Carbon Farming: let's get real and let's get on with it.

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Australia has to do something substantial about its contribution to global warming.

For quite a while we have been willing to kick the can down the road so that future generations will have to do what we have been unwilling to do – disturb a lifestyle that we have come to take for granted – until recently at least.

Attitudes have changed.

We now have an opportunity to make headway, at last. There are proposals on the table that give us a chance to do something constructive – once we get past the cynicism, scepticism, suspicion, and selfishness that has been the feature of what has been passed off as 'discourse' in too many quarters for too many years.

Nobody would argue that change will be easy, or comfortable, or that there are simple solutions ready to weave their magic. We have to work at it, get real and get on with it.

Greenhouse Gas (GHG) emissions simply must be reduced. There is no argument about that.

In parallel, we must draw down carbon dioxide (CO_2) already in the atmosphere.

We know that there is now enough CO_2 in the atmosphere to take the global average temperature to uncomfortable levels.

Carbon farming can reduce that CO_2 and is able to be implemented at scale right now. Carbon farming is based largely on photosynthesis, the process by which plants and some other organisms use light, CO_2 and water to provide energy to grow.

There are no other means available to draw CO_2 out of the atmosphere and sequester it - at scale. Eventually? Maybe. Right now? No.

Of course sequestration has to be valid. Of course the removal of CO_2 has to be real and long-lasting. Of course we all need to be confident that it is both.

The Panel's recommendations are designed to improve a system that has, by now, been operating long enough to see where improvements can be made.

Continuous improvement is the laudable objective, it is simply good practice.

The Government has accepted all recommendations in the Review. The means to implement them are being developed.

<u>The Panel has emphasised that its recommendations should be implemented as a matter of urgency.</u>

The purpose of the *Carbon Credits (Carbon Farming Initiative) Act 2011* (CFI Act) and the role offsets play in Australia's carbon mitigation strategies

The objects of the CFI Act are:

- the removal of GHGs from the atmosphere and avoidance of emissions;
- to create incentives to carry on certain offsets projects;
- to increase carbon abatement in a manner that is consistent with the protection of Australia's natural environment;
- to authorise the purchase by the Commonwealth of units that represent carbon abatement.

Drawdown, *emissions reduction*, *offsets* are complementary elements of a strategy to reduce Australia's contribution to global warming, and to protect the environment.

Science and technology may well develop effective and scalable options to meet the twin challenges of significant GHG removal and secure long-term (millennia) storage. But to start at scale well before 2050, as urged by the IPCC[1], the land sector will have to carry much of the immediate load, and carry it now.

Scope of the review.

The Terms of Reference are clear, and the Panel stuck to them. They did not require a review of the hundreds of individual projects.

The review and administration of individual projects is the role of the Clean Energy Regulator (CER) and its independent auditors.

Availability of Carbon Estimation Area (CEA)[2] data

The confidentiality provisions in the *Clean Energy Regulator Act 2011* (CER Act) prevent the CER from publishing the location of CEAs. They fall under the definition of *protected information* covered by Part 3 of the CER Act.

By contrast, project areas are not subject to the same provisions: indeed, there is a specific provision (CFI Act s 168) that requires project data to be published.

Thus, it is straightforward for a third party to see the boundary of the area in which a project is located, but they have to infer which part is the CEA, and guesstimate critical elements such as the baseline data and period, the suppressor(s) and the relevant management action(s) taken.

Expecting third parties to draw inferences about any or all CEAs and their management is not a sensible way to proceed.

Accordingly, the Panel recommended that CEAs and their management be published and that a principle of maximum transparency be adopted: the default should be that information is made public unless determined otherwise by the CER on a case-by-case basis.

Once implemented, this recommendation will provide third parties with the data to assess the impacts and effectiveness of Australian Carbon Credit Unit (ACCU)[3] projects.

Governance

It was expected that a range of views would be raised during the consultation period. Those advanced most frequently were to:

- enhance transparency;
- clarify governance;
- ensure the Scheme met all objects of the CFI Act including the obligation to increase carbon abatement in a manner that protects Australia's environment and improves resilience to the effects of climate change.

[1] Intergovernmental Panel on Climate Change

[2] A CEA is an area of land within a project area on which the eligible project activity is established and modelled for the purpose of calculating carbon abatement and the issuing of ACCUs (CER 2022).

