

UNIVERSITI TEKNOLOGI MARA

**EFFECT OF COASTAL EROSION AND ACCRETION
ON BEACH PROFILE**

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of the requirements for the bachelor of
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AUTHOR'S DECLARATION

I declare that the work on this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Undergraduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Coastal erosion and accretion are defined as the changes process of the beach sediment whether the sediment was increase or decrease in long term which may cause the changes of the shoreline. Many coastal in Malaysia suffer from erosion and accretion especially at the east coast of Peninsular Malaysia that cause the destruction of property. This study was conducted to determine the effect of erosion and accretion at four coastal areas in Kuala Terengganu which derived from SPOT-5 satellite image and unmanned aerial vehicles (UAV) image on beach profile from real-time kinematic (RTK) observation method. The shoreline of the both images was digitized and overlaid to get the rate of erosion and accretion at study area. In order to get the beach profile, the elevation with 20m offset for every chainage and 5m offset for cross-section point was carried out. The result show that the highest rate of erosion and accretion is 170.2942 m²/year at zone A and the lowest is 57.5271 m²/year at zone D. The erosion and accretion really effect beach profile to become steeper with beach slope value 11.004° at high erosion area and 7.652° at low erosion area. Overall, if the value rate of erosion and accretion high, then beach profile became steeper. For better decision-making process in sustainable coastal management, the future studies should relate to the factors that can affect erosion such as the seasonal change of study area and accurate morphological data. This study is potentially be used by local authorities and other related agencies for decision making process of sustainable coastal management

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