28 April 2017

Shayleen Thompson
Acting CEO
Climate Change Authority
GPO Box 787
Canberra ACT 2600

Via email: submissions@climatechangeauthority.gov.au

Dear Shayleen,

Re: Action on the land: reducing emissions, conserving natural capital and improving farm profitability

Thank you for the opportunity to make a submission to the Climate Change Authority on the issues paper entitled 'Action on the land: reducing emissions, conserving natural capital and improving farm profitability'.

Corporate Carbon is an active Emissions Reduction Fund (ERF) participant with more than 40 million tonnes in carbon abatement contracts and is involved in over 80 projects across all six ERF methodology areas including:

- agriculture
- energy efficiency
- savanna burning
- transport
- vegetation
- waste.

Our main focus in the agriculture area is working with projects under the 'Sequestering Carbon in Soils in Grazing Systems' method. This method and the projects that sit under it, provide working examples on how 'agricultural productivity can be enhanced while also delivering emission reductions, NRM or other benefits'. For example:

- regenerative agriculture as a means of improving soil health (rebuilding soil fertility and nutrient levels (both macronutrients and micronutrients), building diverse microbial populations with balanced fungi to bacteria ratios, increasing stable organic compounds (such as humic substances) and increased labile organic matter that is used as food and energy for plants) will build soil organic carbon
- building soil organic carbon by one percentage point in the top 30 cm layer of soil will lead to carbon sequestration of 165 tonnes of carbon dioxide equivalent (tCO_2e), which translates to approximately 125 Australian Carbon Credit Units (ACCUs) under a 25-year permanence obligation scenario
- this amount of increased soil carbon will in turn enhance water holding capacity by approximately 140,000 litres, contributing to increased growth over a longer period and greater drought resilience
- monetising ACCUs created by participating in the ERF under the 'Sequestering Carbon in Soils in Grazing Systems' method provides an additional revenue stream on top of any productivity gains. Importantly this 'bottom-line' revenue is acting as a catalyst for improving on-farm practices

- participating in the ERF under a measurement method involves comprehensive soil sampling, with farmers in many cases taking up the option to take soil core samples to a depth of one metre. While the focus of this testing is carbon, the high level of sample availability translates into an opportunity for additional lab testing on a wider range of factors (such as available nutrients and total elements). Over time this testing will contribute to a highly detailed sub-surface soil map that will be integral to on-farm decision making and property valuations. This also aligns with emerging industry themes of precision agriculture and 'big-data'
- improving soil health can also be applied in the context of land remediation, where the objective is restoring a base level of productivity and bringing land back into viable agricultural activity.

Building soil carbon is arguably at the early stage commercialisation point of industry uptake. There are many case studies and journal articles on the benefits of building soil carbon. The ERF 'Sequestering Carbon in Soils in Grazing Systems' method and productivity improvements from increasing soil carbon provide incentives for farmers to engage with soil carbon projects. However, there are barriers to the widespread adoption of soil carbon projects across Australia. These barriers include:

- ease of ERF method operation: there are several improvements which would facilitate operating soil carbon projects under the ERF, including (amongst others) greater flexibility on mapping and making changes to project areas, options to meet compliant baselines and removal of the discount in total critical change in soil organic carbon stock for early sampling rounds
- improved soil carbon measurement technology: there have been some costs savings as more projects are baselined under the ERF method, and there are a range of technology approaches that could further reduce these costs. However, cost of participation remains as a barrier to widespread uptake
- expansion to other agricultural activities: at the moment soil carbon projects under the ERF are limited to grazing systems. There is a need to expand the sphere of implementation to other agricultural areas such as broad acre cropping.

One key incentive needed to encourage further emissions reductions through increased soil carbon project uptake is linking of existing programmes and funding opportunities to additional soil testing. This would allow farmers to leverage the funds they have available for soil testing to undertake additional lab analysis and take additional soil samples to improve the accuracy of their measurements.

We support the ongoing efforts by the Government to address ERF implementation issues and improve the operation of the soil carbon method and recognise the key strategic potential soil carbon has for delivering large amounts of carbon sequestration at a national and international level.

Please let me know if I can provide any additional information. Corporate Carbon looks forward to ongoing participation in the ERF and working collaboratively with all key stakeholders to ensure its continued success.

Regards,

Matthew Warnken
Managing Director