

## **General Theme 6**

### **6.13**

Most of the world's major river deltas and related alluvial coastal plain are affected by subsidence. The main effects of subsidence include aquifer salinization, inundation of lowlands and coastal erosion, increased vulnerability to flooding and storm surges. The risk of rapid coastal subsidence to infrastructure and economy is also very significant.

Subsidence rate is primarily controlled by regional and local tectonic regimes but the impact of sediment compaction and consolidation cannot be ignored. Research on that topic has mostly focused on measurement of compaction rates in the shallow subsurface although little data is available for the evaluation of compaction rates over the entire Holocene succession, mostly characterized by sands, silts, clays and peats compacting under their own weight. Even after efficient primary consolidation (due to water extraction for the agricultural and industrial uses, among others), soil deformations can still occur due to creep and will result in an additional ground vertical displacement.

This session aims to explore the causes and consequences of coastal subsidence by taking into account the variety of independent subsidence drivers and focusing on the role of the sedimentary architecture and the related geotechnical characteristics of coastal settings.

We encourage studies addressing a wide range of spatial and temporal scales and applying state of the art methodologies. Papers on interdisciplinary studies are strongly encouraged as they provide the basis for a sustainable management.