

Soils as Keystone for Food Security and Ecosystem Restoration 3 June 2020

A session on “Soils as Keystone for Food Security and Ecosystem Restoration” convened as part of the Global Landscapes Forum Bonn Digital Conference 2020. The session discussed the role of the smallholder farmer as a key agent in land restoration activities, and was split over three subsessions, namely: Soils and the UN Decade for Ecosystem Restoration; Soil Organic Carbon: How can smallholder farming communities benefit from carbon sequestration projects?; and Measuring Progress on Gender and Land Tenure.

During the subsession on **Soils and the UN Decade for Ecosystem Restoration**, participants discussed how to create enabling environments for ecosystem restoration. Key messages emphasized that:

- soils are essential to the UN Decade of Ecosystem Restoration and, for it to be a success, lessons from other restoration efforts should be built upon;
- smallholder farmers must become the stewards of restoration; and
- creating an enabling environment for smallholder farmers includes ensuring social innovation, secure land rights, access to knowledge and extension services, and appropriate and adapted technologies.

The subsession on **Soil Organic Carbon** addressed how small-scale land managers can be compensated for soil organic carbon. Participants discussed:

- the ways in which soil organic carbon (SOC) and restoration projects can further unlock land-based mitigation potential;
- that project design must address how local communities can benefit from engaging in these projects;
- monitoring and verification is essential for carbon accounting and a robust baseline; and
- that land tenure and gender equity remain challenges.

The subsession on **Measuring Progress on Gender and Land Tenure** discussed strengthening women’s access to land rights. Key messages underscored:

- measures to enhance tenure security of women must be included in soil and land restoration programmes;
- social innovation that considers local capacities and needs can help women secure access to land; and
- the decision taken by the 14th session of the Conference of the Parties to the UN Convention to Combat Desertification (UNCCD COP 14) on land tenure signals the importance parties place on soil and land restoration for implementing the UN Decade for Ecosystem Restoration’s strategy.



Session on Soils and the UN Decade for Ecosystem Restoration

This session took place on 3 June 2020 and was organized by TMG Research, a Berlin-based think tank on sustainability. Over 300 participants from national and local governments, intergovernmental and non-governmental organizations, civil society and grassroots organizations, and the private sector participated in this particular session. Participants posed questions to panelists and engaged in interactive discussions.

The Global Landscapes Forum Bonn Digital Conference 2020 was held from 3-5 June in a virtual setting due to the COVID-19 global pandemic. It convened under the theme “Food in the Time of Crises.”

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A Brief History of Soils and Ecosystem Restoration

Soils are essential to ensuring healthy land resources. They provide the basis for more than 95% of global food production and provide income to numerous smallholder farmers. Nevertheless, soil and land degradation continues to be a key threat to agricultural production and food security.

Land and ecosystem restoration, including through sustainable land management, is critical to address this threat and ensure that vulnerable communities have sustainable livelihoods and become more resilient.

Key Turning Points

Global Soil Week: The Global Soil Week (GSW) is a platform and process to bring together a range of actors to initiate and strengthen policies and actions on sustainable soil management and responsible land governance. It also seeks to raise the profile of soil issues in development policies and programmes and translate global targets on sustainable land management into feasible actions at the local level. The GSW was initiated by Klaus Töpfer, founding Executive Director of the Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany, and former Executive Director of the UN Environment Programme (UNEP). It became an independent global platform in 2017, moving its base to TMG Research.

Global Soil Partnership: The Global Soil Partnership (GSP) was established in 2012 under the auspices of the Food and Agriculture Organization of the UN (FAO) as a mechanism to develop and enhance partnership and collaboration to improve the governance and promote the sustainable management of soils.

The GSP aims to develop capacities, build on best available science, and facilitate the exchange of knowledge and technologies among stakeholders to enhance food security, protect ecosystem services, and contribute to poverty alleviation in an era of global demographic growth.

Priorities for action under the Partnership include promoting: the establishment of inclusive policies and soil governance; investment in sustainable soil management; and effective education and extension programmes on soils; and improved knowledge about the state and trend of soil conditions.

Linking Soils to the 2030 Agenda for Sustainable Development and other Multilateral Frameworks: A core objective of the GSW, the GSP and related international and regional initiatives is to raise awareness on the crucial role that soils play as enablers and accelerators of sustainable development. In the lead up to the adoption of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change, the GSW organized a high-level event in July 2016 in New York, US. The event discussed the ways in which global thematic reviews that focus on natural resources, such as land and soil, can support integrated and inclusive implementation of the Sustainable Development Goals (SDGs).

