Senate Finance and Public Administration Legislation Committee

ANSWER TO QUESTION ON NOTICE

Prime Minister and Cabinet Portfolio

Department of Climate Change

Budget Estimates Hearing–May 2009

Written question reference: CC54
Outcome/Output: Outcome 1, Output Group 1.1 – Response to climate change
Topic: Soil carbon and Carbon Pollution Reduction Scheme
Hansard Page: Not relevant for written QoN

Question: (Senator Johnston**)**

a) Why does the legislation fail to take account of the use of natural carbon abatement measures such as soil carbon and biochar?

b) What was that decision based on?

c) If you are so convinced that we should be 'leading the world' on your emissions trading scheme, why not lead on the issue of soil carbon and biochar?

We note the Minister's announcement yesterday of a $1.5 million research project into the merits of soil carbon initiatives.

d) Given that experts like Ross Garnaut have long been talking up the benefits of soil carbon, why has it taken until now to proceed with this research?

e) Why are you only now launching this investigation, AFTER the legislation has been introduced into Parliament

f) Have you done no modelling at all before now? If so, what did it say?

g) Is it the intention of the department to use this research to press ahead to have soil carbon included in the CPRS (as the Coalition has long argued)?

$1.5 million seems like a rather modest sum, particularly given the potential importance of this work and the billions being spent elsewhere on things like solar

h) Why is it going to take three years?

i) Can you outline explain details of the proposed research

j) Does that signal that the Government won't consider incorporating soil carbon for years and years to come?

k) Are you ruling out the Copenhagen talks adopting it this year?

l) If so, what does this mean for your research

m) And would you then recommend that soil carbon be incorporated into the CPRS?

n) Does the department support the use of soil carbon being incorporated into the CPRS?

o) Has it made urged the government to adopt this measure?

p) Has it written to the UN or any other body supporting its adoption?

q) If so, why wasn't it in this proposed legislation?

r) What advice has the CSIRO provided so far on the use of soil carbon in the CPRS?

s) Has the CSIRO supported it?

t) Did it agree with the Department of Climate Change?

u) If not, why not? Can you outline your differences?

Answer:

a) The Carbon Pollution Reduction Scheme (CPRS) is designed to be consistent with Australia's present international commitments under the Kyoto Protocol. If the CPRS recognised abatement that does not contribute to our international obligations, this would mean obligations would need to be met through other means, including Government purchase of recognised international emission permits. This would impose a liability on taxpayers.

Under the Kyoto Protocol, Parties account for emissions and removals from the land sectors through both mandatory and elective provisions. This includes reporting on changes in soil carbon pools.

During the 2008-12 Kyoto Protocol commitment period, the Australian Government will only account for soil carbon under the mandatory categories of Afforestation, Reforestation and Deforestation. Agricultural soil carbon, which is included under the elective provisions of cropping and grazing land management, is not included in Australia's Kyoto Protocol account during this period. Therefore these emissions and removals will not be included in the CPRS.

b) The Government made the decision not to report on carbon dioxide emissions and removals for cropping and grazing land management because, under current rules, changes in soil carbon due to natural variations are included along with changes due to management practices. This creates a risk of substantial emissions from natural causes being included in our accounts, such as year to year differences in climate and events such as drought.

c) On 4 May 2009 the Prime Minister, the Hon Kevin Rudd MP, committed the Australian Government to reduce greenhouse gas emissions to 25 per cent below 2000 levels if the world agrees to an ambitious deal to stabilise levels of carbon dioxide equivalent at 450 parts per million (ppm) or lower. The Government specified pre-conditions for a 25 per cent reduction – the global deal would involve comprehensive coverage of all gases, sources and sectors, with inclusion of the land sector in the agreement. This includes soil carbon initiatives, such as biochar, if they can be scientifically demonstrated.

The Minister for Agriculture, Fisheries and Forestry, the Hon Tony Burke MP, announced on 3 March 2009 that $20 million has been committed for soil carbon research. In addition, on 21 May 2009 the Minister for Agriculture, Fisheries and Forestry announced a further $1.4 million for research into the potential for biochar to reduce greenhouse gas emissions and boost farm productivity.

A National Carbon Offsets Standard (NCOS) is currently being developed to provide consumers with greater confidence in the carbon offset market. It will include a minimum standard for offsets and specify a process for creating recognised carbon credits or offsets in Australia from emissions sources not covered by the CPRS. Under the NCOS, offsets could be generated from emissions sources that are not currently part of accounting for Australia's Kyoto Protocol target, including soil carbon and biochar, once a robust methodology can be demonstrated.

d) The Soil Carbon Research Program was announced on 3 March 2009 after a call for proposals in 2008, followed by thorough assessment of project proposals.

