

ICWRER conference, Koblenz

Session abstract

Title:

Interdisciplinary contributions of regional sea level variations

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Scope:

The inherent physical and geodetic contributions of regional sea level changes are addressed. Regional sea level changes are far away to be spatially uniform. Patterns may originate from the baroclinic component (density change) due to surface fluxes of heat, freshwater or the barotropic component due to wind stress or tidal motions. But also analysis of potential fields, e.g. the Earth's gravity is becoming important for the sea level analysis on the regional scale. The geoid, the local vertical reference system, its changes and land subsidence or rise must be considered in an analysis of regional sea levels. Space geodetic techniques deliver time series describing changes of the surface geometry. Glacial isostatic adjustment (GIA) contributes substantially to related mass-transport phenomena, such as oceanographic changes. Also geological records could be useful to interpret the results of recent observations.