

Outcomes of the Science and Technical Committee

Work programme of the Science-Policy Interface for the biennium 2018–2019

- (a) Refined guidance for implementation of land degradation neutrality
- (b) Guidance to support the adoption and implementation of land-based interventions for drought management and mitigation, under objective 2;

Estimation of SOC in context of LDN planning and monitoring

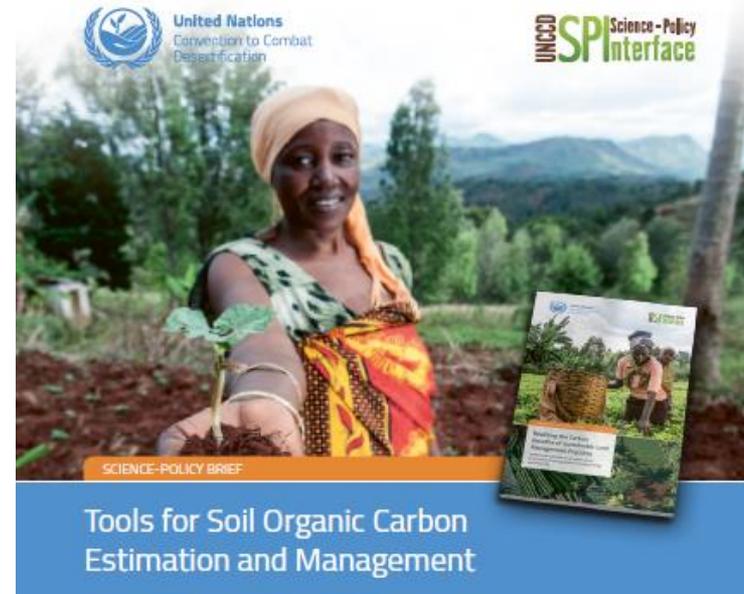
- Harmonized accurate estimations of changes in SOC stocks resulting from SLM interventions.
- i) identify suitable and region-specific SLM practices and approaches to maintain or enhance SOC stocks,
- ii) estimate and monitor SOC for LU planning and for monitoring LDN.
- iii) A comparative list of tools and models for SOC assessment and selection for SLM approaches and technologies,
- iv) Approaches for monitoring changes in SOC stocks from local to national scales



Estimation of SOC in context of LDN planning and monitoring

Policy briefs

- Focus SOC measurement on sites where SOC is the key Indicator
- Use national/local data and local expertise
- Combine measurement and tools/models for SOC assessment
- Use SOC estimation tools to choose appropriate SLM practices
- Encourage gender-responsive actions
- Target application of SLM practices
- Assess co-benefits and trade-offs between ecosystem services provided by land,



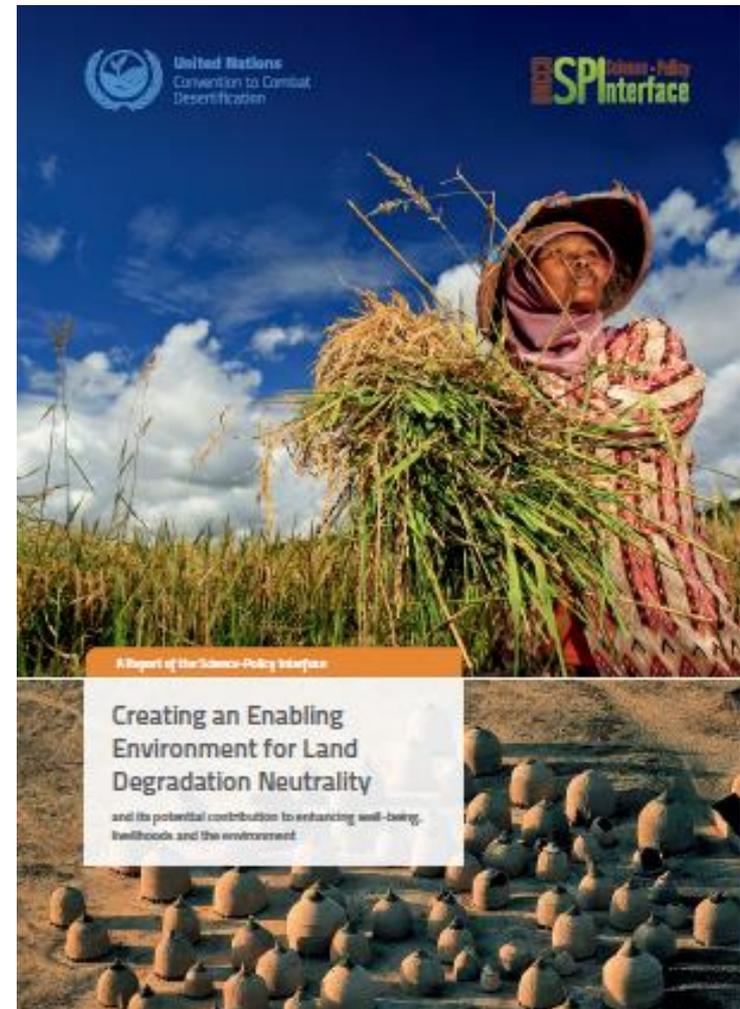
Why manage soil organic carbon?

