



Enquiries: David Harper  
Telephone No:

18 August 2011

The Secretary  
House Standing Committee on  
Climate Change, Environment and the Arts  
Inquiry into Australia's biodiversity in a changing climate  
[ccea.reps@aph.gov.au](mailto:ccea.reps@aph.gov.au)

Dear Secretary

### **INQUIRY INTO AUSTRALIA'S BIODIVERSITY IN A CHANGING CLIMATE**

I refer to the opportunity to provide a submission to the House Standing Committee on Climate Change, Environment and the Arts, Inquiry into Australia's biodiversity in a changing climate. The Yarra Ranges Council in Victoria wishes to take up this opportunity and express our interest in this inquiry.

#### **Yarra Ranges Council**

Yarra Ranges Council is a Victorian Local Government located on metropolitan Melbourne's eastern fringe. The shire represents 144,993 residents (or 1 in 35 Victorians) and services an area of almost 2,500 square kilometres, stretching from the outer suburbs up into the Great Dividing Range and rural agricultural valleys.

The shire balances a mixture of urban and rural communities. Around 70% of the shire's population live in the 'urban' areas, which form approximately 3% of its landmass. There are over 55 suburbs, townships, small communities and rural areas within the Shire, making it one of the most diverse of any municipality in the State. Yarra Ranges Council recognises that environmental values are important and that the shire provides its community a lifestyle of outdoor spaces in harmony with wildlife.

A consistent theme strongly conveyed by the Yarra Ranges community in its vision has been the importance of protecting and enhancing the Shire's remarkable and high-value natural environment, including its flora and fauna assets.

Specifically, the community's vision recognises the need to:

- protect and enhance natural assets;
- ensure development does not occur at the expense of the natural environment

- direct long-term strategic land-use planning on achieving environmental, social and economic outcomes;
- facilitate widespread, community-embraced stewardship of the natural environment;
- embrace the concept of resource conservation.
- value ecological sustainability.

Yarra Ranges Council is committed to pursuing the achievement of its community's vision and objectives, including supporting strong, healthy and connected communities; a thriving local economy and tourism; sustainable built environments; arts, culture and heritage, community living and learning; and safety and access for all within the shire. Support for such objectives, however, sits within the context of a natural environment that is strongly protected, cared for, well-managed and enhanced for the benefit of all.

### **National importance**

Importantly Yarra Ranges Council is located in a particularly significant natural environment, containing some of the most remarkable and ecologically significant environmental assets in Victoria and Australia. The Shire's biodiversity assets include all three of Victoria's land-based State emblems - the Common Heath, Helmeted Honeyeater and Leadbeater's Possum. The upper 51% of the Yarra River catchment and 10% of the Dandenong Creek catchment are located within the Shire, providing valuable water supplies and ecological services to the broader community in the region.

There are some 188,000 hectares of indigenous vegetation within the Shire, representing 76.2% of the entire Yarra Ranges landscape, providing habitat for biodiversity of state and national significance. A large proportion of this forested area contains wet forest ecosystems that the 'Green Carbon' Report by Brendan G. Mackey, Heather Keith, Sandra L. Berry and David B. Lindenmayer, from Australian National University described as the most carbon rich in the world. The value of these forests for carbon sequestration needs to be considered.

### **Climate Change Impacts on biodiversity**

Monitoring the impacts of climate change on our local biodiversity is currently outside the scope of local governments' charter of responsibilities and in most cases – skills base. However, based on the credible research of the CSIRO on the predictive modeling of climate change impacts on the State of Victoria, as well as the IPCC Fourth Report, the Shire of Yarra Ranges believes we can expect the following changes in our region:

- Increased risk of bushfires; more intense summer fires;
- Increased spread/ prevalence/ emergence of environmental and agricultural weed problems;
- Increase in the number of intense storm events and storm surges;

- Increase in land slip risk and waterway erosion due to increased intensity from storm events;
- Overall decrease in rainfall to the region and reduced reliability of water resources for the maintenance of aquatic ecosystems/waterways (stream flows), drinking water supply, agricultural and horticultural industries, maintaining sports fields, dust suppression for unsealed roads, revegetation projects, sports facilities etc;
- Decrease in soil health;
- Decrease in biodiversity, in particular vulnerable, rare or threatened plant and animal species, or those with specialised habitat requirements;
- Changes in suitable agricultural crops; and
- Changes in indigenous vegetation (types and locations).

