

Introduction to the Yellow River Delta: Origin, Evolution, Challenge and Endeavor

Abstract

Siyuan Ye

Qingdao Institute of Marine Geology
Shandong, China

Introduction to the Yellow River Delta: origin, evolution, challenge and endeavor

Abstract: In 1855, the Yellow River was broken at the Tong Wa Xiang, Henan province. The flood water of the Yellow River captured the course of the Daqing River to the Bohai Sea, where it created a new delta rapidly. Because of its geographical location (neighboring Beijing and Tianjin, facing the Bohai Sea to the north) and its vast land resources, the Yellow River Delta (YRD) has been developed into a national cotton and grain production base, a gas and oil field, a petrochemical industry center, a cattle breeding region, a salt industry area and an aquaculture groundwork. Previous studies indicated that major shifts in the course of the Yellow River have contributed significantly to the evolution of the YRD. Natural processes alone, however, are not responsible for all of this. Human activities such as construction of reservoirs in the drainage basin have reduced sediment supply for the healthy growth of habitat in the YRD. Draining and filling the sea for agriculture activities and oil exploitation have also been largely responsible for shaping the Delta. As a consequence, the YRD has been facing great challenges in the decline of habitats and land losses since 1996 due to the lack of water and sediment supply. To cope with these, the Yellow River water conservation committee has carried out the water and sediment adjustment project yearly, which could provide 80 million m³ water and 20 mT sediments to ease the decline of wetland and extension of salinity, as well as improve soil quality. Thus, the wetland ecology and floral habitat and aquatic food chain could be effectively recovered.