

SMACUMED International Conference on Water-Energy-Food-Ecosystem Nexus in the Mediterranean Region (WEFE 2023)

Wednesday, November 15, 2023 - Friday, November 17, 2023

Marrakesh, Morocco

Scientific Program

Water

This track focuses on the relationship between water and the other three other dimensions (Energy, Food, and Ecosystem). It examines water availability, water quality, water management, and water-related challenges in the context of food and energy production and ecosystem sustainability. Issues such as water scarcity, water pollution, irrigation practices, and water use efficiency fall within this track.

Food

The food track emphasizes the interplay between water and food production. It explores the water requirements for agricultural activities, including irrigation, livestock farming, and aquaculture. This track also considers food security, sustainable agricultural practices, crop-water productivity, and the impact of water availability and quality on food production.

Energy

The energy track focuses on the water requirements and impacts of energy production and consumption. It examines the water-energy nexus by considering the water needed for various energy sources, such as thermal power plants, hydropower, hydrogen production, bioenergy, and fossil fuel extraction. This track also addresses the impact of energy production on water resources, including water pollution from energy activities. This track highlights also the relevance of renewable energy to the nexus discussions.

Agriculture

This track includes :

- Sustainable intensification of food production systems
- Harvest and Post-Harvest Technologies for Reducing Food Losses
- Fertilization and Soil Management
- Agroecology and Sustainable Agriculture
- Smart farming systems
- Global and Local Analysis of Food Security

Environment

The environmental track recognizes the importance of the natural environment in the Water-Food-Energy-Ecosystem Nexus. It considers the ecological aspects, such as biodiversity, ecosystem services, land use, and climate change, and how these elements influence water availability, food production, and energy generation. Furthermore, Water use, whether for food or energy production, has significant impacts on ecosystems and the wider environment.

Water-Energy-Food-Ecosystem Nexus

The nexus track highlights the interdependence of water, energy and food security and ecosystems – water, soil, and land – that underpin that security. This track explores context-specific solutions based on different levels of interventions to achieve long-term economic, environmental, and social goals.

PRIMA Project

Special sessions dedicated to presenting results from different PRIMA projects will be organized under this track.