

A number of challenges arise in crediting soil carbon projects that aim to mitigate soil-related GHG emissions or enhance soil carbon removals. These challenges pose a threat to the quality of certificates and the integrity of carbon markets. Since they cannot be fully overcome, soil carbon credits should not be used for offsetting purposes.

Mitigation measures can have positive and negative social and environmental impacts. Robust social and environmental safeguard requirements, monitoring of impacts and stakeholder consultations must make sure that mitigation measures deliver co-benefits and avoid or mitigate negative impacts.

Additional sources
of income for local
populations

Emission reductions and carbon removals are considered additional if they occur as a result of the incentives created by the funding for climate action.

Without the economic incentive, the mitigation would not have occurred.

- due to legal requirements
- established common practice or
- because they are economically viable in themselves

Quantifying reductions and removals from soil carbon measures is challenging and must not result in overestimating mitigation outcomes. If the challenges cannot be met, an activity must be excluded from being credited.

Costs:
Soil sampling is cost and labour intensive.

Leakage:
Mitigation activities may lead to leakage of emissions to other locations.



Uncertainty:
Soils are heterogeneous so that carbon stock measurements can vary significantly.

Baselines:
Baseline setting is based on counterfactual assumptions and thus involves uncertainties.

Non-permanence refers to a situation where the emission reductions or removals generated by a mitigation activity are reversed at a later point in time. Non-permanence poses a significant risk for mitigation activities that enhance or preserve terrestrial carbon reservoirs, such as climate-friendly soil management.

A circular diagram representing a system. Inside the circle, there is a sun-like symbol (a circle with radiating lines) in the upper left quadrant. A horizontal line divides the circle into two halves. Numerous small circles of varying sizes are scattered throughout the circle, with a higher concentration in the upper half. A wavy line is positioned just below the horizontal dividing line, with several small circles resting on it.

Unintentional reversals occur due to natural processes.



Intentional reversals
occur due to direct
human interference.

Double counting occurs if a single emission reduction or removal is counted more than once towards the achievement of a mitigation goal.