Focus on Africa: African stakeholders at GSW 2015 expressed a strong interest in creating a regional platform for sustainable soil management and responsible land governance in Africa. In response, the GSW organized the first African Soil Seminar in Nairobi, Kenya, from 28-30 November 2016 under the theme “Soil Restoration for Achieving the 2063 and 2030 Agendas in Africa: Linking Global Ambitions to Local Needs.” The event took place against a backdrop of increased pressure on land due to a growing population, increased climate variability and resource degradation trends. Discussions sought to contribute

to improved coordination, exchange and mutual learning by diverse African and international initiatives and programmes that work to restore and rehabilitate degraded soils to improve the livelihoods of the rural poor, and the health of humans and ecosystems.

UN Decade on Ecosystem Restoration: On 1 March 2019, the UN General Assembly proclaimed 2021-2030 as the Decade on Ecosystem Restoration. The Decade calls for commitments by the international community to achieve transformational ecosystem restoration and addresses all ecosystems. On land, this involves the restoration of at least 350 million hectares of degraded landscapes by 2030.

Report of the Session

This event was divided into three subsessions.

Soils and the UN Decade on Ecosystem Restoration

This session was facilitated by Alexander Müller, Managing Director, TMG Research, who underscored that soils are fundamental for ecosystem restoration. He stated small-scale farmers must become stewards of ecosystem restoration to ensure food security, improved livelihoods, better natural resource management and increased resilience.

Annalisa Mauro, Global Network Coordinator, International Land Coalition, highlighted that ecosystem restoration should use rights-based approaches, outlining her organization's efforts to assist communities in legalizing their land tenure and monitoring their contributions to restoration targets.

Susan Chomba, Project Manager, World Agroforestry (ICRAF), said projects operating at the landscape scale can embrace the complexities of ecosystem restoration. She emphasized the importance of soil for sustainable land management, stating that soil restoration contributes to climate change mitigation, and increases both agricultural productivity and economic activity. She underscored the role of technology for smallholder farmers to access finance and other assistance.

Martin Yemefack, Intergovernmental Technical Panel on Soils, GSP, through a statement read by Jes Weigelt, TMG Research, said that to preserve soil productivity in smallholder farms, community-based development projects should integrate, among others, the agriculture, education and health sectors.



Susan Chomba, Project Manager, ICRAF



Amy Duchelle, Team Leader, Climate Change, Energy and Low-Carbon Development, CIFOR

During the ensuing discussion, on ensuring restoration initiatives do not reinforce inequalities, Mauro said securing land tenure, legal rights and legal identity is crucial. He explained that progress will not be made to make societies resilient and sustainable without the recognition of basic rights. Chomba said the COVID-19 global pandemic provided a unique opportunity to “build back better” and that actions must be transformative. She called for making a strong case for the economic, livelihood and social benefits of ecosystem restoration, and not focusing solely on biodiversity.

Participants also highlighted, *inter alia*, that distributing benefits based on land ownership are likely to exclude communities in need, and communities are not homogenous units.

Tim Christophersen, Head of Nature for Climate Branch, UNEP, providing closing remarks, stressed that a change in social norms is required to achieve a successful UN Decade on Ecosystem Restoration. He said tackling existing vested interests in land degradation, such as those invested in fossil fuels, is one of the barriers to success. He reiterated technology’s role for accessing finance and other assistance, saying that “if we get this right, smallholder farmers can absolutely contribute to achieving, at least, the goals of the Bonn Challenge.”

In conclusion, Müller said the UN Decade on Ecosystem Restoration must be successful to combat climate change.

Soil Organic Carbon: How Can Smallholder Farming Communities Benefit from Carbon Sequestration Projects?

This session, facilitated by Sarah D’haen, SEWOH Lab project coordinator, TMG Research, discussed insights from REDD+ initiatives and the ways in which they can inform SOC projects, including the compensation of small-scale land managers for SOC.

Amy Duchelle, Team Leader, Climate Change, Energy and Low-Carbon Development, Center for International Forestry Research (CIFOR), provided an overview of CIFOR’s work evaluating the impact of local REDD+ initiatives. She stated that although the expected reversal in deforestation had not happened, intermediate benefits, such as the improvement in land degradation, had been realized. She highlighted that including

livelihood incentives in project design generally resulted in better results. She underscored two key challenges emerging from CIFOR’s analysis as land tenure and gender equity.

