**Session Proposal**

# Session Title

# Sustainable Management and Restoration of Black Soils: Global Experiences and Actions

# Session Organizers

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# Session Description

Black soils are vital for global food security and environmental sustainability due to their exceptional fertility and high organic carbon content. Despite their importance, black soils are under threat from erosion, compaction, nutrient depletion, and climate change. The International Network of Black Soils (INBS), established by FAO under the Global Soil Partnership, unites countries and experts to promote the sustainable management, restoration, and monitoring of black soils globally.

This session aims to showcase collaborative scientific advancements and policy efforts led by INBS members, sharing success stories and technical solutions from diverse regions of the world and countries, including China, Russia, Canada, Africa, Brazil, and Argentina. It will highlight tools for soil monitoring, organic carbon management, sustainable farming practices, and policy integration.
By convening global experts and stakeholders, the session will promote peer learning, highlight INBS achievements, and encourage cross-sectoral collaboration to reverse black soil degradation and enhance their role in food systems and climate resilience.

# Format

Oral presentations, panel discussions, expert Q&A

# Proposed Speakers

1. Miguel Taboada, National Institute of Agricultural Technology (INTA), Argentina: Dr. Taboada provides insights from South American black soil zones, focusing on sustainable agriculture, carbon sequestration, and integrated landscape restoration. Chair of the International Network of Black Soils (INBS)
2. Pavel Krasilnikov, Lomonosov Moscow State University, Russian Federation: Dr. Krasilnikov has contributed extensively to global soil classification, soil degradation assessment, and black soil ecosystem services under INBS and FAO-led initiatives.
3. Ivan Vasenev, Russian State Agrarian University & Moscow Timiryazev Agricultural Academy: Dr. Vasenev specializes in urban and agricultural black soil systems in Russia, emphasizing land-use change and carbon dynamics. His long-standing research supports climate-smart practices and regional policy recommendations under INBS.
4. Lúcia Helena Cunha dos Anjos, Federal Rural University of Rio de Janeiro, Brazil: Prof. Anjos is an expert in tropical black soils (Amazon Dark Earths) and community-based soil conservation. She brings a Latin American perspective to the global dialogue on black soil preservation and knowledge exchange.
5. Yuxin Tong, Global Soil Partnership, FAO: As technical lead of INBS, Ms. Tong coordinates global activities, facilitates country collaboration, and supports black soil policy development and knowledge dissemination within FAO.
6. Ganlin ZHANG, Institute of Soil Science/Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences. Dr. Zhang is a leading expert in the field of Soil Genesis and Earth Surface System Science. Dr. Zhang led a national soil research campaign to catalogue soil types in China at the finest resolution of soil series, and made a clear picture of soil resource classification and conservation in China towards social-economic sustainability. His work is recognized by scientific community and government with the National Award (2005 and 2024). Dr. Zhang has been long devoted for professional service of scientific community including, 1st Vice-Chair of the Commission of Soils in Space and Time (2022-2026); Chair of Soil Genesis Commission of International Union of Soil Sciences (2010–2014); Leader of the GlobalSoilMap.net’s East Asian Node; Member of FAO’s Intergovernmental Technical Panel of Soil. Dr. Zhang has published more than 460 papers in academic journals (205 in SCI-indexed journals), including Science, PNAS, NSR, Science Bulletin, with a total of over 19,000 citations from others. He has also published 6 monographs, served as chief editor of the 30-volume “Soil Series of China", and holds 14 granted patents (including 3 PCT patents).
7. Xiaobing LIU, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences. Dr. Liu is a leading expert in the field of Black Soil Conservation and Utilization. He initiated the World Mollisols Association (WMA) being officially aligned with Alliance of International Science Organization. Dr. Liu serves as the President of WMA and member of World Soybean Research Conference Continuing Committee. Dr. Liu made significant contributions to yield formation in crops, obstacles in soybean monoculture and proposed the generalized principle underlying the relationship between soil erosion and crop productivity. Prof. Dr. Liu has authorized over 230 publications, 4 patents and 3 monographs.
8. Aizhen LIANG. Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences. Dr. Liang is a leading expert in the field of soil carbon cycling and conservation tillage in Chinese Mollisol. She has won the Highest Prize at National Level for Women as a Scientist (2024) and received the Outstanding Science and Technology Achievement Prize of CAS (2024) as a key contributor. Dr. Liang has led long-term field experiments over 20 years for in situ monitoring soil organic carbon (SOC) dynamics and she has made great contribution on conservation tillage-centric SOC fractionation and evolution. Dr. Liang also made great progress in trans-disciplinary mechanisms of SOC sequestration by soil structure and soil microbes under conservation tillage. Of particular importance is her contribution to transform scientific knowledge to practical application with a 667-ha agriculture field for high-tech demonstration towards better soil fertility and higher crop production in Black soils. She published over 180 scientific papers.
9. Georges Martial Ndzana, soil scientist and climate expert, currently work as the Senior Lecturer at the faculty of Agronomy of the University of Dschang, Cameroon, a role that I have held for five years now. As a Senior Lecturer, I teach and do research and supervise graduate and undergraduate students. I am also currently occupied a position of Chair of International Network of Soil Fertility and Fertilizer at UN-FAO and soil expert of the UN-FAO since 2022. I am leading 5 international projects including two black soil projects. I have more than 30 peer review papers in soil Science.