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13th December 2023

DAFF, Agriculture and Land Sectoral Plan – Have your say

To Whom it May Concern,

Thank you for the opportunity to provide this submission. [redacted] A circular approach will help reduce human pressure on our natural resources through improved utilisation and ensuring products are designed and used for multiple applications or purposes during their life cycle.

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Please find below our response to the questions specifically requested.

1. **What are the opportunities to reduce emissions and build carbon stores in agriculture and the land? What are the main barriers to action?**

Agricultural industries and land are a key solution to emission management, via best practice adoption to reduce emissions and carbon sequestration via soil and vegetation.

Key barriers to action
- Uncertainty regarding Govt policy – early adopters can be penalised
- The cost of implementation -costs not shared across value chain, highlighting the unreasonable burden on part of the value chain whilst there are significant public benefits.
- Cost of monitoring both emissions and sequestration
- Uncertainty regarding new technology -
- Livestock sector concerns regarding animal and human health implications of feed additives.
- Existing approaches too bureaucratic and costly for most individual farm enterprises
- Low confidence in carbon calculators that don't adequately take into consideration sequestration. Most calculator methods not designed to assist with on farm benchmarking and monitoring improvements in best practice.
- Uncertainty of where to focus efforts on farm and the relative cost:benefit/effort reward of each.

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**2. How can we progress emission reduction efforts whilst also building resilience and adapting to climate change?**

The Circular Economy approach allows resilience and adaption to be factored into the circularity roadmap. For example, shade and shelterbelt plantings on farms can reduce heat stress for animals, enhance biodiversity connectivity, could be partially harvested for high value timber production, indigenous plant species could be harvested annually for indigenous bush food/medicine enterprises, whilst sequesting carbon.

**3. Are there initiatives or innovative programs underway that could be applied or expanded on at a national scale?**

[redacted] Noting renewable energy projects will get Australia part of the way to net zero, but a Circular Economy approach, incorporating renewable energy will get us a lot closer to net zero.

**4. How can the Australian Government bring together existing effort and new initiatives into one coordinated plan?**

The plan needs to look at emissions from a circularity perspective. The baselining and resource optimisation process which would then allow priority existing and new initiatives to align. Noting it is likely that individual businesses including many commercial farms will not be able to individually achieve net zero, however, they can all play their part and at the regional level net zero could be achievable.

**5. What are the most important options to be further adopted or supported, looking in the short and the longer-term?**

The Govt needs to take an active role in resource baselining and monitoring carbon sequestration to take the burden off landholders who need to focus on implementation. The cost of monitoring and auditing makes both soil and vegetation sequestration practices under the Emission Reduction Fund not viable for most farm enterprises. For both soil sequestration and vegetation sequestration, remote sensing and modelling technology needs to be further developed, shared and utilised. Further support needs to be given to developing practices to help landholders reduce methane emissions in livestock that does not pose a potential health risk to the animals or the food chain.

6. **What are the practical solutions to increase uptake?**
Clear policy direction from Government
Good quality on farm extension programs focussing on production and emission reduction drivers.
Focus needs to change from 'Know your carbon number' to a focus on emission

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reduction/sequestration best practice adoption. The key areas of emissions across each industry are well known and benchmarked. We need to encourage landholders to improve their understanding of their carbon emissions and sequestration opportunities whist offering solutions and incentives for best practice adoption. With agriculture being a significant area for carbon sequestration, far more can be achieved through incentives than regulation.

The existing carbon calculators focus on emissions but do not adequately calculate sequestration opportunity. Making landholders feel that they are more the problem than the solution is not helpful for empowering practice change.

The best practices recommended to farmers to reduce emissions or increase sequestration need to be technically sound, and commercially available to all farmers. If the practice does not enhance economic productivity for the farmer or have a management benefit, then cost impost on the farmer needs to be paid by the community.

**7. How do you see the agriculture and land sectors contributing over the medium and longer-term? What are the opportunities to deliver emission reductions in parallel with wider goals?**

Agriculture has the potential to play a significant role in emissions reduction in the medium and long term if supported and encouraged to do so. To remain financially viable farmers need to maintain focus on productivity, however, practices that maintain or enhance productivity whilst at the same time reduce emissions should be strongly encouraged. Similarly, investment that will improve productivity resilience whilst reducing emissions and take pressure off at risk natural resources should also be strongly supported. Using the Circularity model at a regional level will identify via the resource baselining and optimisation process synergies between natural resources, industries and communities that can be better utilised to enhance agricultural productivity whilst at the same time reduce emissions and restore natural ecological processes.

