**Session Proposal**

# Session Title

# Fostering International Collaboration in Soil Science

# Session Organizers

1. **Prof. Dr. Wang Fang**, Institute of Soil Science, Chinese Academy of Sciences; IAEA, , wangfang@issas.ac.cn, ***Primary contact person*** (**Yuhao Fu**, yhfu@issas.ac.cn)
2. **Prof. Dr. Wei Zhang,** Michigan State University, weizhang@smu.edu
3. **Prof. Dr. Martin Elsner,** Technical University of Munich, m.elsner@tum.de
4. **Prof. Dr. Carlos Bezuidenhout,** North-West University, Carlos.Bezuidenhout@nwu.ac.za

# Session Description

Soils are fundamental to addressing critical environmental challenges, including climate change, food security, and ecosystem restoration. However, international soil research has often been marred by "helicopter research," where scientists from wealthier nations collect soil samples from less-developed countries, conduct analyses abroad, and publish results with minimal involvement of local researchers. This practice not only limits capacity-building in local institutions but also hinders the development of context-specific solutions essential for sustainable soil management.

This session will explore pathways to fostering ethical, inclusive, and mutually beneficial international collaborations in soil science. It will highlight strategies to ensure that research conducted in developing regions equitably involves local scientists, respects indigenous knowledge and strengthens local research capacities.

**Discussion Topics:**

* **Redefining Research Ethics:** Addressing the ethical and scientific implications of helicopter research and promoting fair collaboration.
* **Capacity Building & Knowledge Sharing:** Strengthening local research institutions, training programs, and infrastructure for in-country soil analysis.
* **Equitable Partnerships:** Developing models for inclusive research collaboration that ensure local scientists play leading roles in study design, execution, and publication.
* **Policy & Institutional Frameworks:** Encouraging funding agencies, universities, and journals to support ethical international research partnerships.

By fostering meaningful international collaboration, we can drive more impactful, contextually relevant soil research while empowering scientists worldwide to contribute to sustainable soil management and global environmental solutions.

1. **Relevance**

This session aligns with the World Congress of Soil Science 2026 (WCSS2026) theme, **“Soil and the Shared Future for Mankind,”** by promoting ethical, inclusive, and collaborative soil science research. Addressing helicopter research is essential to ensuring that all nations, especially those most affected by soil degradation, benefit from scientific advancements. By fostering equitable partnerships, strengthening local research capacity, and advocating for knowledge co-creation, this session contributes to sustainable soil management solutions that are globally just and scientifically robust. It highlights how fair collaboration drives innovation, enhances soil stewardship, and supports a truly shared future for mankind.

# Format

This session will include both a panel discussion and a roundtable discussion.

# Proposed Speakers

1. **Prof. Dr. Wulf Amelung**

**University of Bonn and Forschungszentrum Jülich GmbH,**

Head of the Department of Soil Science and Soil Ecology at the University of Bonn and Director of the Jülich Research Center for Agrosphere.

Collaborated with scientists from various countries to study soil health, investigate pollutant behavior in soil, and develop strategies for restoring degraded soils.

Email: wulf.amelung@uni-bonn.de

1. **Prof. Dr. Budiman Minasny**

**The University of Sydney**

Professor Minasny’s research in soil science focuses on understanding the causes and factors influencing soil distribution across space and time. He has developed innovative methodologies to explain soil dynamics within landscapes. Additionally, he is the first and corresponding author of Global Soil Science Research Collaboration in the 21st Century: Time to End Helicopter Research.

Email: budiman.minasny@sydney.edu.au

1. **Prof. Dr. Matthias C. Rillig**

**Freie Universität Berlin**

Specializing in soil ecology and global change biology, collaborating with researchers worldwide to enhance understanding of how global change drivers affect soil processes and biodiversity.

Email: rillig@zedat.fu-berlin.de

1. **Prof. Dr. ZHU Yongguan**

**Institute of Urban Environment, Chinese Academy of Sciences (CAS)**

Professor Zhu is an Academician of the Chinese Academy of Sciences. Professor Zhu obtained his PhD in environmental biology from Imperial College, London in 1998. He is currently the Director for Education/Internationalization of the Institute of Urban Environment, Chinese Academy of Sciences (CAS). Professor Zhu is a leader in taking multi-scale and multi-disciplinary approaches to soil and environmental problems, such as arsenic biogeochemistry and antimicrobial resistance.

Email: ygzhu@rcees.ac.cn

**More professors are to be added……………….**