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Tasmania

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Hon Dick Adams MP
Committee Chair
House of Representatives Primary Industries and Resource Committee
PO Box 6021
PARLIAMENT HOUSE ACT 2600

Dear Dick

Please find attached the Tasmanian Government submission to the inquiry on adapting farming to climate change.

The Tasmanian Government has a priority to support a highly diversified food and agriculture sector, through sustainable agricultural practices, that respond and address climate change issues.

Should you have any questions regarding the submission please contact Caroline Brown, Regional and Business Development Branch, on 03 63 365383.

I look forward to considering the findings from your inquiry in due course.

Yours sincerely

David Llewellyn MP
MINISTER FOR PRIMARY INDUSTRIES AND WATER

Tasmanian Government

Adapting Farming to Climate Change

Australian Government House of Representatives Primary Industries and Resource Committee

Tasmanian Government Response

Prepared by Department Primary Industries and Water, 13th March 2009

Background

The Tasmanian Government Department of Primary Industries and Water (DPIW) makes the following submission to the Australian House of Representatives Primary Industries and Resource Committee (AHOR) inquiry into the role of Government in assisting Australian farmers to adapt to the impacts of climate change and the questions of how:

- Current and prospective adaptations to the impacts of climate change on agriculture and the potential impacts on downstream processing;
- The role of government in:
  - Augmenting the shift towards farming practices which promote resilience in the farm sector in the face of climate change;
  - Promoting research, extension and training which assists the farm sector to better adapt to climate change.
- The role of rural research and development in assisting farmers to adapt to the impacts of climate change.

Summary of Tasmanian Government approach to the submission

In this submission DPIW deals with the following:

1. Intensive Livestock
2. Extensive Livestock
3. Intensive Cropping (Horticulture/viticulture)
4. Extensive Cropping

In summary, governments' role is to provide policy settings that assist businesses, communities and individuals to adapt to the impacts of climate change, and to take account of these impacts when making decisions about the provision of public goods and management of public assets.

It is crucial that policies reflect the 'triple bottom line' – economic, social and environmental – in order to sustain the agricultural sector.

Current and prospective adaptations to the impact of climate change on agriculture and the potential impacts on downstream processing

Tasmanian framework for action on climate change

The Tasmanian Government has established the Tasmanian Framework for Action on Climate Change that seeks to address current and prospective programs, policies and actions capturing economic, social and environmental elements. The Framework supports innovative and sustainable practices in agriculture that respond to and address climate change issues. Measures include:

- Scientific research measures, to improve predictions of the impacts of climate change and identify new approaches to adaptation;
- Providing businesses, communities and individuals with appropriate information regarding climate change, as well as the resources, skills and incentives needed to plan for and adapt to climate change and manage risks;
- Providing adequate emergency responses to more frequent and intense events, such as bushfires, floods and storms, and to assist community recovery in the course of such events; and
- Managing risks to public infrastructure, assets and values (including roads, biodiversity, national parks and reserves) and protecting industry and the community against health and bio-security risks.

Role of government in augmenting the shift towards farming practices which promote resilience in the farm sector in the face of climate change

The Tasmanian Framework for Action on Climate Change ensures that any climate change considerations are now effectively "mainstreamed" in all decision making processes of government agencies that deal with primary industries and other natural resource management matters.

Intensive and Extensive Livestock – Analysis of issues

The performance and improvements in Tasmanian industry management practices, production efficiencies (including changes in livestock numbers) have been combined to reduce gross greenhouse gas emissions (rumen and manure emissions) from sheep and beef cattle significantly in the extensive grazing industries since 1990. Current practices have been adopted to participate in a range of R&D projects (such as through Meat and Livestock Australia) aimed at reducing and measuring methane emissions from livestock enterprises and meat processing facilities.

It is recognised that farmers are conscious of the need to initiate climate variability and drought management strategies. Challenges to this approach are the impacts of previous droughts with capital expenditure redirected to pasture renovation and restocking. Many farmers have recognised that they need to vary their farming enterprises and review their grazing techniques.

