Here, we present preliminary results of a comprehensive geomorphological and geological study that interprets the innermost part of the Mekong Delta as a palaeo-coastal lowland environment rather than as a prograding sediment body. We propose that deep bays might have followed the morphostructure of river valleys at the particular time of early settlement and salt-water intrusion might even have amplified these marine influences deeply into the hinterland. However, main problem of this study is the very low preservation potential of thin-sheeted regressive deposits of the minor late Holocene sea-level lowering.

The architecture of the submarine Ganges-Brahmaputra delta results from high-resolution seismic and sediment echosounder surveys

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The submarine Ganges and Brahmaputra Delta plays an important role in the source to sink system Himalaya-Bengal Fan by connecting the Ganges and Brahmaputra rivers, which drain the Himalayas, with the largest submarine fan on Earth. Recently around one third of the delivered sediments are transported to the deep sea fan, whereas the other two third remains in the subaerial and the submarine delta. This huge amount of sediment is essential to stabilize the coast line, because the coastal zone is affected by a strong subsidence. It is obvious, that this sensitive balance between subsidence and sediment input is strongly influenced by climatic and sea level changes. To improve our understanding of this process, it is reasonable to study the development of the submarine delta under the influence of sea level changes in the past. The submarine Ganges Brahmaputra Delta was the target of three expeditions with the German Research Vessel □Sonne□ in 1993 (SO93), 1997 (SO126) and 2006 (SO188), carried out in cooperation between the BGR (Hannover, Germany) and the University of Bremen (Germany). During all three cruises sediment echosounder Parasound data were collected, whereby several profiles from 1993 or 1997 were revisited in 2006 to image directly the modern accumulation of sediments in the delta. As major part of the expedition in 2006, high-resolution multi channel seismic data were gathered on long overview lines and on detailed local surveys located on the eastern and western part of the delta. This multi-frequency seismo-acoustic data set allows now to study the delta in different vertical resolutions, i.e. on different time scales, from the head of the shelf canyon □Swatch of No Ground□ to the eastern part of the shelf. Over the whole study areas the submarine delta shows the typical clinoform structure, build on a distinct erosive surface probably representing the transgressive flooding. Below this surface the low stand Ganges Delta in the west and the Brahmaputra estuary system in the east could be identified. The clinoform structure itself could be separated into subunits, which maybe images changing of sea level rise. As important structural feature acoustically transparent units are found within the clinoform. These units are interpreted as homogeneous sediments, resulting from mass-wasting processes or in-situ homogenising processes. Both processes maybe triggered by earthquakes or strong storm surges. However, mapping shows that shelf wide events must have caused them and volume calculations reveals that major parts of the submarine delta deposits are affected by these processes.

Two changes of delta front; a case study of the Yahagi delta, central Japan

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Depositional history of delta was investigated by using radiocarbon-dated boring cores from the Yahagi delta (Nishimikawa plain), Central Japan. Especially, historical change of gradient, thickness, and grain-size distribution of the delta front and sediment discharge of the Yahagi River were discussed.
The latest Pleistocene to Holocene sequence in the Yahagi delta is interpreted as incised-valley fill system formed after Last Glacial and subdivided into five sedimentary facies, facies A (fluvial), facies B (estuary), facies C (prodelta), facies D (delta front), and facies E (tidal flat). In main axis of the incised valley, facies A, facies B, facies C, facies D, and facies A are deposited, in ascending order. In the western area of the valley,