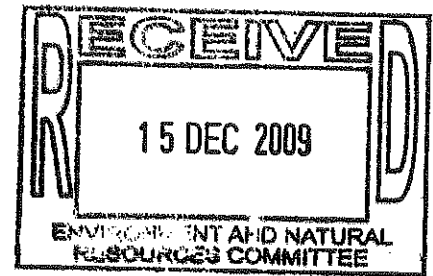


11 December 2009

Executive Officer
Environment and Natural Resources Committee
Parliament House
Spring Street
East Melbourne
VIC 3002

Contact: David Leslie
Phone: 03 5880 1400
Email: david.leslie@cma.nsw.gov.au
Your Ref.:
Our File: MUR 00063
Object Id: A304670



Dear Sir or Madam,

Re: Inquiry into soil carbon sequestration in Victoria

Thank you for inviting the Murray Catchment Management Authority (CMA) to make a submission to this inquiry.

Murray CMA has been actively working towards a better understanding of the impacts of land use practices on sequestration of soil carbon, and the potential impact carbon trading could have on the delivery of regional natural resource management (NRM). Our activities to date include:

- Involvement in the Federally funded Soil Carbon Research Project; a nationwide program looking to quantify the impacts of land use practices on soil carbon sequestration and the establishment of standardised soil carbon measurement protocols (<http://www.csiro.au/science/Soil-Carbon-Research-Program.html>).
- Over \$750,000 investment in the last three years in on-ground improvements to land management practices that lead to an increase in soil carbon sequestration
- Investigation into the possible impacts carbon trading may have on natural resource management via a Carbon Pollution Reduction Scheme (CPRS) and an Emissions Trading Scheme (ETS) (<http://www.csiro.au/files/files/pr4m.pdf>) in collaboration with the CSIRO.
- Collaboration with CSIRO to quantify the likely changes in terrestrial carbon as a result of land use change. This project will evaluate the costs and benefits of a variety of climate change mitigation options in the context of a varying carbon price, and standard regional land management practices.

I would like to highlight the following points:

- Significant work has already been done in establishing the benefits of soil carbon to both agriculture and the wider environment. Many of the crucial ecosystem services we require as a society are mediated through the presence and activity of soil carbon and the associated soil biota that use this carbon as a food source. I refer the committee to a summary provided by two of Australia's leading soil carbon scientists (Krull, Skjemstad & Baldock 2004) <http://www.grdc.com.au/uploads/documents/cso000291.pdf>. I feel that further investigation into this would not be warranted as the importance of soil carbon is seldom disputed by the scientific community, and considerable information already exists that clearly identifies the critical role of carbon in the soil.

- Considerable work is occurring in establishing methodologies for the measurement of soil carbon in Australia. These methods will largely depend on those approved through a global climate change agreement, and not the result of a parliamentary enquiry.
- The sequestration of soil carbon is an important atmospheric CO₂ reduction process regardless of its inclusion or exclusion in an emissions trading scheme. In a recent report put out by the Wentworth Group of Concerned Scientists (http://www.wentworthgroup.org/docs/1270%20Optimising_Terrestrial_Carbon-9bfinal.pdf), the annual sequestration rate of CO₂ in soil was estimated at 100 Mt of CO₂-equivalent/year, approximately 20% of Australia's annual greenhouse gas emissions. Much of Victoria's soils offer considerable potential as greenhouse gas sinks.
- Soil carbon is vital to Victoria's agricultural productivity and environmental well being. In the face of demands for increased food, more efficient use of water and an increasing cost of energy, any and all options for public investment into the sequestration of carbon on agricultural land need to be investigated. Many of the technological adoption practices that result in increased carbon sequestration require considerable private investment by land owners (http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0003/210756/Increasing-soil-organic-carbon.pdf), many of whom are struggling to remain economically viable as a result of the drought conditions over the last 10 years.

Inclusion of soil carbon (and other forms of terrestrial carbon) into an ETS could result in a significant change to the rural landscape. The planting of woodlots on otherwise productive land and changes in land use practices resulting in increased soil carbon sequestration could, for example, cause a reduction in agricultural productivity and water availability. Further work needs to be done in prioritising where investment in terrestrial carbon sequestration should occur within the State that optimises the multiple benefits both to agriculture and the environment.

Please contact Nathan Health on 02 6051 2234 should you require further information.

Yours Sincerely



David Leslie
General Manager