Intensive and Extensive Livestock – Future actions

Government has a role to provide assistance that fosters capacity building and thus preparedness to manage risks of climate change. Changes in the approach to pest management will need to be integrated into farming with new climatic conditions opening up biological opportunities for pest and disease incursions. Co-ordination of biosecurity activities (such as exotic animal disease outbreak) across all jurisdictions is seen as vital.

In tough climate conditions such as drought, the farming and natural landscape – may be degraded with farming businesses struggling to remain viable. Providing assistance to stricken businesses may reduce the risk of resource degradation, but often the problem is well established before such assistance becomes available. The Australian Government's recent initiatives that seek to build capacity of primary producers in planning for climate change, may aid in addressing this issue.

Intensive and Extensive Cropping- Analysis of issues

The Tasmanian vegetable industry is primarily irrigation dependent and any decreases or significant changes in seasonal patterns of rainfall through climate change is considered a major risk to the state vegetable production. Already variations in temperature and the absence of frosts from traditional frost prone areas, has meant the rescheduling of crop production.

New approaches in agronomic methods of producing perennial berries and stone fruit will be influenced by temperature shifts and reduced soil moisture. Further adjustments may be needed as future climate impacts are understood. Viable sustainable practices (both agronomic and economic) will be achieved through changes in varietal selection and shift in production areas.

Intensive and Extensive Cropping- Actions

Central to the State Government's climate change adaptation strategy is the Climate Futures for Tasmania Project. Tasmanian topography dictates a regional focus being important as the likely impact of climate change on Tasmania will be different other parts of Australia. Current global modelling of the impact of climate change provides little information specific to Tasmania.

The purpose of the Climate Futures for Tasmania Project (project led by the Antarctic Climate and Ecosystems Cooperative Research Centre ACE CRC) is to develop fine scale climate projections for Tasmania through to the year 2100, under a range of accepted greenhouse scenarios. Parameters being investigated include projected temperatures, rainfall and evaporation, which are highly relevant to Tasmania's agricultural sector.

The Tasmanian Government's sustainable development and freshwater management strategy has allocated $220 million of State and Commonwealth funding to irrigation development in Tasmania. While the expansion of irrigation supplies is intended to underpin projected growth in agriculture, the increase in capacity is also critical to improving the resilience of the industry in the face of drought and climate change.

Enabling water resource planning and investment decisions is important for Government and farmers in regards to water infrastructure needs and water security for the sustainability of intensive cropping in the long term. Government's role is to not only assist with infrastructure but to ensure that any development is self-sustaining.

The Irrigation Partnerships Program and Farm Water Development Plans under the Tasmanian Government SMART Farming initiative has an aim to enable irrigators to consider their current and future water supply needs and plan and implement measures to ensure those water supply needs are met in the future.

The Climate Futures for Tasmania Project is also working with the $4.1 million Tasmanian Sustainable Yields Project, which has been established to provide critical information on current and likely future water supply and demand until 2030. The analysis is being undertaken by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the project will run until the end of 2009.

Intensive and Extensive Cropping - Future Actions

Classical breeding techniques may play a role in assisting primary industries to adapt to a changing climate through breed selection and resilience of plant production systems. Some other states have decided to allow genetically modified (GM) crops within their jurisdictions. In November 2008, Tasmania re-affirmed its commitment against the trend of Gene Technology (also known as transformation) and maintained a GM moratorium on the use of GMOs in primary industries. Refer to the policy statement, *Gene Technology and Tasmanian Primary Industries 2009-2014.*

Role of Government promoting research, extension and training that assists the farm sector to better adapt to climate change.

Government needs to encourage innovation in shifting farming enterprises to be more resilient in the face of climate change. There remains a public good case for promoting and supporting innovative change through research, extension and training. Public investment, in partnership with industry, has played an important role in this area.

