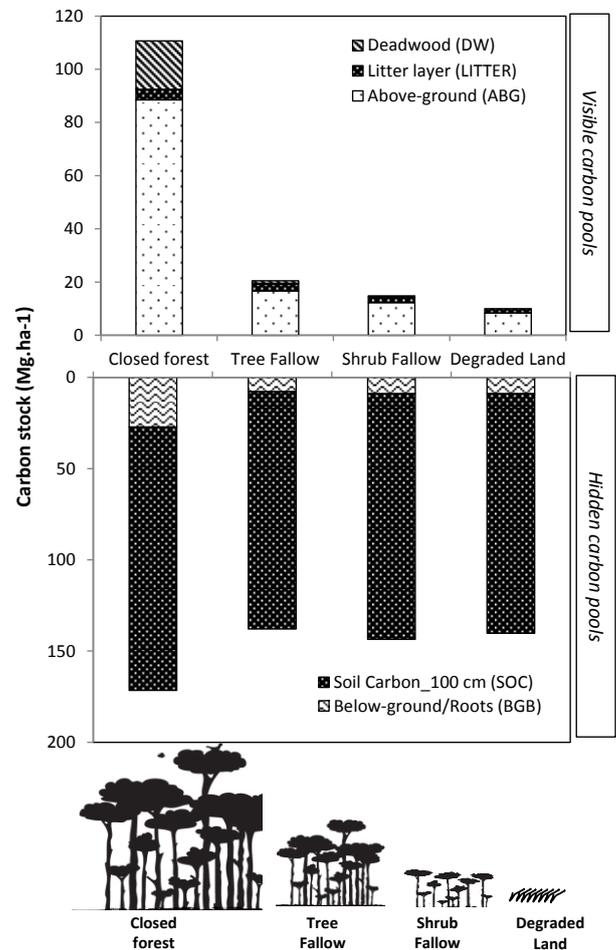


Carbon stock surveys in the framework of poverty alleviation in Madagascar: challenges and results

Carbon is a global Ecosystem Service (ES) that influences human wellbeing at global and local scales. Moreover, carbon storage could be also linked with other ESs like water availability and biodiversity conservation.

However, it is known that accurate carbon accounting is a difficult and time-consuming task, especially in a complex ecosystem such humid tropical forest where deforestation is important. The project undertook to not only measure carbon stock in all pools (visible and hidden) but also to survey the other ESs in different land uses resulting from forest clearance (mainly for slash and burn).

Appropriate and replicable methodology was developed based on a combination of different skill sets (scientific and local knowledge, discussion with all stakeholders involved in forest-soil-water management). Key results: (i) the hidden pools that were often neglected (mainly soil) contained a huge quantity of carbon stock; (ii) carbon storage potential decreased following deforestation ; (iii) a part from higher carbon storage, wooded lands showed more water infiltration and presented more aerial and soil biodiversity.



Conclusions and recommendations: Complete carbon survey could allow the achievement of some SDGs such as: combating climate change, water resources management and restoration, leading to land degradation neutrality and ensuring food security. The hidden pools have to not be neglected.

To truly benefit from these findings, there is a need to establish an effective science-policy interface.

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