Carbon Removals: Soil carbon pool

OVERVIEW

As the agricultural sector faces increasing pressure to mitigate climate change, farms are uniquely positioned to contribute through carbon removal activities. Carbon removal refers to capturing and storing atmospheric carbon dioxide, often through practices like planting trees, improving soil carbon sequestration, and sustainable land management. However, to ensure these efforts are effective, measurable, and verifiable, it's essential to follow an established process for measurement and reporting. In South Africa, calculating carbon in dead organic matter and biomass pools offers limited value due to the short lifespan and carbon storage potential of perennial crops. However, monitoring soil organic carbon is more beneficial, as it provides a longer-term and more stable form of carbon sequestration.

APPROACH

At **Blue North**, we offer a structured approach to help farms measure and report carbon removals in line with international standards, ensuring alignment with the Greenhouse Gas Protocol (GHGP) Land Sector and Removals Guidance and Science Based Targets initiative (SBTi) Forest, Land and Agriculture (FLAG) Guidance. This approach is structured as follows:

1 **Kick-Off Workshop**

- **Introduction**
- **Review farm practices & identify potential carbon pools**
- **Project scope & objectives**

2 **Data collection & support**

3 **Report compilation**

Reporting*

Using collected data, Blue North compiles a removals report in compliance with the GHGP and SBTi FLAG, covering:

- **Land management carbon removals.**
- **Monitoring systems for long-term carbon storage.**
- **Uncertainty management & challenges.**

What data should you collect for this project?

Baseline data • Project start date • Pre-project carbon stocks • History of management on farm	**Soil carbon pool data** • Above & belowground biomass • Soil type & organic carbon content, soil sampling depth (0-30cm), bulk density & coarse fraction • Spatial variability (in samples)**	**Geographic data** • Location (GPS coordinates) of sampling zones & interventions
Land management practices & management interventions	**Optional data** • Total area of land under management for the project • Inputs used • Data on crop yields • Grazing intensity • Climate data	**Biomass carbon pool data *(if necessary to measure)*** • Growth & mortality rates of vegetation • Tree dimensions

Long-term monitoring is needed to monitor sequestered carbon over time. It is best to sample at the same time each year, as well within the same sampling zone. Sampling can be done every two to four years.

**A third-party verification is recommended by Blue North and required by the SBTi to ensure credibility and compliance.*

*** Take multiple composite samples in an area and it must be representative of spatial variation of the area.*

Interested to learn more? Contact us, and we will guide you through the process to use your carbon removals as part of your journey to reduce your business's carbon intensity, improve your ESG reporting, and meet growing market demands for sustainability.
Contact us at 063 688 5593 or hello@bluenorth.co.za.