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DETERMINATION OF SHORELINE CHANGES ALONG THE BATU PAHAT JOHOR USING DIGITAL SHORELINE ANALYSIS SYSTEM (DSAS)

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COLLEGE OF BUILT ENVIRONMENT

UNIVERSITI TEKNOLOGI MARA

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Thesis submitted to the Universiti Teknologi MARA Malaysia
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AUTHOR'S DECLARATION

I declare that the work on this project/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA (UiTM). This project/dissertation is original and it is the result of my work, unless otherwise indicated or acknowledged as referenced work.

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ABSTRACT

Coastal areas are environmentally sensitive areas where the coastal community and the wildlife can be exposed to various erosion risks. Coastal erosion rises due to the rise in sea level rise, and rainfall during the Southwest monsoon. This research was intended to determine shoreline changes in Batu Pahat Johor involving the application of Geospatial information System (GIS) using Digital Shoreline Analysis System (DSAS). The objective of this research is to extract the shoreline changes along Batu Pahat shoreline in two (2) years 2015 and 2020, to determine the rate of shoreline changes in two years using DSAS and to evaluate the impact of shoreline changes around 1 km along Batu Pahat shoreline. DSAS method was carried out in this study to estimate the rate of shoreline using End Point Rate method. Overall, the coastal areas are exposed to higher erosion process than accretion. The average of all erosional rates is -7.12 m/year and the highest erosion of about - 33.79m/year (2015- 2020) was noticed in the Minyak Beku Beach, whereas the average of all accretional is 3.88m/year and highest accretion was about 12.12 m/year (2015-2020) at the Suloh Barat River. Furthermore, this finding assesses that impact on the population who live near the coast are very worried about the occurrence of coastal erosion and have suffered damage and destruction of assets with the occurrence of coastal erosion, also cause economic and community activities around the coast to be disrupted and affected. This study is significant to help authorities in identifying appropriate methods for managing erosion problems and useful as the authorities may use it for information sharing among the coastal community.

***Keywords**:* shoreline, Erosion, Accretion, Digital Shoreline Analysis System (DSAS), End Point Rate (EPR), Batu Pahat.

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