitally important that adaptation strategies are put in place by infrastructure owners to address these risks. But how do we fully understand these risks in Tasmania, as they surely change from catchment to catchment?

In the September 2007 issue of LGAT News (Climate Change: from science to policy, pp42), the Antarctic Climate and Ecosystems (ACE) CRC’s Marcus Haward wrote about the impacts of climate change on local councils but noted that the differences would vary from area to area. “Local climate change needs to be considered in risk management strategies developed and adopted as part of ongoing planning”, he wrote.

In Tasmania, the recently-formed consortium, Climate Futures for Tasmania, is bringing together a number of scientific research organisations to help decision-makers develop informed adaptation strategies. Hobart Water is one of many organisations which will benefit from the group’s work, which includes the ACE CRC, CSIRO, the Tasmanian Partnership for Advanced Computing, the Tasmanian Institute of Agricultural Research, UTAS, the Australian Bureau of Meteorology and Hydro Tasmania.

In essence, Climate Futures for Tasmania will undertake four major research components:

- Fine scale climate projections for Tasmania;
- Modelling of selected catchment water flows and reservoir dynamics;
- Derivation of key climate variables most relevant to selected users; and
- Estimation of extreme events.

The outcomes of the Climate Futures for Tasmania research projects will not only be invaluable to local

Continued Page 56
councils, but to the whole water sector in Tasmania. While Hobart Water is continuing to develop 30-year asset management plans for water infrastructure in the southern region, access to new projections and models will help us address the added variable of climate change.

In the process of adapting infrastructure, there must also be an awareness of the environmental footprint that is being created - particularly with relation to energy demand. This research, and the ability of organisations like Hobart Water to access it, is profoundly important to Tasmania’s future.

If climate change predictions prove right - or even just partly right - our state’s ability to manage water catchments, to supply high quality drinking water, to remove wastewater and stormwater, and to re-use water will impact on local communities.

The message is loud and clear. Planning new infrastructure on historical climate records cannot continue, as the ramifications of the failure to plan will be costly. Future infrastructure needs must be determined through best available climate predictions and rigorous risk assessment.

In a 2005 report for the Australian Greenhouse Office on climate change, risk and vulnerability, the Allen Consulting Group noted that “the community... expects that our cities and infrastructure will cope with severe weather events efficiently and safely.” Within the water and wastewater industry, we must expect and plan for this too.

### Potential Risks in Tasmania Resulting From Climate Change Impacts

#### Catchments:
- Surface run-off changes
- Increased bush fire risk
- Erosion pattern changes
- Agricultural production / activity changes

#### Water supply:
- Quality of supply e.g. turbidity spikes after high rainfall events
- Increased pressure on stressed rural regions
- Increased event damage e.g. flooding
- Event impacts on power and telecommunications impacting on water and wastewater operations

#### Infrastructure:
- Soil moisture changes and resulting impacts on underground infrastructure

#### Wastewater systems:
- Stormwater infiltration into wastewater systems in extreme weather events
- The capacity of treatment plants to manage severe spikes

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Our businesses are using specialist knowledge to help manage and build safe and cost-effective infrastructure, including roads, dams, building and mine operations.

Our businesses are also helping ensure the environment is protected – for both humans and the ecology – while still allowing local communities to enjoy the benefits that modern development brings. Getting this delicate balance right requires the specialist knowledge of scientists, geologists and engineers. Our specialist businesses Coffey Geotechnics, Coffey Environments, Coffey Mining and Coffey Projects are leaders and experts in their fields.

Coffey has been operating in Tasmania for over 11 years and employs a wide range of experienced professionals who are passionate about developing a sustainable future for our magnificent state.
Signing up to Save Our Shorebirds

PATRICK TAYLOR, COMMUNICATIONS OFFICER
NRM South

The start of school holidays and soaring summer temperatures in December traditionally mark the beginning of beach season, with Tasmanian families taking to coastal waters to cool off and enjoy our many splendid beaches. But while we enjoy ourselves in the sun, sand and surf, a new initiative has been launched to remind us that our beaches are there to share.

Officially launched by The Hon. Paula Wriedt MHA, Minister for Tourism, Arts and the Environment, and Dr Christine Mucha, Chair of NRM South, the first of 29 shorebird information signs was unveiled at Five Mile Beach during Coastcare Week on 7 December, 2007.

The new signs highlight the importance of our beaches and coastal wetlands in the lifecycles of both local and migratory birds, from shearwaters to penguins, oystercatchers and the critically endangered little tern, which has less than ten known breeding pairs statewide.

Targeting the many south-eastern recreational beach users - ranging from swimmers, surfers, and fishers to dog walkers, horse riders, trail and quad bike riders, and four-wheel drivers - the new shorebird signage has developed out of a strong partnership between Clarence, Glamorgan-Spring Bay, Sorell and Tasman Councils, Birds Tasmania, the Parks and Wildlife Service, the Department of Tourism, Arts and Environment, Southern Coastcare Association of Tasmania and NRM South.

The interpretive content of each sign uses language and images designed to reach beach users of all ages, and while responding to specific locations, the message in each is universal - that our coastal regions and their diverse bird communities are fragile and need our care and protection.

Seven different design templates have been applied to interpret the range of issues threatening coastal values at each of the 21 distinct sites. The signs contain information about the shorebirds, both local and migratory, current threats to them and their habitats, and how the community and beach users can minimise these threats.

