

1/2/08

The Secretary  
Senate Standing Committee on Rural and Regional Affairs and Transport  
Parliament House  
Canberra ACT 2600

Dear Committee Secretary,

### **Inquiry into Climate Change and the Australian Agricultural Sector**

Please consider this letter and attachment a submission to the Senate Inquiry into Climate Change and the Australian Agricultural Sector. Land & Water Australia is making this submission on behalf of the Joint Strategy Team for the development of the National Climate Change Research Strategy for Primary Industries. The main purpose of this submission is to alert the Inquiry to this important initiative which we hope to complete in final draft form within a few weeks.

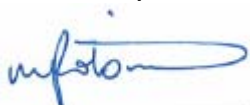
The aims of the Strategy are ultimately to assist in achieving a sustainable, as measured on a triple bottom line, primary industries in the face of climate change in the coming decades. Specifically, the Strategy will:

- identify the research needs of primary industries, including indirect and indirect impacts of climate change (biophysical, social and economic)
- map existing and developing research activity to identify major gaps
- identify short and longer term research priorities
- identify major collaborative and co-ordination opportunities
- recommend options for implementing a nationally co-ordinated research strategy that includes research agencies and governments across Australia.

The National Climate Change Research Strategy for Primary Industries (CCRSPI) is a unique collaboration of the Australian and State governments, all rural Research and Development Corporations, CSIRO and universities. The Strategy is being prepared for the Primary Industries Standing Committee and the Council of Rural Research and Development Corporation Chairs. The development of the Strategy commenced in September 2007 and the draft reports will be completed and presented to those bodies for their endorsement in early March 2008.

The Joint Strategy Team believes that CCRSPI will make a significant contribution to the long term sustainability of Australian Primary Industries. We would be delighted to forward our reports to you upon completion and/or discuss our work with you at anytime. The attached provides a brief summary of preliminary findings on key research needs. Please do not hesitate to contact me for further information.

Yours sincerely



Dr Michael Robinson  
Executive Director, Land & Water Australia  
Chair, Joint Strategy Team, National Climate Change Research Strategy for Primary Industries



## **Climate Change and the Australian Agricultural Sector The Senate - Standing Committee on Rural and Regional Affairs and Transport**

*(i) The scientific evidence available on the likely future climate of Australia's key agricultural production zones, and its implications for current farm enterprises and possible future industries.*

In 2007 the CSIRO presented a set of updated climate change projections that outline the implications for climate change across Australia. These projections have been useful in generating discussion within the primary industries and will be a valuable tool for primary industries.

As a general comment, the National Climate Change Research Strategy for Primary Industries (CCRSPI) consultations have demonstrated a desire for the climate change projections to be presented at a finer scale with greater certainty on the impacts (for example climate projections can indicate changes in rainfall of between -15% to +10% depending on the scenario/timeframe and location). In particular uncertainty in rainfall projections and future water availability have made it difficult for primary producers to consider alternative production systems and approaches to management. As a consequence our understanding of the implications of climate change for current and future industries is limited.

We are also acutely aware of the importance of climate variability, especially with climate change. There are concerns that the current methods for producing seasonal forecasts may be ineffective as climate change becomes a more dominant feature of the climate. This will have significant implications for primary producers who use seasonal climate forecasts to manage production risks. Whilst some research is being undertaken on this issue, we believe that it may warrant further investigation.

Land & Water Australia and its sister Research and Development Corporations (RDCs) have invested in climate research to support better management of existing climate variability for over a decade. One component of the rationale for supporting this work is that the better management of current climate risk (including drought) and uncertainty will better prepare primary producers to understand future climate and make decisions about future climate risks. Key research initiatives include:

- Managing Climate Variability 2003/4-2009/10, previously the Climate Variability in Agriculture Program established under the National Drought Policy in 1992, managed by Land & Water Australia
- South East Australian Climate Initiative (SEACI) is a partnership of the Managing Climate Variability program, Murray Darling Basin Commission, Australian Greenhouse Office, the Victorian Department of Sustainability and Environment, CSIRO and Bureau of Meteorology investigating the causes and impacts of climate change and climate variability on water resources in south eastern Australia.

Further investment in seasonal climate forecasting is required to assist producers to better manage climate risk and account for the impacts of climate change.

The RDCs are well placed to expand research into the impacts of climate variability and climate change;

- Through their links with primary producers, climate scientists and policy makers
- A strong emphasis on adoption and extension activities
- A strong past record and good reputation
- Strong monitoring and evaluation frameworks.

Recent Return on Investment work on the Managing Climate Variability program to 2007 found projected benefits of well over \$29 million on a \$17 million investment. From 2000 to 2008, the proportion of farmers taking seasonal climate forecasts into account in their decision making has increased from 37% to 80%. It is worth noting that since 2000 climate change has become a recognised policy issue and demand from farmers and advisors for forecasting tools has become very strong.



(ii) *The need for a national strategy to assist Australian agricultural industries to adapt to climate change.*

A national research strategy to increase collaboration and coordination would greatly assist primary industries to adapt to climate change.

The myriad of uncoordinated and relatively small scale research projects being undertaken involves a significant risk that the research effort will not be maximised, or decrease in priority, as researchers and policy makers attempt to address competing interests and priorities. A coordinated national research strategy would focus attention on key issues for the primary industries, and provide the primary industries with a basis for negotiating the delivery of research that is relevant and appropriate for their needs.

The National Climate Change Research Strategy for Primary Industries goal is to assist in achieving sustainable primary industries, as measured on a triple bottom line, in the face of climate change in the coming decades. Specifically, the Strategy will:

- identify the research needs of primary industries, including indirect and indirect impacts of climate change (biophysical, social and economic)
- map existing and developing research activity to identify major gaps
- identify short and longer term research priorities
- identify major collaborative and co-ordination opportunities
- recommend options for implementing a nationally co-ordinated research strategy that includes research agencies and governments across Australia.

Extensive research and consultation of rural industries, government and the wider community was undertaken to develop the research strategy. This consultation and research highlighted six key areas that were consistently identified as high priorities for collaborative work. These six key areas are likely to form part of a recommendation for the work after presentation to the Primary Industries Standing Committee and the Council of Rural Research and Development Corporations. The key areas are outlined below:

- Providing access to the best science and information on climate change and greenhouse gas emissions to improve awareness, understanding and decision making
- Research to understand and better promote change and adoption of new practises in primary industries to underpin adaptation and improved management of emissions
- Continued support for research and development of improved seasonal climate forecasts to underpin communication and understanding of future climate projections
- Enabling access to projections of future climate that have been 'downscaled' to understand climate change impacts in regions, to better understand implications for future production
- Research to understand emissions (life cycle assessment) from the primary industries and appropriate standards and methodologies to ensure that there is consistency in reporting across industries
- Promote linkages and discussion between policymakers, industry and scientists to assist the development of practical solutions to climate change and emissions management.

The National Climate Change Research Strategy for Primary Industries is a unique collaboration of all Australian and State governments, all rural Research and Development Corporations, CSIRO and universities. The Strategy is being prepared for the Primary Industries Standing Committee and the Council of Rural Research and Development Corporation Chairs. The development of the Strategy commenced in September 2007 and the draft reports will be completed and presented to those bodies for their endorsement in early March 2008.

*(iii) The adequacy of existing drought assistance and exceptional circumstances programs to cope with long-term climactic changes.*

The National Climate Change Research Strategy for Primary Industries aims to result in quality science being undertaken to inform the development and implementation of relevant policy programs such as drought assistance and exceptional circumstances.