[3] Each ACCU issued represents one tonne of carbon dioxide equivalent (tCO_2-e) stored or avoided by a project. An ACCU can only be issued to a person if the person has a Registry account and a Registry account can only be opened by a person after the Regulator has considered whether they are a 'fit and proper person (CER 2023).

Once all the Panel's recommendations are implemented, the scheme will have clear and transparent requirements, processes and protocols to administer both existing and new projects. It will provide a sound basis for future action.

Panel recommendations for human-induced regeneration (HIR) projects

The HIR method has been subject to specific and extensive review.

A 20-month long review by the Emissions Reduction Assurance Committee (ERAC) was concluded in 2019 (Report).

Of the (approximately) 370 currently registered HIR projects, more than 200 are registered under that most recent iteration of the method. All 370+ registered HIR projects are subject to updated compliance obligations and monitoring as a direct consequence of the 2019 ERAC review.

An independent review of Qld and NSW HIR projects by Dr Stephen Beare and Professor Raymond Chambers (2021) was conducted in response to similar criticisms that this Panel heard and considered.

The Beare and Chambers (2021) review concluded:

> *Overall, the analysis presented here provides strong evidence that projects established under the HIR method have resulted in significant increases in WF (woody forest) cover in the arid and semi-arid regions of NSW and Queensland.*

The strength and limitations of this statistical analysis were reviewed in turn by an independent third-party, Professor Christopher Briggs (2021) who concluded:

> *Overall, the analysis presented in the report provides strong evidence that projects established under the HIR method have resulted in significant increases in WF cover in the arid and semi-arid regions of NSW and Queensland…. The choice of modelling methods is appropriate throughout.*
>
> *The data analysis is careful, and results are checked by being derived in two or more ways, and compared using external testing methods. We can have confidence in the robustness of the conclusions of the analysis in this report.*

The Panel also considered the response to Beare and Chambers (2021) prepared by Macintosh et al (2022). Unfortunately, Macintosh et al (2022) had restricted access to data because of the secrecy provisions in the CER Act (Part 3), which limited the value of their critique.

The Panel commissioned the Australian Academy of Science (AAS) to provide advice on the science underpinning four methods. The AAS was provided with more than 30 peer reviewed and published articles as well as other expert opinions. The report was reviewed by three independent academics before it was provided to the Panel (Report). It was important input and carefully considered along with the rest.

The Panel concluded that the HIR method is sound – particularly as it is administered by a robust regulatory framework.

Project reporting

Project reporting is quite properly demanding. Progress (or otherwise) is reported to the CER at least every 5 years and projects are subjected to at least 3 independent audits during the 25-year crediting period. HIR projects have additional requirements, including 5-yearly regeneration and forest attainment gateway checks (a direct result of the 2019 ERAC Review).

The CER can, and does, use existing provisions to address project (non)compliance.

The CER can withhold ACCUs or require their relinquishment; it can require remedial action, and revoke projects, on a case-by-case basis.

While the Panel did not conclude that projects should be cancelled by a magisterial sweep of the arm, there is nothing in the Panel's recommendations that suggests existing projects under this method are exempt from review, scrutiny and appropriate action. Projects established 10 years ago, or ten months from now (for example) are subject to the same rules and the same scrutiny.

Doubtless, some projects do not meet all their obligations, all the time. The CER has the processes and authority to act, to make adjustments to projects, re-stratify CEAs, to pause credits or to cancel projects.

We saw no evidence that the CER does not act when circumstances require.

The publicly available project register from March 2023 shows 256 projects have been revoked for a variety of reasons - some voluntarily and some due to regulator action, across a number of methods.

FullCAM[4] efficacy to accurately measuring carbon abatement in projects with substantial remnant vegetation / mature trees

In November 2022, CSIRO published a verification study of the FullCAM calibrations in HIR regions with high project activity. The evidence showed that the model is sufficiently calibrated for areas in human-induced regeneration projects that include vegetation with a range of ages during the 25-year crediting period.

Associate Professor Cristopher Brack, described to the Australian Senate as *an absolute expert in that field who was one of the original authors and creators of the model*, concluded in his input to the AAS review that:

> *provided the input values, stratification and management drivers are appropriate, the estimates of carbon stocks for Human-induced regeneration of a permanent even-aged native forest rely predominately on the science of FullCAM and that it has been well publicised, peer reviewed and validated…*
>
> *…Spatially precise and reliable management records are essential to demonstrate the timing and effectiveness of human-induced intervention and/or active decisions to cease previously approved and feasible deforestation activities.*

Like any model, therefore, the quality of the output from FullCAM depends utterly on the quality of the input to FullCAM.

