**Session Proposal**

# Session Title

Global status of salt-affected soils: the outcomes of the FAO’s report

# Session Organizers

**Organizers**: Global Soil Partnership of the FAO

**Contact persons**:

Maria Konyushkova, FAO, Global Soil Partnership secretariat, maria.konyushkova@fao.org, primary contact person

Jorge Batlle-Sales, Chair of the International Network of Salt-affected Soils (INSAS), Chair of the IUSS Commission 3.6 Salt-affected Soils, Jorge.Batlle@uv.es

# Session Description

Salt-affected soils, characterized by high soluble salts (saline) or exchangeable sodium (sodic), impact plant growth and occur globally, especially in arid and coastal regions. Salinization stems from natural causes (e.g. climate change, sea level rise) and human actions (e.g. poor irrigation practices, excessive water use). FAO’s Global Map of Salt-Affected Soils reveals that over 1 381 million hectares, 10.7 percent of global land, are affected. Increasing aridity and water demand amplify soil degradation risks, particularly in developing regions. Climate change and water scarcity threaten agricultural productivity, with substantial crop yield losses observed in saline areas. Halophytes and salt-tolerant crops provide a foundation for saline agriculture, yet many salt-affected soils remain unprotected and inadequately regulated. FAO’s INSAS (International Network of Salt-Affected Soils) underscores the need for updated data, harmonized salinity measurements, and sustainable management practices, with enhanced training and policy frameworks. Mitigation strategies like improved drainage, soil amendments, and the cultivation of salt-tolerant plants are recommended. Key recommendations include scaling sustainable practices, investing in salt-tolerant crop markets, improving data collection and water quality monitoring, conserving ecosystems, and fostering cross-sector collaboration. Such integrated efforts aim to boost food production and resilience in affected regions while protecting vital ecosystems.

This session is aimed to present the main outcomes of the global report to the scientific community of the Congress and discuss the research gaps innovations needed for sustainable management of salt-affected soils. The program will include the oral presentation of the main findings of the report at the global and regional levels followed by the panel discussion by the representatives of different regions of the world.

# Format

Oral presentations followed by the panel discussion

# Proposed Speakers

**Jorge Batlle-Sales**, Professor, Chair of the International Network of Salt-affected Soils (INSAS), Chair of the IUSS Commission 3.6 Salt-affected Soils. He is an expert on salt-affected soils. He has delivered numerous lectures, keynote presentations in conferences, seminars and courses worldwide, and has been very active in international cooperation. He will represent INSAS and IUSS Commission 3.6.

**Maria Konyushkova**, Dr, FAO, Global Soil Partnership secretariat, coordinator of the International Network of Salt-affected Soils (INSAS). She is an expert in salt-affected soils and sustainable soil management. She will represent the international organization (FAO).

**Edoardo Costantini**, Dr, International Union of Soil Sciences (IUSS), Past President. He is an agronomist with a specialization in Pedology and did research work on soil genesis, classification, mapping, and conservation in Europe, Asia, and Central and South America. He led over 30 projects mainly focused on sustainable soil management; soil restoration and conservation; soil mapping and geodatabases; land suitability for winegrape and other quality crops. He was a coordinating expert of the EIP-AGRI Focus Group on Soil salinization. He will represent European region.

**Sanjay Arora**, Dr, Vice-Chair of the IUSS Commission 3.6 Salt-affected Soils. He is an expert in irrigation, soil and water conservation, salinity, drought, salt tolerance, cropping systems and soil fertility. He will represent Asian region.

**Shuwen Hu**, Professor, expert in reclamation of salt-affected soils. He has established a team focusing on reclamation research. The team has established over 130 experimental stations in China. They reclaimed over 126,700 hectares of saline-alkaline lands.  He will represent a hosting country.

**Elke Noellemeyer**, Professor, Universidad Nacional de La Pampa, Argentina, International Union of Soil Sciences (IUSS), Chair of Commission 2.5 on Soil Chemical, Physical and Biological Interfacial Reactions. She is an expert in sustainable agricultural production systems, science policy interface and interdisciplinary networking. She will represent Latin American region.

**Shabbir Shahid**, Professor, Kuwait Institute for Scientific Research. He is a leading expert in soil salinity management. He has worked in applied agriculture projects in many countries (e.g., Pakistan, Kuwait, UAE, Qatar, Oman, Niger, Morocco, Jordan, Spain, and Syria). He is a prolific author with over 150 publications in peer reviewed refereed journals, proceedings, books and manuals. He will represent Near East and North African region.