

## Latest Pleistocene-Holocene sequence in the mega-deltas in Asia

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A delta, which is a low-lying area found at the mouth of a river, is an important feature of coastal topography. In particular, large rivers form huge deltas in South, Southeast, and East Asia: e.g., the Indus, Ganges-Brahmaputra, Irrawagi, Chao Phraya, Mekong, Song Hong (Red River), Zhujiang (Pearl River), Changjiang (Yangtze River), and Huanghe (Yellow River) deltas. More than 50% of the world's population lives in Asia and most of Asia's population lives in deltaic areas. Deltaic lowlands in Asia are also important to the study of sedimentology and global sediment flux. Rivers in southern Asia and Oceania contribute about 70% to 80% of the world's sediment flux from the land to the ocean. Large rivers in Asia contribute about 40% to 50%, and small rivers in mountainous Oceania contribute 20% to 30% of the world's flux. Deposits of these huge sediment discharges have formed mega-deltas during the last 6000 years.

Most Asian deltas are located along tide-dominated coasts. The exceptions are the Huanghe delta, which is on a wave-dominated coast, and the Chaophraya delta, which is on a low-energy coast. Mean tidal ranges are more than 2 m, with a maximum range exceeding 4 m. Today's wide delta plains, which formed mostly over the last 6000 years, display a variety of evolutionary styles.

Incised-valley sequence since the LGM consists of fluvial, estuarine and deltaic sediments in ascending order. Its maximum thickness is 20-30 m for the Huanghe and Chaophraya and more than 70 m for the Changjiang, Song Hong, and Mekong. Stacking patterns of depositional systems and their facies are controlled by post-glacial sea-level changes.