



Big win: Soil Organic Carbon: absorbing carbon back into the soil

Carbon sequestration by soils can mitigate climate change; the stock of carbon in the soil is twice that in the atmosphere. Small changes in soil carbon can have a big impact on atmospheric carbon - according to recent analysis by scientists at CIAT and The Nature Conservancy.

The “4 p1000” initiative on soil for food security and climate, hopes to sequester approximately 3.5 gigatons of carbon in soils globally each year. If implemented together with measures that aim at a zero above-ground carbon loss from land use changes (e.g. REDD+), this amount would offset all CO₂ emissions from fossil fuel burning not already absorbed by oceans and land.

Recent analysis shows that 25–50 % of the 4p1000 target for soil carbon sequestration could be met on agricultural lands alone - that is 0.9 - 1.85 gigatons of carbon per year on the 16 million km² of agricultural land globally suitable for measures to foster carbon sequestration.

The map presented in this session is based on the most up-to-date soil property maps, and published estimates of soil carbon sequestration for a range of agricultural practices including agroforestry; cover cropping; and conservation agriculture. It illustrates where carbon could be sequestered if practices to enhance soil organic carbon were widespread. We already actively manage agricultural

lands. Since agricultural soils have lost significant amounts of carbon, they are able, based on soil type and climate, to re-absorb carbon.

Call to action:

- Site-specific tools can be developed to present decision makers with the bigger picture of where soils are most degraded, and which areas should be prioritized for investment to improve soil carbon stocks.
- Ready-to-finance packages of best-bet soil conservation practices can highlight which soil conserving practices are the most appropriate to enhance soil organic carbon stocks in a particular regions.



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