

## Change of Land Use in Modern Yellow River Delta

### *Abstract*

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Regional land use and cover change is an important part of global environmental change and sustainable development. The modern Yellow River Delta is one of hot spots for socio-economic development. Using field investigating data and topographic map, we interpret the 1987 TM image and 2001 ETM+ image. Based on the GIS methods, the land use change is analyzed in spatial and temporal aspect. The land use classification falls in ten categories, namely arable land, forestland, grassland, reservoir, river coverage, land for resident, oil field use, tidal flat, sea cultivated zone and unused land. The land used in agriculture increases greatly, such as arable land, sea water aquaculture. The reservoir and oil field use in 2001 almost increased a fold than 1987, while the unused land, grassland and tidal flat decreased. Of all the categories, the sea-water aquaculture and reservoir change fastest. They increased at the rate of 58.39% and 9.03% respectively. As to the spatial change, the noticeable were arable land turned to resident, tidal flat turned to sea water aquaculture, grassland turned to arable land. So sediment loads carried by the Yellow River results in an expansion of land, while main reason of land use change is human action. The area has the possibility to be exploited, but the negative effects should be avoided.

Key words: Land use; Remote Sensing; GIS; Yellow River Delta