Actions

The Australian Innovation Research Centre (University of Tasmania) has been engaged to make recommendations on the best means of encouraging innovation in Tasmania's agricultural sector in response to climate change. The AIRC will advise the Government on policy, program and legislative settings to promote innovation in Tasmanian agriculture, with the Centre's report due in the first half of 2009.

The Tasmanian Institute of Agricultural Research (TIAR) is a collaborative arrangement between the University of Tasmania and the Department of Primary Industries and Water. With a $4million annual budget, the institute works closely with industry to undertake research and development programs. Priority areas include the agricultural value chain, productivity, innovation, safe food production, social and natural resource management issues. The Tasmanian climate change R&D efforts are being delivered through TIAR in partnership with industry. Rural social research is being conducted that seeks to build an understanding of community responses to climate change.

A regional focus remains important when providing knowledge to farmers in soil management and biodiversity/environmental planning. State Governments do provide assistance by providing extension services, research and education through flexible and responsive industry development and extension programs. They help to address the principal direct physical and ecosystem impacts of climate change. Support services such as agricultural consultants and agronomists are also available. The key factor in their use is the recognition by farmers that these professionals can add value to their business.

Role of rural research and development in assisting farmers to adapt to the impacts of climate change.

An emphasis on seasonal variance has improved business performance and sustained production in the industry. Innovation in agriculture will continue to create supply opportunities. Downstream processing of agricultural raw materials creates diversification as well as new and alternative market opportunities. Ongoing research, extension and training will be critical to innovation to ensure that the farming sector remains competitive in the global market place.

Areas that will feel the impact of economic change include the development of regions, worker retention and attraction, consumer and customer demands, competitiveness and productivity demands, business compliance, innovation and technological advancement, globalization and market expansion and access.

Stewardship of the environment and the resilience of rural communities are linked to the economic viability of primary producers. Long term challenges are exacerbated by the global financial crisis. The Productivity Commission recent review into National Drought Policy notes the vulnerability of farm businesses (and rural communities) to shocks such as drought is in part dependent on the size and composition of the capital base – natural capital; physical capital; social capital; human capital; and financial capital

Actions

Improved productivity for farmers will remain one of the key elements to managing climate change. Improvements will come through skills, technology and management practices. Governments can assist by providing incentives for development of new innovation. Research (conducted by ABARE and others) into measuring productivity and understanding the drivers to improving R&D effectiveness will also assist growth.

A cooperative response with regional communities is required to attract and retain people to a region. The Tasmanian Government Social Inclusion Strategy will facilitate cross-sectoral cooperation to create whole-of-community responses to emerging issues in our communities.

Policy linkages/information efficiencies

Government can foster sustainable agriculture by ensuring the continued productive capacity of the agricultural land resource. Competition for land use will be impacted by climate change. It is vital that regulatory frameworks are maintained to reflect the legal, social and physical infrastructure necessary to echo the range of values held by the community.

Productivity growth can offset rising costs (such as impacts of the Australian Government's proposed carbon pollution reduction scheme CPRS) and assist in Australian farmers remaining trade competitive. Whilst we may see inflationary pressures ease on some farm inputs, it is predicted that there will be rising CPRS impacts on food production and downstream processing. Through the CPRS there may also be the potential to favour production of some farm commodities over others.

The full implications of the CPRS are not yet clear. What is known however is that there will be an effect on agricultural production costs whether the sector is 'covered' or not. Consequently, the Tasmanian Government supports the postponement of a decision on whether or not to include agriculture in the CPRS until further research is conducted to understand the impacts on the agriculture sector.

Summary

It is important that the collaborative research continues across Australia to address the climate change adaptation challenge. There is a need to continue to build on our knowledge about the potential economic impacts of climate change and the barriers and benefits for the primary production sector to adopt change. Research should cross economic, environmental and social aspects to ensure adaptive responses are fully understood.