Agriculture aligned projects identified as part of the [redacted] to date include;

Waste fish from recreational fishing, commercial processing, composed using waste bark from timber processing to produce high value compost for use in gardens and commercial agriculture for soil fertilizer/conditioning – increasing soil carbon, soil health, reducing waste to landfill and methane emissions.
https://ocean2earth.com.au/

Farming of kelp for high value pharmaceutical use as well as commercial fertilizer for

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agriculture, increasing carbon sequestration whilst replacing synthetic agriculture fertiliser usage – reducing nitrous oxide emissions and increasing carbon sequestration..

Planting of trees for high value timber production as well as for shade & shelter for livestock, enhancing biodiversity connectivity, animal welfare outcomes as well as carbon sequestration.

Utilisation of surplus calves from the dairy industry grown out to produce low emission beef for the value chain, reducing emissions whilst improving animal welfare outcomes.

In coastal unregulated water sources the construction of on farm water storages for irrigation and stock water use during extended dry periods. Harvesting water during flood events for use during dry times taking pressure off extreme low stream flows, improving natural ecological processes. Project will improve landholder resilience to drought, reduce the volume of purchased feed transported during drought (carbon emissions), maintaining good quality forage for stock, minimising enteric methane production, whilst trickle seepage from storages will provide drought refuge for native wildlife. The revegetation of the riparian zone will improve wildlife connectivity as well as increase carbon sequestration.

**8. How can the Australian Government better support agriculture and the land sector to:**

a. **drive innovation -**
The Government needs to work collaboratively with the corporate and private industry sectors to drive innovation.

b. **build capacity**
The Government needs to re engage and provide industry specific technically sound, unbiased and independent extension support to farmers to drive best practice adoption and emission reduction & sequestration awareness. Landholders need to know they are a valued solution not just the problem.

c. **ensure the system enables emissions reductions?**
The Government needs to invest in remote sensing technology, and evidence supported modelling to monitor emission reduction and sequestration at a landscape level.

**9. What new initiatives could the Australian Government design that would support emissions reduction and carbon storage in agriculture and land emissions reductions and help ensure a productive, profitable, resilient and sustainable future for agriculture and land sectors?**

[redacted] has already identified many new initiatives such as the ones mentioned above. These initiatives have been identified to

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date though effective collaboration with major corporate entities, small to large local businesses, community groups and individuals. To identify more initiatives the Government needs to work effectively with all levels of the community as well as the scientific community.

**10. A consistent and trusted approach for assessing and reporting emissions is often raised as a barrier to reducing emissions. Is there a role for the Australian Government in addressing this concern, and how can producers and land managers be supported?**

Currently too much focus is being placed on emission calculators. They are just a tool for estimating emissions – most do not estimate sequestration opportunities very well. Most industries within the agricultural sector understand where the majority of emissions are coming from within the sector. Focus needs to be directed to encouraging the adoption of known best practices and research into new commercially viable options.

To monitor improvement we need a sound baseline to work off that is able to be accessed and utilised by everyone in the value chain to assist with monitoring and reporting on improvements.

Many landholders are well informed and are keeping up to date with global warming predictions, international agreements and the science regarding greenhouse gas emissions. There has been a lot of discussion around the global warming potential of the three main gasses, with particular debate around methane and its degradation over 15-20 years. Whilst it is understood methane is more potent, its degrading nature is not factored into the current calculators or emission accounts. The Government needs to keep up with the latest science in emission calculation to ensure we are playing on a level field internationally and not exposing Australian industries and landholders to excessive burden.

Many landholders are holding off on implementing emission reduction and or sequestration projects because they know that if they implement now they may miss out on carbon credit opportunities or their activities may not be counted. Uncertainty around the Government's intentions with regard to emissions in the agricultural sector is stifling implementation of emission reduction projects.

The apparent lack of Government leadership to date is driving banks, supermarkets and processors to set emission targets and a roadmap for reducing emissions in their supply chain without regard for who pays for the implementation of emission reduction works. It is not reasonable for the landholders to be left with the burden of paying all the work that needs to be done. The costs need to be shared across the whole value chain and

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Govt needs to play its part in that value chain.

**11. What skills, knowledge and capabilities do you think producers and land managers need to implement change?**

Producers and land managers already have great skills and knowledge and have demonstrated capability in adapting to change when they understand the issues affecting them. Emissions are invisible which makes managing them very difficult. When explained in terms of lost energy or lost opportunity, farmers are more likely to identify solutions within their circle of control that will result in emissions reduction. Farmers are also more likely to take action if the cost of taking action is shared across the value chain and they are not left with the cost alone.

If trained in Circular Economy Principles farmers as well as the wider community are more likely to identify solutions to many resource issues from within their local communities.

**12. What information and data would help them make decisions about emissions reductions and sustainable land management in the short and longer-term?**

More information on how farmers can be the solution and less focus on how they or their enterprise is the problem would be a great start. Regional mapping of carbon stores within the soil and vegetation would help farmers to better estimate their current and potential sequestration contributions.

If you have any queries please do not hesitate to contact me on the number below

Yours sincerely

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