The Government continues considerable investments in developing national capabilities to account for greenhouse gas emissions from soils. The Government's National Carbon Accounting System has included a 10-year collaboration with CSIRO Land and Water, state government agencies and universities to develop the national accounting for soil carbon.

e) The Department of Agriculture, Fisheries and Forestry (DAFF) called for project proposals under the Australia's Farming Future Initiative in 2008, prior to the introduction of the CPRS legislation.

An expression of interest for the biochar research proposal was submitted to DAFF in September 2008 in the first round of applications under the Climate Change Research Program. The independent Climate Change Expert Panel recommended no decision be made on the proposal until the CSIRO had completed a review to identify major biochar research gaps. The announcement of the biochar research project on 21 May 2009 followed consideration of the findings of the review.

f) The Government has not conducted any modelling on soil carbon or biochar in the context of the CPRS.

g) The outcomes of new research could help inform consideration of the role of soil carbon in greenhouse gas mitigation policy measures. The 2007 Intergovernmental Panel on Climate Change Fourth Assessment Report identified that emissions mitigation actions in agriculture, forest management and land management (including building up stocks of soil carbon) have significant potential to reduce global emissions of greenhouse gases. All mitigation options, including land management practices, will be essential to achieving the Australian Government's objective of stabilisation of greenhouse gases at a level of 450 ppm or lower.

The inclusion of new mitigation options will need to be based on sound science and delivery of robust and credible emissions reductions.

h) The biochar research project requires a period of three years to allow for detailed data collection and analysis, including field trials covering different biochar feedstocks, impacts on different soil types and seasonal effects.

i) The biochar project will be supported through the Climate Change Research Program under the Government's Australia's Farming Future Initiative.

CSIRO will coordinate the project, which will include:

- life cycle assessment of biochar from feedstock source to production to sink, including costs, risks, benefits and implications for farmers;
- categorisation of biochars according to their properties and suggested usage;
- economic assessment of biochar for both net greenhouse gas emissions and potential profitability to land owners; and
- analysis of risk factors in terms of rates of applications as well as the potential production of toxic by-products during pyrolysis.

Under the $20 million Soil Carbon Research Program, research into soil management and carbon storage will look at creating a nationally standardised system for collecting and analysing soil samples across Australia. The standardised system will enable primary producers, universities, researchers, industry groups and government departments to use the recorded information. Research will also look into how some land uses and management practices can increase the levels of carbon in the soil. The program includes nine projects and covers a range of regions and production systems.

j) Two prerequisites need to be met before soil carbon could be included in the CPRS: sound science based on Australian soils, and changes to the international accounting rules. The Government is actively working on both of these fronts.

k) The Kyoto Protocol already includes soil carbon for mandatory and elective land management activities.

However, the current rules applying to soil carbon require countries to account for emissions due to natural causes (including bushfire and drought) together with changes due to management practices. This creates a risk of liability for substantial emissions from natural causes. For the first commitment period, the Australian Government decided not to report on the elective activities, including cropland and grazing land management, because of this risk.

A priority for the Government in the post-2012 negotiations is ensuring emissions and removals resulting from natural events and climate variability are excluded from Australia's national accounts. Establishing that we will only be accounting for changes resulting from human activity is an important step for Australia taking on additional commitments for the land sector post-2012.

l) Research into improving soil management and determining the potential for sequestration of carbon in agricultural soils is a priority of the Government's Australia's Farming Future Initiative. The purpose of research under this initiative is to help prepare Australia's primary industries for climate change and build the resilience of the agricultural sector into the future.

m) Any advice regarding inclusion of soil carbon in the CPRS would be based on consideration of issues including research findings and outcomes of post-2012 negotiations.

n) See answer to part (m).

o) The Government indicated in the CPRS White Paper that the CPRS will cover only domestic emissions sources and sinks that are counted in Australia's Kyoto Protocol national account.

p) The Government regularly puts its view to the United Nations. For example, it has made a number of submissions to the United Nations Framework Convention on Climate Change (UNFCCC) outlining the changes in the international accounting framework we are seeking here before Australia will take on additional commitments for the land sector post-2012. Recent submissions are available at: www.climatechange.gov.au/international/unfccc-submissions.html

Australia reports annually to the UNFCCC on changes in soil carbon pools and accounts for emissions and removals from soil carbon under the mandatory provisions of the Kyoto Protocol.

Australia's National Inventory Report 2007, prepared as part of Australia's reporting obligations under the UNFCCC, contains a comprehensive coverage of soil carbon emissions.

q) The CPRS legislation provides for coverage of greenhouse gas sources and sinks that are currently counted in Australia's Kyoto Protocol national account.

r) The Department of Climate Change is not aware of any advice on the inclusion of soil carbon in the CPRS provided by CSIRO.

The Government announced a commitment of nearly $32 million to research soil carbon and nitrous oxide emissions in Australian agriculture in March as part of its broader program of work on climate change. CSIRO is a respected partner organisation in the soil carbon component of this research, and work is ongoing.

s) See answer to part (r).

t) See answer to part (r).

u) See answer to part (r).