Land degradation neutrality (LDN) is achieved if land degradation is avoided or reduced, and new degradation is balanced by reversing degradation elsewhere in the same land type through restoration or rehabilitation. The primary instrument for avoiding and reducing degradation is the application of sustainable land management (SLM) approaches and technologies. Because of its multifunctional roles and its sensitivity to land management, soil organic carbon (SOC) is one of the three global indicators for LDN, so predicting and monitoring change in SOC is vital to achieving LDN targets. Measuring SOC is challenging because SOC stock is highly variable across landscapes, even within the same soil type and land use, and SOC stock fluctuates over time. Predicting the potential change in SOC stock due to changes in land management is also a challenge. Accurate evaluation of SOC stock change resulting

from SLM interventions is often limited by the availability of data and the performance of tools/models for SOC assessment. Therefore, targeted investment in SOC estimation is vital. Guidance on harmonized methods that provide accurate estimations of changes in SOC stocks resulting from SLM interventions is required. Software tools and biophysical models for SOC assessment can help "fill the gaps" in measured datasets for SOC estimation. The following decision trees will guide efforts to predict change in SOC under alternative SLM practices, and monitor SOC change in response to SLM interventions, and thereby support decision-makers to pursue the right SLM interventions in the right locations, at the right time, at the right scale with the overall goal to increase or maintain SOC and improve soil health in support of LDN achievement.

An enabling environment for LDN and contribution to enhance livelihood and the environment

- Provides key messages and policy options for LDN planning
- SLM
- Environment benefits
- Well-being
- Sustainable livelihoods



An enabling environment for LDN & contribution to enhance livelihood & the environment

Policy briefs

- Mainstreaming LDN targets
- Finance and capacity development needs
- Land tenure and land use planning conditions
- Account for private actors in land governance
- Science-policy aspects aimed at raising awareness and understanding of LDN
- Engage in achieving environmental, social and economic
- benefits in the context of LDN

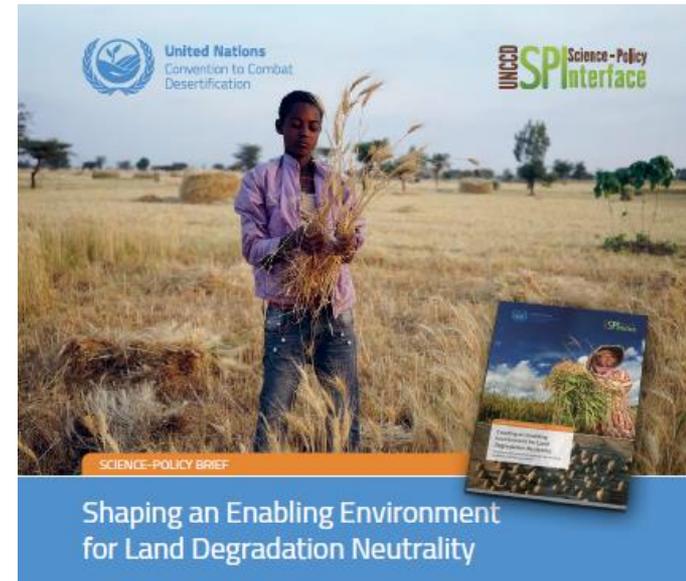


FIGURE 1
Conceptual framework of the linkages between land degradation neutrality (LDN), the enabling environment and the achievement of multiple benefits.

The challenge: Land degradation neutrality calls for an enabling environment

Avoiding, reducing and reversing land degradation is as much a policy challenge as it is a technical challenge. Policy-makers may question how best to support the adoption of sustainable land management, how to organize relevant agencies to be effective at scale, how to develop land use plans or identify and remove constraints for implementation of land degradation neutrality (LDN).

These questions are addressed in the concept of an enabling environment, defined as a conducive institutional, policy, regulatory and financial setting for progress to be made towards LDN.

Guidance on land-based interventions for drought management and mitigation

- Linkages between land use, drought and water
- Drought-smart land management (D-SLM)
- Indicators:

Simple drought hazard indicator

- Trends in the proportion of drought affected land

Simple drought exposure indicator

- Trends in the proportion of the population exposed to drought

Comprehensive drought vulnerability indicator

- Trends in the degree of drought vulnerability

- Relevant approaches and practices
- Guidance for enhancing five enablers
- The need for vulnerability and risk assessments



Guidance on land-based interventions for drought management and mitigation

Policy brief

Provide incentives via:

- Landscape approach,
- Capacity development,
- Good land, and water governance,
- Geospatial analysis, and
- Finance.