There needs to be greater recognition in the role of protecting and improving existing ecosystems in carbon sequestration as a priority over revegetation.

Climate change knowledge needs to be interpreted at the municipal, sub catchment and site based scales. This is required to identify priority ecosystems and or patches of vegetation for protection to maintain healthy ecosystems and the flora and fauna they contain.

#### **Former Victorian Government Land & Biodiversity White Paper at a time of Climate Change 2010**

Yarra Ranges Council would like to raise the former Victorian Government's Land & Biodiversity White Paper at a time of Climate Change 2009. This White Paper process generated a lot of interest from peak bodies, environmental advocates, climate change interest groups and Local Government amongst many others.

The White Paper had a significant process attached to it and created an environment for interested parties to really consider the impacts of climate change on land health and biodiversity, looking at a 50 year time horizon. There were many workshops, focus groups and steering committees established through the development process of the Paper, many of which were based on robust scientific evidence, risk assessment scenarios and new economic based solutions.

Yarra Ranges Council applied significant investment of time in the development of its submissions to the development of the White Paper, and we continue to work those considerations into our current policy and planning platforms where we are looking at both climate change planning and biodiversity protection.

We are however perhaps disheartened that the extensive considerations and contributions which were provided to the White Paper process may have come to nothing. This is felt given that the final White Paper report appeared not to have any substantial funding base to support its implementation, and given that

it was a product of the former Labor Government which has now been replaced by the current Coalition government with no current commitment to the White Paper outcomes identified.

We consider that it may be advantageous for the Federal Inquiry Committee to at least familiarise itself with the work that was being prepared on behalf of the Victorian Government over the 2008-2009 period and seek transfer of any useful and innovative suggestions into the current inquiry process.

### **Eastern Alliance for Greenhouse Action (EAGA)**

The Eastern Alliance for Greenhouse Action (EAGA) was established in 2008, to provide a regional framework for local stakeholders to work together on climate change and greenhouse gas projects in the eastern suburbs of Melbourne, Victoria. The EAGA Committee includes representatives from Boroondara City Council, Knox City Council, Monash City Council, Maroondah City Council, Whitehorse City Council and the Yarra Ranges Council. The EAGA collection of Councils compliments the adjoining alliances of Northern Alliance for Greenhouse Action (NAGA) and South East Council's Climate Change Alliance (SECCCA). Together these Councils cover 23 urban and eastern fringe municipalities in Victoria with similar interest in this space.

### **EAGA project: investigation into "Bushland and Urban Biodiversity Management in a Changing Climate" Report**

The EAGA Councils together worked on a project funded through the Victorian Government's Sustainability Fund under the Victorian Local Sustainability Accord, investigating Bushland and Urban Biodiversity Management in a Changing Climate. The project has just been completed in June 2011. A copy of all reports can be made available to the Inquiry Panel if interested.

The objectives of the project were:

- document the needs, issues and opportunities for local government to enable them to support species and ecosystems to adapt to climate change – with a strong focus on biodiversity and bushland management on public and private land; and
- identify knowledge gaps to enable local government to manage public and private land biodiversity in a changing climate.

The project investigated the current understanding of the potential impacts of climate change on ability of local governments to manage their biodiversity and bushland assets. It scoped the challenges that local government face which in turn has helped to determine what opportunities are available and where the knowledge gaps are.

Research helped to set the scene, and relationships were formed with Macquarie University, University of Melbourne, Monash University, CSIRO, Bureau of Meteorology and Department of Sustainability and Environment (DSE). A workshop was held on bushland and biodiversity in climate change

with the aim to bring together local government representatives and relevant stakeholders involved in managing bushland and biodiversity to learn about and discuss the impacts of climate change and the implications for future policy development and implementation.

