**Session Proposal**

# Session

Rethinking the planning of soil and water management under climate change

# Session Organizers

Lillian Øygarden. Chair of IUSS commission 3.2 Soil and water conservation. [Lillian.oygarden@nibio.no](mailto:Lillian.oygarden@nibio.no).

Dorota Dec. Vice chair of commission 3.2 Soil and water conservation. [Dorota.dec@uach.ch](mailto:Dorota.dec@uach.ch)

# Session Description

Climate change brings changes in precipitation, rainfall, frozen soils, snowmelt conditions, drought periods and extreme weather that affect production, runoff and hydrological pathways in the agricultural landscape. These changes affect soil functions and soil health that further influence the possibilities of crop production related to water management. Also, runoff with losses of nutrients and erosion processes, put the pressures on the need of efficient measures and especially for site specific management.

This session invite for a broad focus on how to manage soil-water- in the agricultural landscape- under changing conditions which brings the need for site-specific/efficient water management and need of rethinking the planning of soil and water management.

Increase of temperature and decrease of rainfall will increase the need of water application (irrigation), also accelerated by population growth and soil loss due to erosion. We invite contributions about use of modern tools such as sensors, new techniques, maps of spatial and/or temporal distribution of specific soil properties. Proper management of specific information and associated parameters adjustment require linking to previous knowledge about soil properties (physical, hydraulic, EVP) and their influence on crop production/ water availability for plants.

The session welcome focus on management, physical, hydraulic, and chemical properties and their influence on water conservation, soil health, and factors that influence crop yield. Plants draw water from the soil and we invite for presentations that focus on conditions especially for plant roots and their development under wet and dry conditions.

Extreme weather brings challenges with too wet soil conditions, flooding, runoff, serious erosion events and losses of nutrients. Seasonal variations give special challenges and need of solutions. We invite for contributions which address the challenges and demonstrate tools, measures and solutions to reduce such risks.

# Format

The session is planned with introduction of a key note speaker.

We invite abstracts for oral presentations as well as a poster session.

After the oral presentations there will be general discussion

# Proposed Speakers

Invited speaker for a key note presentation is not confirmed- and will be included later.