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Along-shore and Cross-shore Clinoforms Developed Over The River-Dominated Asian Margins

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Extensive geological and geophysical surveys over the Asian river-dominated sea margins indicate that many Asian rivers have developed largest subaqueous deltas, with asymmetrical prodelta lobes, and elongate or detached masses of sediment. For example, besides the large proximal delta plains near their river mouths, the Yangtze River sediment is transported ~800 km into the Taiwan Strait, and Yellow River sediment is deposited more than 700 km into the south Yellow Sea. And both the systems have developed a 40-m thick distal mud depocenter. Near its distributary river mouths, the Mekong River has formed a classic sigmoidal cross-shelf clinoform, up to 15 m thick, with topset, foreset and bottomset facies, but constrained to water depths of <20 m. Parallel to shore, the Mekong-derived sediment has extended >250 km southwestward to the tip of the Ca Mau Peninsula, forming a distal mud depocenter up to 22 m thick, and extending into the Gulf of Thailand. Other major Asian river systems, like the Pearl, Red, Irrawaddy and Ganges-Brahmaputra also have a large longshore-transported distal deposit with some typical underwater clinoform features.