



30th November 2007

Climate Change Group
Department of Prime Minister and Cabinet
PO Box 5500
CANBERRA ACT 2600

Dear Sir/Madam

Early Abatement Incentives Discussion Paper

Australian agriculture is the nation's second largest emitter of greenhouse gases according to the National Greenhouse Gas Inventory. As such, agriculture will be expected to contribute to emissions reductions through mitigation and as a provider of carbon sinks. This letter has been prepared by a group of the Rural Research and Development Corporations (RDCs) to raise a number of research and investment needs which need to be addressed before agriculture can participate in emission trading as a covered or uncovered sector.

The rural RDCs invest in research, development and extension to ensure growth in productivity, competitiveness and sustainability of Australian agriculture. RDCs have identified greenhouse gas mitigation and emissions trading (ET) as important areas for research due to the limited capacity of the sector in this area. This letter follows an Issues Paper that was prepared by RDCs in May 2007 for consideration by the Prime Ministerial Task Group on Emissions Trading. This letter has been prepared on behalf of:

- Meat & Livestock Australia
- Dairy Australia
- Grains Research & Development Corporation
- Land & Water Australia
- Cotton Research and Development Corporation
- Rural Industries Research and Development Corporation
- Australian Pork Limited
- Australian Wool Innovation
- Sugar Research and Development Corporation

The rationale behind agriculture not being included as a covered sector in an emissions trading scheme (ETS) is acknowledged. The sector has a number of attributes which create practical barriers to participation such as its wide distribution, difficulties in measurement of small fluxes over large areas, the permanence of changes in fluxes and stores, proving additionality, the cost of measurement and verification, and a general lack of knowledge about low cost abatement options.

This PM&C Discussion Paper focuses on early abatement incentives, and identifies agriculture as a provider of early offset credits. Any offset credit scheme will need to be easy and inexpensive to administer to ensure that the cost of participation does not outstrip the value of the trade. Agriculture's capacity however to participate will be limited due to a lack of standards, protocols and guidelines. RDCs support the need for investment to address this issue and note the current limited investment in this area.

Level 1, 86 Northbourne Ave Braddon ACT 2612
GPO Box 2182 Canberra ACT 2601
phone +61 26263 6000 facsimile +61 26263 6099
www.lwa.gov.au ABN: 25 602 743 013



The challenges facing agriculture in terms of participation in ETS include:

- monitoring and measurement of emissions is either non-existent, or based on limited modelling capacity, changes to emissions or sinks cannot be measured cost effectively, making agriculture an unattractive provider of early abatement offsets credits;
- emissions and sinks from agriculture are widely distributed, in varied ownership and control;
- while annual fluxes through land-based activity are significant at national scale, at site or enterprise scale annual fluxes are frequently small and expensive to measure;
- climatic variations can turn an anticipated sink into a source of emissions;
- climate change will affect the emissions profile of agriculture;
- at the site or enterprise scale, permanence of individual sinks will be difficult to demonstrate;
- there is little known about the social, economic and environmental impacts of ET on agriculture;
- little is known about the best management practices to reduce agricultural emissions, the costs of such practices, or the extent of their impact.

The RDCs are involved in an initiative which could assist to address some of the challenges in collaboration with the Australian Government. Land & Water Australia is leading the development of a National Climate Change Research Strategy for Primary Industries (CCRPSI). CCRPSI is an initiative across RDCs, Federal and State governments, CSIRO and universities. The research strategy will be completed by March 2008 and will identify the climate change research investment needs for primary industries including those relating to mitigation and ETS.

Offset Credit Opportunities

Agriculture will be involved in the production of biofuels and bioenergy which could reduce greenhouse gas emissions. Some biofuel/bioenergy production systems provide minimum carbon savings relative to fossil fuel systems. Research is required to assess greenhouse life cycles of different biofuel/bioenergy production systems so that the inclusion of biofuels in ETS delivers greenhouse gas reductions. Research is also needed to understand the interactions and tradeoffs biofuels will create between the energy, transport and agriculture sectors.

There is interest within agriculture about the potential role that soil carbon may play as a sink. While international experience shows for some countries soil can be managed to increase the carbon sink, the Australian environment is different. Soils and their carbon sink capacity are dynamic and vary geographically and temporally. There is a need for a significant research effort to better understand the potential of soils as a long-term carbon store in Australian conditions.

Any offset credit scheme needs to make use of the relationship between farm practice and sequestered carbon. Farmers change systems and practices in response to commodity prices, climatic conditions and other factors. The carbon sink capacity of farms will vary in response. Practices which enhance the carbon store could also positively benefit biodiversity and sustainability, any offset scheme should therefore encourage multiple environmental outcomes. While there are opportunities to encourage carbon sequestration to create tradeable offsets, the relationship with the emission of other greenhouse gases such as nitrous oxide and methane must be considered to ensure an overall reduction of emissions is achieved.

Proving 'additional' abatement within agriculture is a barrier to participation. There is a need to invest in good baseline data, including better understanding natural variation and processes in



order to establish baselines from which additionality can be proven. Agriculture is subject to considerable natural variations, often due to climate variability which will determine whether at any one time a particular pool is behaving as a source or a sink.

Establishing standards for abatement is a critical area for research and investment if agriculture is to participate as a covered or uncovered sector. Agriculture's greenhouse profile is influenced by shifting factors of rainfall, evaporation, fire, temperature, solar radiation and atmospheric carbon dioxide. These factors will influence the nature of an enterprise's greenhouse profile. Standards, protocols and guidelines are needed to help the sector deal with such variation. These standards need to be applicable at the relevant scale for project level accounting.

While **Greenhouse Friendly** is identified as the administrative mechanism for approving offsets and early action credits, there is a need for investment for the agriculture sector to be included under this structure. There also needs to be a strong scientific review of the science underpinning the administration arrangements in Greenhouse Friendly for agriculture to ensure that science reflects as far as possible, reality.

Protocols for offset activities in agriculture need urgent development and should cover a broad range of possible offset activities if the sector is to contribute to early abatement. Such protocols must be easy and cost effective to administer. Care must be taken to ensure that the costs of administration and reporting do not outweigh the offsets achieved.

Investigating robust options for offsets that are not yet internationally recognised represents a significant opportunity for agriculture to contribute to ETS. Research is required to identify those offset activities which offer the lowest cost abatement opportunities.

Voluntary market access to ETS offset standards is proposed to assist in ensuring the quality of offsets developed in uncovered sectors. If agriculture is to participate in the voluntary market and meet such standards, investment will be required to developed protocols, standards and guidelines which meet the quality test. RDCs support robust systems for voluntary markets.

This letter has been prepared by the RDCs to promote dialogue between the Australian Government and the agricultural research, development and extension community about the investment required to assist agriculture to participate in an ETS. RDCs have identified significant knowledge gaps and a lack of capacity within the sector to contribute. The development of protocols, standards and guidelines are urgently needed and RDCs are willing to work in collaboration with the Australian Government to build the capability of agriculture in this area and note the significant low levels of investment that are needed in this area..

Yours sincerely



Dr Michael Robinson
Executive Director
Chair, Joint Strategy Team Climate Change Research Strategy in Primary Industries Initiative



