

Stratigraphy and sedimentary system of the Alluvium in Mekong River Delta, Vietnam

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The depositional system of Mekong River Delta was reconstructed on the basis of analysis of sedimentary facies, diatom, foraminifer, and chemical composition, and dating of shell fragments, woods, and quartz grains. Stratigraphical and environmental gap was not recognized in the late Pleistocene to Holocene sequence of the Mekong River Delta.

The evolution of the Mekong River Delta is summarized as followings.

1. A deep valley with 50 m in depth was incised the basement including middle Pleistocene sediments in the southeast part of the delta at the last glacial stage.

2. Late Pleistocene to lower Holocene fluvial and estuarine sediments were deposited in this valley as the sea-level rises.

3. The wide shallow sea covered the whole area of present delta extended to Phnom Penh, Cambodia at the maximum transgression stage about 7 to 6 ky.BP.

4. The fluvial plain was formed in the present upper delta area by progradation of huge clastic sediments at the high stand of sea-level before 4 to 3 ky.BP.. Major depositional system is tide-dominated.

5. After 3 ky.BP. the progradation rate was slow down, and the strand plain was developed in the present lower delta area. A depositional system of this stage is considered to be mixed tide and wave processes.

Sand dune and relict beach ridges characterized the strand plain have been analyzed sedimentologically. Geomorphological and sedimentological processes have to been analyzed synthetically for an elucidation of depositional system of the Alluvium delta.