Beaches receiving the new signs range from Dennison Beach, North of Bicheno, down to White Beach on the southern Tasman Peninsula - covering nearly half of the East Coast. With over 1500km of coastline between the councils, the 21 priority sites were selected by local land managers and experts from Birds Tasmania. Through a series of field trips, supported by long-term data, a comprehensive map of species, threats and issues was developed for each site. Chosen sites were those perceived to have the greatest potential to benefit.

The development of the signage is part of a much larger coastal management strategy being managed by NRM South, with investment from Federal and State Governments through the Natural Heritage Trust.

Councillors and council staff are encouraged to view the new signs in their permanent locations at Pipe Clay Lagoon in Clarence, Lisdillon Beach in Glamorgan-Spring Bay, Long Spit Private Nature Reserve in Sorell, or Fortescue Bay in Tasman, and to assist all visitors to our beaches in enjoying our natural heritage responsibly.

For details of the 21 signage locations, contact NRM South on 6208 6121.

BACKGROUND PHOTO: Shy Albatross.
Photography by Kim Rumbold courtesy of Tourism Tasmania

(L-R) Clr. Sharyn von Bertouch representing Clarence City Council, Clr. David Moser from Tasman Council, and Peter Cusick of the Parks and Wildlife Service with one of the new signs at Ralphs Bay
environment

Dr Edward Hall Environment Awards 2007

The winners of the Dr Edward Hall Environment Awards were announced in December 2007 at a special presentation held at the Hobart Town Hall.

Established nine years ago, the awards were devised to improve the conservation and protection of Hobart’s environment by:

- Providing recognition to businesses, community groups and schools that have excelled in environmental management initiatives and achievements;
- Generating community support for projects beneficial to our environment; and
- Enhancing the relationships between Hobart City Council and organisations that are pro-active in environmental management.

The 2007 Dr Edward Hall Environment Award winners are:

**Primary School Project**
- Taroona Primary School

**Secondary School Project**
- Woodbridge School

**Business Industry Large**
- Glenview

**Business Industry Small**
- Badger Makes Badges

**Community Group**
- Waterworks Valley Community

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Launceston City Council Tackles Climate Change

Launceston City Council is to join the Cities for Climate Protection Program (CCP) in a bid to reduce greenhouse gas emissions.

Aldermen voted at a February Council meeting to sign up to the program, making it the first council in northern Tasmania to be part of the national initiative. Funding for an officer to help Council meet performance-based milestones, set down as part of the program, will be considered in the forthcoming budget discussions.

Council’s involvement in CCP will result in savings by lowering Council’s energy costs, and addressing high transport costs and emissions through more efficient fuels and improved transportation management.

The push for Council to tackle climate change has been led by a group of employees. The Creating a Pathway to a Sustainable Future team was formed in March 2007, and is in the process of developing a number of projects to bring about a change in consciousness within Council regarding sustainability.

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The Fox Eradication Program and the Tasmanian Community:
Continuing Action for a FOX FREE TASMANIA

A weight of hard evidence, as well as continuing credible sighting reports, indicates that the red fox is still present in Tasmania. Were it to establish, this adaptable predator would have a devastating impact on our wildlife, agriculture and tourism.

It is currently believed that the fox population is small, providing Tasmania with the unique opportunity to eradicate this pest.

To achieve this, the Tasmanian community can provide vital assistance by reporting all possible wolf sightings and any possible fox evidence to the FOX OUT hotline.

All Tasmanians need to work together to ensure the success of eradication efforts aimed at protecting this state’s unique environment and lifestyle. If you would like more information about the Fox Eradication Program, please phone 03 6336 5320, email Fox.Enquiries@dpiw.tas.gov.au or visit the website: www.dpiw.tas.gov.au/fox

Remember, all sighting reports are confidential and will be taken seriously. Thank you for your support in dealing with this important issue.

Please call the 24-hour hotline if you see a fox or find possible evidence of fox presence:
**1300 FOX OUT (1300 369 688)**

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Primary School Winners - Taroona Primary School

Innovation in Waste Management Winner
- Cascade Brewery Company Pty Ltd.

Primary Art Winner
- Kate Raffety - Taroona Primary School

Secondary Art Winner
- Liam Killick and Fletcher Pegus - New Town High School

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Wayward Weeds Get a Wash Down

Recent concern expressed about the weed hygiene situation in Tasmania highlights the importance of cleaning down vehicles to prevent weeds and their seeds ‘hitching a ride’.

This summer, Southern Tasmanian land managers will tackle the weed threat with new mobile wash down stations. Huon Valley Council, Tasman Council and Hydro Tasmania have been funded by the Southern Tasmanian Councils Authority to develop and operate the mobile wash down stations. The units, to be built in early 2008, will allow these land managers and their contractors to clean down machinery to minimise the spread of weeds.

Preventing the spread of weeds is the most cost-effective form of weed management. For every dollar spent on preventing the spread of a weed, at least $30 is saved on its control in the long-term.

The mobile wash down station in action

The Southern Tasmanian Weed Strategy has found that the development of mobile wash down stations, consisting of a trailer with a water tank, pump, high-pressure hose and compressed air facilities, is a cost-effective and practical means of controlling the spread of weeds. The cost of building a fixed wash down station is in excess of $100,000. Mobile wash down stations, with a cost of around $8,500 each, are therefore a more realistic option for land managers.

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