

Understanding countries' status and challenges for estimation of soil carbon stock changes in national greenhouse gas inventories: survey findings

Background

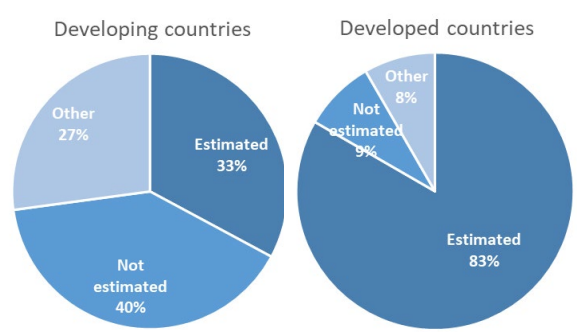
Estimation and report of carbon stock changes (CSCs) in mineral soils in national GHG inventories (GHGI) is very limited. Understanding of the main difficulties allows to define targeted support to help countries to fulfill the completeness requirement of the Enhanced Transparency Framework. The estimation of CSCs provides insights for developing targeted policies to encourage ambitious nationally determined contributions and tracking their implementation.

Global survey in 2021

- **226** responses from 104 countries (88 developing countries, 16 developed countries)
- The analysis includes **139** respondents, involved in GHGI preparation, of which **109 GHGI experts** and **30 soil scientists** from **70 developing** and **12 developed** countries

Preliminary analysis

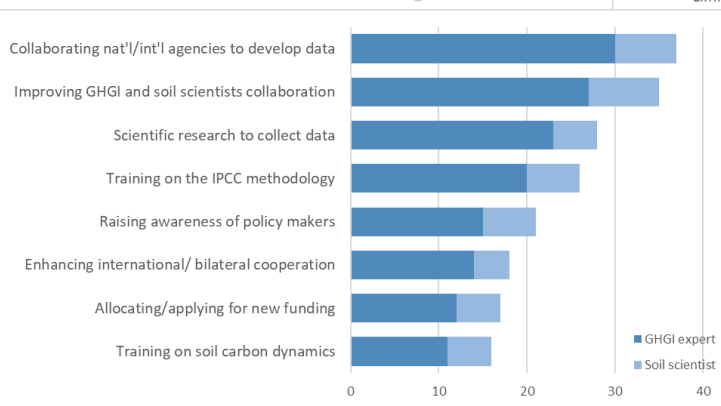
Status of estimation of CSCs in mineral soils



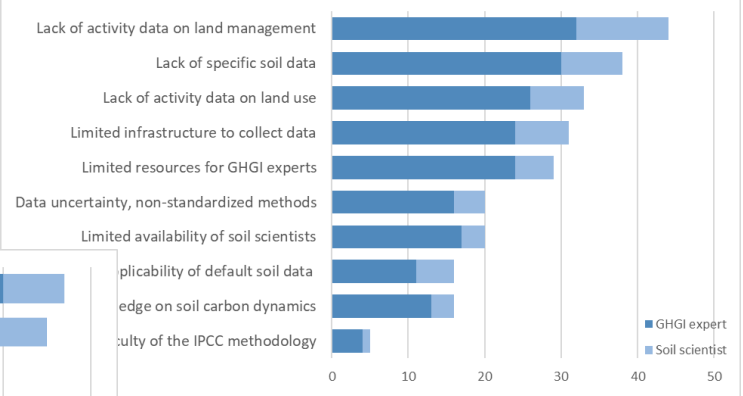
- Only **one third** of developing countries estimated emissions and removals from CSCs in mineral soils
 - **74 percent** of them estimated CSCs applying **Tier 1**
- “Other” includes respondents not aware or conflicting responses for the same country on the status of CSCs estimation

Lack of activity data on land management/use and soil data, and the **infrastructure to collect** them, has limited CSCs estimation

Solutions to overcome challenges



Challenges faced by GHGI experts and soil scientists



National and international collaborative approach on **data collection efforts**, coupled with enhanced **cooperation between GHGI experts and soil scientists** in the estimation process are the solutions

Recommendations

- ✓ Provide clear technical guidance on how to collect and analyze data
- ✓ Ensure financial and human resources for data collection
- ✓ Conduct joint training programs for GHGI experts and soil scientists
- ✓ Share good practices and learning at regional level

Source: <https://www.fao.org/publications/card/en/c/CB9075EN/>