Leigh Winowiecki, Soil and Land Health Leader, ICRAF, noted sustainable land management can improve soil health. She explained that data analytics combining remote sensing with field surveys can produce accurate and relevant maps with soil health indicators to smallholders, farmers and governments at the scale necessary to make further interventions in soil management.

Amos Wekesa, Environment and Climate Change Advisor, Vi Agroforestry, presented on the Kenya Agricultural Carbon Project, saying that the project targeted approximately 30,000 smallholder farms to implement sustainable land management practices. Challenges in implementation, he noted, include high running and management costs of projects, and that farmers may be more interested in crop yields rather than carbon credits. He urged involving local communities in projects to ensure the longevity of sustainable land management practices beyond the lifetime of the project.

Bruno St-Jacques, Research Associate, TMG Research, presented on the carbon sequestration project chain, asking participants to share lessons learned and challenges and solutions that can be experienced along the chain. Referring to some of the challenges raised by participants, he cited the need to develop low-cost certification and verification systems that are affordable for smallholder farmers in rural areas.

Responding to questions from the audience and the moderator, Winowiecki stated that to build soil health, long-term commitment from farmers is needed, and projects should consider phased-in benefits over their life span. Duchelle said evidence from REDD+ projects showed that genuine participation by local smallholders in project design and implementation is crucial to ensuring benefits and continued engagement with these kinds of initiatives.

Other topics discussed included ways to address gender equality, setting baselines for monitoring, and capacity building and the role of extension services in facilitating smallholder engagement in SOC projects.

Measuring Progress on Gender and Land Tenure

This session was moderated by Jes Weigelt, Head of Programmes, TMG Research, who stated that including measures in soil and land restoration programmes to enhance women’s



Bruno St-Jacques, Research Associate, TMG Research



Marcos Montoiro, NGO and Civil Society Liaison Officer, UNCCD Secretariat

tenure security, specifically, and smallholder farmers, more generally, is possible. He stressed the need for social innovations that secure women's land rights while taking into account available capacities at the local level.

Violet Shivutse, Founder and Coordinator, Shibuye Community Health Workers, Kenya, said her organization has partnered with others to assess how women can access land to participate in projects on, among others, soil management and climate change issues. She noted efforts to sensitize local authorities on these issues and the development of guidelines for women and youth to participate and engage in land leasing.

Larissa Stiem-Bhatia, Project Coordinator, TMG Research, presented on work undertaken by TMG and partners in Burkina Faso to secure women's land tenure. She highlighted the process developed to drive this social innovation, which will be different for each community. She detailed steps in the process, including: consultation; awareness raising; negotiation of tenure agreements; georeferencing of transferred plots; and validation of tenure agreements. She underscored key factors for success include a trusted and neutral process facilitator, consensus building in the community, a strong sense of ownership in the community, and respecting local customs.

Marcos Montoiro, NGO and Civil Society Liaison Officer, UNCCD Secretariat, underscored the role of civil society in highlighting land tenure's importance for successful land restoration and preventing soil degradation in the context of the UNCCD. He noted that UNCCD COP 14 requested the Secretariat to address the ways in which the Voluntary Guidelines on Responsible Land Governance could be incorporated for achieving Land Degradation Neutrality.

During the discussion, Stiem-Bhatia stressed that scaling up projects is not the same as replicating projects, as social innovation must be context specific. On which indicators to use to measure gender and land tenure, Shivutse noted her organization uses indicators such as youth involvement, land conflict reduction, land governance improvement, and the uptake of an example application form for land leases to assess progress.

Providing some commentary on the session topic, Sylvia Kuria, Founder, Sylvia's Basket, Kenya, highlighted her kitchen garden model to increase women's involvement in agricultural activities, saying that starting small allows "you to take care of the soil now and the soil will continue to reward you down the line."

Loren Cardeli, Founder and President, A Growing Culture, stated that his organization is an information repository to enable the exchange of success stories, failures and innovation among smallholder farmers. He underscored the role of women in this regard, saying they are negatively affected by land tenure, access to credit, and access to information.

