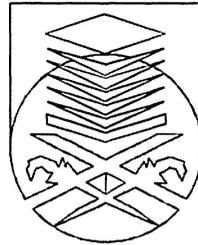


**DETECTION OF COASTLINE EROSION BY REMOTE  
SENSING APPROACH  
A CASE STUDY: ALONG THE COAST OF TANJUNG  
PIAI**

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**Thesis submitted to the Universiti Teknologi MARA Malaysia  
in partial fulfilment for the award of the degree of the  
Bachelor of Surveying Science and Geomatics (Honours)**

**JULY 2020**

## 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 erosion is becoming a growing problem all over the world. Coasts are very diverse environments that are continually evolving. The transition is attributed to three major mechanisms, such as flooding, transport and precipitation, which work on the coast. Coastal erosion relies on multiple environmental causes such as hurricanes, seas, weather, tides, near-shore rivers, slope cycles, vertical ground motions. Erosion attributable to human activities can involve clearance of beach material, building activity, shifting direction of flow of sediment, etc. Marine management techniques are used to shield marine property from erosion. Coastal defenses are primarily used in coastal protection schemes with the purpose of avoiding coastal degradation and floods in the hinterland. Such goals include the defense of harbor basins and port openings from tides, the strengthening of shipping channels and inlets, and the security of water intakes and outlets. There are three major classes of concrete systems that shield the soil or the beaches. The study of monitoring and analysis of coastline change and erosion prediction has been widely used satellite imagery. Satellite data that is often used in monitoring studies and analysis of coastline changes are Landsat, Quickbird, Allos, SPOT, IKONOS, etc. The aim of study is to study the influence of coastal dynamic action on the erosion of coastline happened in Tanjung Piai, Johor, Malaysia by using SPOT 7 in 2015 and 2019, has a spatial resolution 1.5 m. As a result, identification of the changes can made by land cover area. The covered by land for 2015 was 345677.78 ha (67 per cent) and 36872.78 ha (33 per cent) for 2019. The difference for both years is 16872.00 ha (2 percent). This indicates that the coastline of Tanjung Piai, Johor, faces changing coastlines from 2015 to 2019.

## ACKNOWLEDGEMENTS

First and foremost, praises and thanks to the God, the Almighty, for His showers of blessings throughout my research work to complete the research successfully. I would like to say a special thank you to my supervisor, Sr Raiz Razali. His support, guidance and overall insights in this field have made this an inspiring experience for me. His dynamism, vision, sincerity and motivation have deeply inspired me. He has taught me the methodology to carry out the research and to present the research works as clearly as possible. It was a great privilege and honor to work and study under his guidance. I am extremely grateful for what he has offered me. I would also like to thank him for his friendship, empathy, and great sense of humor. I am extending my heartfelt thanks to his wife, family for their acceptance and patience during the discussion I had with him on research work and thesis preparation. I am extremely grateful to my parents for their love, prayers, caring and sacrifices for educating and preparing me for my future. Also I express my thanks to my friends, for their help, support and valuable prayers. Finally, I would like to thank my family for supporting me during the compilation of this dissertation. Last but not least, big appreciation to our coordinator, Dr Nafisah Khalid also as my co coordinator for her invaluable help and dedicated efforts throughout this study.

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