

ABSTRACT

Thesis Title : Land Utilization Impact on Coastal Geomorphic Characteristics
at Prasae Delta, Klaeng District, Rayong Province

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The objective of this research is to study the impact of land utilization of coastal geomorphic characteristics at Prasae Delta, Klaeng District, Rayong Province. From 2524 to 2544 B. E., the land utilization of rice farming and shrimps culturing had been changed the most. Moreover, it was found that the area of paddy fields decreased because of land abandonment and ownership transfer. The second major land utilization was for the coastal fisheries (black-tiger prawn culturing, etc.) from 2533 to 2544 B. E., causing intensive destruction of the mangrove forests, especially when black-tiger prawn culturing had reached tidal swamps and alluvial flat land.

Form 2524 to 2533 B. E., the land utilization of agriculture comprised field crops (cassava, sugar cane, etc.) and orchard growing (durians, bananas, coconuts, mangoes, as papayas, etc). In some areas perennial trees (eucalyptus, casuarina, and betel palm, etc.) were planted.

In terms of population settlement, it was found that the highly populated areas were around Prasae Delta. The geomorphology of Prasae River, whose origin was from relatively short tributaries, could be divided into 9 types: pro-delta mud and sand, salt-water mangroves, brackish-water mangroves, tidal flats, marshes or backswamps, alluvial flats, main river, tributaries and estuaries.

The land utilization of black-tiger prawn culturing had another impact on coastal geomorphic characteristics of Prasae Delta in the tidal and alluvial flat areas in that they were left with hole and pits, and the soil became more acidic resulting in the decrease of mangrove forests.

The study also revealed that natural water resources were destroyed by some human activities: garbage dumping, untreated wastewater disposal and shrimp farming.

Moreover, the population settlement lead to the tidal flats being filled, obstructing waterway flow and reducing tidal flat areas.

Finally, this study indicated coastal geomorphic changes in the Prasae Delta area was caused by human activities including coastal fishery, human settlements, and agriculture in that order.