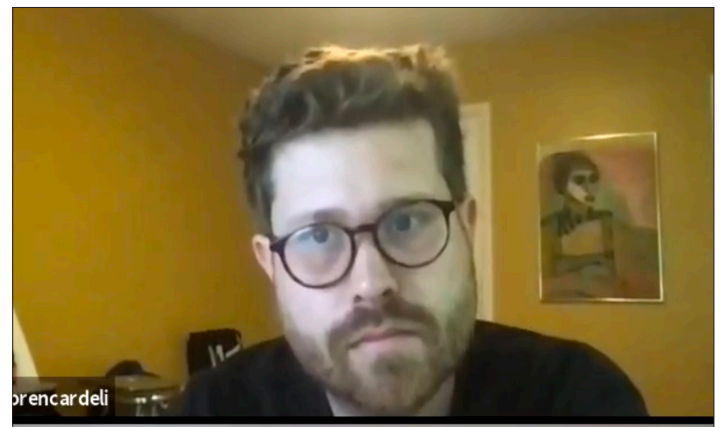
In closing, panelists called for: supporting local civil society organizations as they are key to facilitating social innovation; showcasing bottom-up approaches that make changes possible; and working to bring together the knowledge, expertise and experiences of all practitioners to achieve success.

Upcoming Meetings

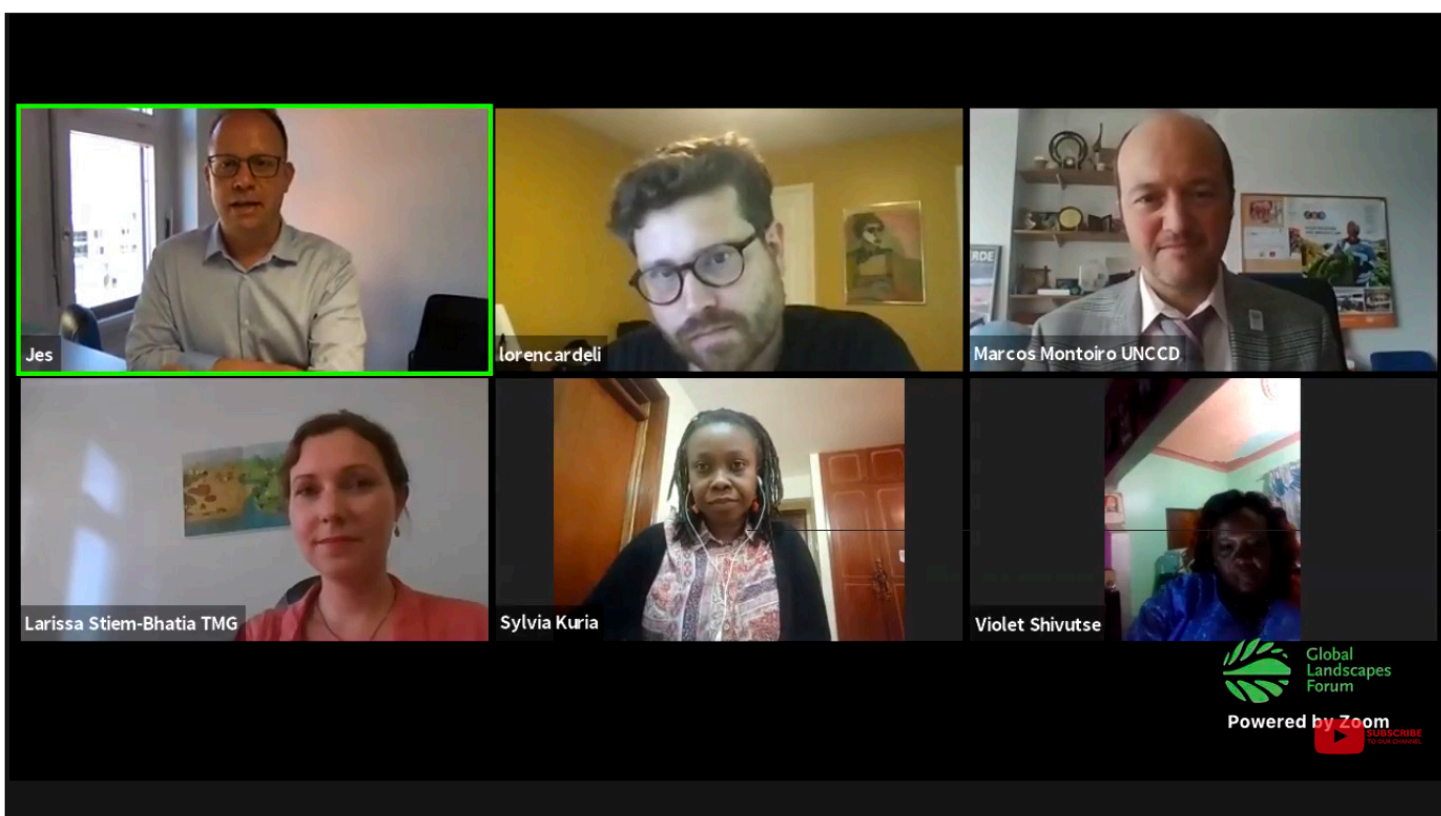
Adaptation Futures 2020: The sixth International Climate Change Adaptation Conference – Adaptation Futures 2020 – will convene on the theme “Accelerating Adaptation Action and Knowledge to Support Action,” with a particular focus on Asia. Originally scheduled to take place from 27-30 April, the dates were changed due to the COVID-19 pandemic. **dates:** 29 September - 1 October 2020 **location:** New Delhi, India **www:** <http://adaptationfutures2020.in/>

