

Sustainability

Making soil carbon credits while the rain falls

New research on soil carbon credits has highlighted concerns about the permanence and additionality of credited sequestration beyond natural climate variability.

The paper [“Making soil carbon credits work for climate change mitigation”](#) by Elaine Mitchell and others, published in Carbon Management, examines the effectiveness and credibility of soil carbon credits in achieving real emissions mitigation.

The research looked at the six soil carbon projects that were issued Australian Carbon Credit Units (ACCUs) in 2023 and found that the observed soil organic carbon (SOC) sequestration was mostly attributed to above-average rainfall instead of project interventions.

The credits were issued following a period of unusually high rainfall, and the rates of sequestration seen in the projects significantly exceeded the rates of expected long-term SOC increases in Australia based on the best available science.

The report points to fluctuations occurring in short-lived carbon in the soil, primarily driven by rainfall, while gains in

persistent SOC accumulate gradually.

The results highlight potential uncertainty about the persistence of the observed gains over the remainder of the projects’ permanence periods.

The study offers policy insights that could support continuing improvements in the robustness of the ACCU scheme and provides two key recommendations for amendments to the soil carbon method. These include extending the minimum measurement period to at least five years and basing short-term crediting on established science-based “reasonable bounds” for expected long-term SOC gains.

If the findings of crediting non-permanent, non-additional sequestration are valid, this may pose a risk to farmers and the carbon industry by compromising the credibility of the crediting scheme.

Potential changes to improve the integrity of the scheme can help to ensure credited SOC sequestration is based on management-driven, rather than climate-driven, outcomes.

What to watch:

- **The government’s “nature positive” legislation hits a roadblock** – A potential deal between Labor and the Greens was not progressed after discussions with the Western Australian premier. The legislation would see two new agencies established, including an environmental watchdog and an information agency to manage environmental data.



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