**Session Proposal**

# Session Title

Soil health-Water-GHG Nexus for sustainable crop production in paddy soils

# Session Organizers

1. Mizuhiko NISHIDA\*

Chair, Paddy Soils Working Group

Tohoku University, Japan

mizuhiko.nishida.a2@tohoku.ac.jp

\*Primary contact person

1. Kazumichi FUJII

Fukushima Institute for Research, Education and Innovation, Japan

fjkazumichi@gmail.com

# Session Description

More than half of the world's population relies on rice as a staple food. Under growing population and changing climate, paddy soils play an increasingly important role in sustaining food production in the world. The interconnected dynamics of soil health, water management, and greenhouse gas (GHG) emissions are essential to achieving sustainable agricultural practices, particularly in paddy soils. This session aims to explore innovative strategies and integrated approaches to enhance soil health while optimizing water use and mitigating GHG emissions in rice-based cropping systems. The session will bring together experts to discuss advances in soil management practices, water-saving technologies, GHG reduction techniques, and approaches to sustainable crop production. By addressing the synergies and trade-offs within this nexus, the session will provide actionable insights for soil scientists, policymakers, and practitioners dedicated to ensuring food security, environmental resilience, and the sustainable management of paddy soils.

# Format

Oral presentations

(If there are many speakers, divide the session into several subgroups)

# Proposed Speakers

1. Junta Yanai. Kyoto Prefectural University, Japan. A leading expert of the soil fertility and soil health of paddy soils in Asian countries
2. Yan Xiaoyuan\*. Institute of Soil Science, Chinese Academy of Sciences, China. A leading expert of GHG emission from paddy soils
3. Pil Joo Kim\*. Gyeongsang National University, South Korea. A leading expert of soil management and GHG in paddy soils
4. Kazumichi Fujii. Fukushima Institute for Research, Education and Innovation, Japan. A leading expert of restoration of paddy soils in Fukushima, Japan
5. Zhang Ganlin\*. Chinese Academy of Sciences, China. A leading expert of paddy soil evolution

\*Not yet contacted