47th Session of the Committee on World Food Security (CFS 47): The proposed theme for CFS 47 is “Transforming Food Systems to End All Forms of Malnutrition” in recognition of the upcoming Food Systems Summit in 2021. The meeting is expected to, among other things, take decisions on Agroecological and Other Innovative Approaches and on the adoption and uptake of the Voluntary Guidelines on Food Systems and Nutrition. A global thematic event will convene on a Framework for Action on Food Security and Nutrition in Protracted Crises. **dates:** 12-16 October 2020 (TBC) **venue:** FAO Headquarters **location:** Rome, Italy **contact:** CFS Secretariat **www:** <http://www.fao.org/cfs/en/>; http://www.fao.org/fileadmin/templates/cfs/Docs1920/BurAG/2020_01_28/CFS_BurAG_2020_01_28_01a_CFS_47_Agendas_Timetable_Theme.pdf

4th International Conference on Global Food Security: This conference will meet under the theme “Achieving local and global food security: At what costs?” It will address food security at all spatial levels from local to global, and from an interdisciplinary and systemic food systems perspective. The



Loren Cardeli, Founder and President, A Growing Culture



Participants during the closing session

objective is to better understand environmental, nutritional, agricultural, demographic, socio-economic, political, technological, and institutional drivers, costs and outcomes of current and future food security. **dates:** 6-9 December 2020 (TBC) **location:** Montpellier, France **www:** <http://www.globalfoodsecurityconference.com/>

IUCN World Conservation Congress: On 3 April 2020, IUCN announced that, in light of the ongoing COVID-19 pandemic, the IUCN World Conservation Congress 2020 would be postponed until 7-15 January 2021. The event was originally scheduled for 11-19 June 2020. **dates:** 7-15 January 2021 **location:** Marseille, Provence-Alpes-Cote D'Azur, France **www:** <https://www.iucncongress2020.org/>

Climate Adaptation Summit 2021: The online Climate Adaptation Summit, hosted by the Netherlands, will be a state of the art, climate-neutral virtual conference, streamed worldwide over 24 hours with online anchoring events from cities around the world. It will build on the work of the Global Commission on Adaptation, delivering enhanced ambition, accelerated actions, and tangible solutions to the climate crisis. **date:** 25 January 2021 **location:** worldwide **www:** <https://climateadaptationsummit.gca.org/>

Global Symposium on Soil Biodiversity: This Symposium will review the state of knowledge on soil biodiversity and ecosystem services, the sustainable use and conservation of soil biodiversity, and the contributions of soil organisms to the SDGs. The Symposium was originally scheduled to take place from 10-12 March 2020. However, due to the COVID-19 pandemic,

it was postponed until 2-4 February 2021. **dates:** 2-4 February 2021 **location:** Rome, Italy **www:** <http://www.fao.org/global-soil-partnership/resources/highlights/detail/en/c/1183872/>

2021 UN Food Systems Summit: In 2021, the UN Secretary-General will host a Food Systems Summit to maximize the co-benefits of a food systems approach across the entire 2030 Agenda for Sustainable Development and meet the challenges of climate change. As a key contribution to the Decade of Action to deliver the SDGs, the Food Systems Summit aims to generate momentum, expand knowledge, and share experiences and approaches worldwide to help countries and stakeholders tap the benefits of food systems for all people. **date:** TBD **location:** TBD **www:** <http://www.fao.org/3/nc131en/nc131en.pdf>

Glossary

CIFOR	Center for International Forestry Research
COP	Conference of the Parties
GSW	Global Soil Week
GSP	Global Soil Partnership
ICRAF	World Agroforestry
SDGs	Sustainable Development Goals
SOC	Soil organic carbon
UNCCD	UN Convention to Combat Desertification
UNEP	UN Environment Programme