Assurance that FullCAM is correctly applied is achieved through geospatial monitoring routinely performed by the CER using a suite of sophisticated compliance tools and processes, and exercising its powers as required.

ACCU generation and issuance

Registering projects by the CER only follows an extensive review of the project details and indeed of the character of the proponents (fit and proper person assessment).

[4] The Full Carbon Accounting Model (FullCAM) is a calculation tool for modelling Australia's greenhouse gas emissions from the land sector. FullCAM is used to generate abatement estimates for vegetation methods under the ACCU scheme. Each method has its own guidance for using FullCAM (DCCEEW 2020).

ACCUs are not issued simply because projects are registered. ACCUs must be earned over the crediting period as projects demonstrate carbon abatement.

Project reports, independent audit reports and applications for ACCUs are assessed and approved by the CER **before** ACCUs are issued.

Project proponents are required to report regularly on their projects, regardless of whether they are accompanied by an application for ACCUs. Failure to meet project reporting deadlines may result in the CER taking action for non-compliance.

Concerns that projects are being over-credited

Issuance of ACCUs is adjusted over the crediting period - projects are subject to regular reporting, record-keeping and auditing obligations. In other words, the total number of ACCUs issued over the 25-year period are more important than the number of ACCUs seen to be issued at any intermediate time point.

There are no projects that have been running for 25 years.

What happens if a proponent sells all their ACCUs within the 25-year crediting period?

ACCUs are issued after abatement is demonstrated and assessed by the CER.

This requires project reporting and audit obligations as well as permanence obligations for sequestration projects (such as HIR projects).

If a proponent sells or forward contracts ACCUs early in their 25-year crediting period, they are still required to meet and maintain scheme eligibility criteria and deliver the project per method and scheme requirements.

If they are found to have been over-credited after the ACCUs have been issued and sold, there are options depending on the stage of the project's lifecycle. For example, the CER could pause the issuing of further ACCUs to allow carbon stores to increase to match the amount that had been over-credited rather than immediately requiring ACCUs to be relinquished.

It is even eventually possible that landholders could be required to buy a suitable number of ACCUs in the market and relinquish them, but that is more likely to occur closer to the end when the actual sequestration in the CEA over the crediting period can be assessed.

The CER's compliance and enforcement priorities, approach, action and powers are characteristic of a regulator and published.

The CER provided the Panel with practical examples of how their policies are applied and enforced and the consequences for individual projects - depending on their circumstances.

Additionality, newness and increasing scheme participation:

The more effective and accessible we can make the scheme, the more it enhances the sustainability of our land, the more demonstrable the benefits, the more people who actively engage, the more we reduce our negative impact on the planet, the more we can showcase what can be done when incentives combine to encourage well-designed and cost-effective action – the better off we will all be.

The Panel found that the confusion and complexity around how additionality is interpreted and administered at the method and project-level hindered opportunities to participate in the scheme, particularly for smaller-scale landholders and entities as well as Native Title holders.

The emphasis should be on new and additional abatement as opposed to new and additional intent to abate or to undertake a particular activity.

The Panel found that at the project-level the regulatory additionality requirement and the government program requirement are appropriate, but the newness requirement should be refocussed to place emphasis on 'new' abatement that will be credited following a project's commencement date.

At the method and/or module level under the new framework, additionality tests under the offsets integrity standards should be applied on the basis of evidence and observable common practice, and not require statements of intent, counterfactuals or financial viability by project proponent.

This means that proponents should not be automatically excluded from participating or undertaking an activity because it is becoming best-practice in an industry or sector for incentives other carbon abatement, including cultural significance.

Similarly, if proponents have already commenced an activity, the Panel does not think that they should be automatically excluded from the scheme but that evidence-based baselines should be determined at the point they enter the scheme so that they are only credited for abatement generated after the project's commencement date.

Proponents should be encouraged to extend or scale-up their existing activity or research and development to drive innovation and accelerate abatement.

The Panel's views on refocussing additionality in the evolving context of the scheme prompted the recommendation to consider increasing conservativeness at the scheme-level across the entire portfolio. (Recommendation 7).