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Changes of Coastline by Reclamations in Jeonbuk Province (1900 ~ 2006)

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1. Introduction

Tidal flats are gently sloping surfaces (or banks) of mud and sand that are exposed at low tide, are developed around estuaries and along the shore. Tidal ranges are from 8.1 meters (around Inchon) to 3.1 meters (Mokpo) along the West Coast, from 2.5 meters (Yosu) to 1.2 meters (Busan) along the South Coast, 0.2 ~ 0.5 meters along the East Coast in Korea.

Tidal Flats in South Korea cover area of 2,900㎢ mainly along the West Coast, in North Korea 3,000㎢ exclusively along the West Coast. Reclamation is to build embankment higher than highest high tide to obtain reclaimed land (e.g. polder in Netherlands).

The 40% area of tidal flat has reclaimed and under reclamation project. The reclamation project in Korea launched 1232, for the self-supply of rice at Ganghwa-do (Island, north of Inchon Airport), transferred capital of Goryo Dynasty according to the invasion of Mongols Yuan Dynasty (Kublai Khan).

The coastline changes by reclamation from 1900 to 2006 were investigated on the topographic maps (mainly 1/50,000 scale) published from 1910 to nowadays.

2. Coastline changes by reclamation

At Gunsan, a port located on the West Coast of Jeonbuk Province, the mean spring and neap tidal ranges are 5.4 and 1.3 meters respectively.

The huge area of tidal flats developed along the West coast of Jeonbuk Province, had reclaimed by small scale at bays until 1910s.

Topographic maps published early in the 20th century show extensive salt marshes widely scattered along the West Coast. Since the Japanese Occupation of Korea, however, nearly all of the marshes have been reclaimed mostly for paddy fields, largely due to the introduction of modern irrigation systems.

The large scale reclamations were constructed during 1920s and 1970s, their irrigation water were supplied from the reservoirs of the different stream networks. The main use of reclamation lands was paddy field.

Saemangeum Reclamation Project started on 1991 had only finished the tidal embankment (lenth: 33Km) on 2006, the land uses plan are not yet settled because of water pollution and the tidal flat destruction.

Land uses of reclaimed areas have changed at the Gomso Bay such as: paddy field → salt farm (pond) → lobster growing farm (pond) → golf course.

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