**Session Proposal**

# **Session Title**

# "AI and Innovative Technologies for Research, Mapping, and Sustainable Management of Salt-Affected Soils".

# **Session Organizers**

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# **Session Description**

The session "AI and Innovative Technologies for Research, Mapping, and Sustainable Management of Salt-Affected Soils" delves into the challenges posed by salt-affected soils, which hinder agricultural productivity and ecosystem health worldwide. It highlights how cutting-edge technologies, particularly artificial intelligence, are revolutionizing approaches to understand, map, and manage these challenging landscapes.

Key topics include the use of AI for analyzing complex soil data, enabling precise identification and characterization of salt-affected areas. The session explores geospatial tools and remote sensing as well as proximal sensing technologies for efficient soil mapping, offering scalable solutions to monitor and visualize salinity levels over vast regions. Furthermore, it emphasizes sustainable strategies that integrate innovative practices, like predictive modeling, to prevent and mitigate the impact of soil salinity on agriculture, water resources, and biodiversity.

This session is highly relevant as it addresses global food security, environmental resilience, and climate change adaptation. Participants will gain insights into the latest scientific advancements, practical applications, and collaborative frameworks that empower stakeholders—from researchers to policymakers—to implement effective and sustainable solutions for managing salt-affected soils. By showcasing technology-driven approaches, the session underscores the potential to transform agriculture and environmental conservation in affected areas.

# **Format**

The session "AI and Innovative Technologies for Research, Mapping, and Sustainable Management of Salt-Affected Soils" will feature a dynamic mix of \*\*oral presentations\*\*, where experts will share their latest research and findings; \*\*panel discussions\*\*, offering diverse perspectives and collaborative insights, researchers and practitioners; and a \*\*possible workshop\*\*, providing a hands-on opportunity for participants to engage with innovative tools and technologies. This variety ensures an engaging and comprehensive exploration of solutions for salt-affected soils.

# **Proposed Speakers**

To be confirmed soon.