Session title

Processes, Tools and Advancements in Coastal Hydrogeology

Description

The dynamic interaction of terrestrial and marine processes in the land-sea transition zone affects coastal groundwater systems, leading to results in complex flow, mixing, and solute transport behaviours. In many water-scarce coastal areas, these systems are often a vital and unique freshwater resource that sustains human well-being, economic activity, and ecosystem functioning. This session aims to promote the knowledge of coastal hydrogeological systems by combining theoretical, experimental, and observational methods. Contributions that advance conceptual models, quantitative analysis, and methodological developments related to coastal system dynamics and responses to natural or anthropogenic stress are invited. While the primary focus is on fundamental processes and system understanding, case studies demonstrating the transformation of scientific information into applications that promote resilient and sustainable management of coastal groundwater resources should be highlighted.

Keywords

Coastal groundwater, Groundwater-seawater interaction, Submarine groundwater discharge, Sustainable groundwater management

Session Chair

Rezwana Binte Delwar

Conveners

Stephan L. Seibert

Nils Moosdorf

Maria Teresa Condesso de Melo

Brijesh Kumar Yadav

Maurizio Polemio