The outcomes of the workshop helped inform the Project, develop an issues paper which identified areas where local government need additional information and expertise to use in strategic planning and operations for best outcomes for biodiversity. The needs of local government were grouped under the following headings:

- Role of LGA's in bushland and biodiversity management on public and private land
- Understanding of biodiversity and bushland assets
- Access, understanding and response to climate change information and issues
- Areas of greatest influence over biodiversity and bushland management in response to climate change
- Barriers to successfully adapting bushland and biodiversity management to changing climate

These were then developed into a series of potential case study topics, with the first one being chosen by the project steering committee for further development.

- What plants will survive in a hotter climate? Identify the Ecological Vegetation Classes in the EAGA region, select key species, and obtain climatic envelope data for those species.
- What weeds will become more pronounced with climate change? Develop a system or tool to investigate 'climate envelopes' for weeds
- What is the economic value of trees? Investigate the dollar value associated with bushland reserves to our community. To provide an additional tool for engaging the community and upper management in bushland conservation (may include heat islands research) and health benefits of urban biodiversity.

The species modelled in our case study were selected for their ecological importance in the region, so it may be expected that the greatest projected changes in climatic suitability often occur outside the region. The findings show that Bioclimatic Modelling has value in projecting the potential effects of climate change on species. This may assist councils in allocation of resources to manage and preserve bushland and biodiversity values. Our case study found:

- Species modelled are likely to be affected in at least some parts of their range by a changing climate during the 21st century
- Species that currently occur together in particular habitats, and are therefore grouped together into EVCs, may have different climatic ranges

and are likely to respond to changes independently of each other, not necessarily in association

- General trend in the EAGA region to shift toward the North-East
- Modelling has revealed potential changes in climatic suitability for several species that occur within the six LGAs.
- The species that shows the greatest effect in the short term (2020) is *Eucalyptus regnans*
- It may be possible to rank EVCs according to vulnerability to climate change
- The climate impacts, could lead to changes composition of existing EVCs, the loss of some and possibly the emergence of new communities.

The next steps are using this research as a foundation to start building adaptation management strategies to a changing climate. Knowledge of how changes in climate will impact these assets is difficult for Local government to attain within the existing resources and skill base. The project highlights the importance that councils work closely with State and Federal governments and research agencies to better understand the issues faced and form research partnerships to better plan for effective action. Essentially this means bringing the science out of the models and applying it in long term strategic planning and on-ground operations to find the most efficient ways of protecting natural assets in a changing climate.

### **Concluding comments**

Councils are a key stakeholder group in the context of a regional response to the potential impacts of climate change on biodiversity. They are major public land managers and providers of environment and community services in their municipalities and play a crucial role in facilitating community awareness, networking and response to the issue.

In many cases councils are at the frontline of natural resource management on both public and private land, and therefore have a very important role to play in biodiversity management. Councils are managers of public land, regulators of development and planners for land use and patterns of development and have the most relevant local knowledge about biodiversity protection on private land. Councils lead by demonstrating environmentally responsible behaviours, and provide support for private land-holders in the form of education, training and capacity building. Some councils also engage through incentive programs and schemes.

As the EAGA project concluded though, knowledge of how changes in climate will impact biodiversity assets is difficult for Local government to attain within the existing resources and skill base. The project highlights the importance that councils work closely with State and Federal governments and research agencies to better understand the issues faced and form research partnerships to better plan for effective action. Essentially this means bringing the science

out of the models and applying it in long term strategic planning and on-ground operations to find the most efficient ways of protecting natural assets in a changing climate.

Yarra Ranges Council would be keen to be kept informed of developments through the Inquiry's investigation, and be available to attend any hearings planned to further support the content of this submission.

Should you require any further information I can be contacted on telephone number

Yours sincerely

**David Harper**  
Manager, Environment Department