

APPLICATION OF GEO-INFORMATION TECHNOLOGY TO MONITOR CHANGES IN SHORELINE OF RAYONG PROVINCE, THAILAND

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ABSTRACT: This study aimed to determine the patterns of shoreline change of Rayong province during the year 2002-2010 from Tambon Phla to Tambon Phe, Rayong Province using the aerial orthophoto in 2002, SPOT-5 satellite images in 2006 and THEOS satellite images in 2010 spanning the period of 2002-2010. By digitizing the edge of the shoreline of each year and analyzed by Geographic information system (GIS) techniques for monitoring the rates of shoreline change using the Transect method. The results showed that Map Ta Phut area was the most severely eroded area 25,507.67 square meters in the last nine years, or approximately 15.94 rai. Especially in Ban Nong Fab, there was 82.89 meters eroded Shoreline, or approximately 9.21 meters per year. For the highest deposited area during last nine years was Ta Pra doo subdistrict, covered 51,432 square meters or approximately 32.14 rai or approximately 8.51 meters per year. And the factors that affect the shoreline changes, the results showed that Land use that effect the shoreline was because of the building of a pier, large obstruction to the movement of sediment transport along the shoreline and was carried offshore Factor of the wave current by using the analysis by BOUSS-2D equation was found to be Rip current.

The results is shown that the coast of Map Ta Phut is the type with a layer with varying depths not parallel to the coast causing the wave current to strike the shoreline and bend out to left and right of the shoreline. Especially the southwest monsoon is an important factor to the violence of the waves and currents also affect the coastal area of Map Ta Phut.