

**UNIVERSITI TEKNOLOGI MARA**

**ASSESSMENT OF COASTAL  
VULNERABILITY INDEX USING  
REMOTE SENSING AND  
GEOGRAPHICAL INFORMATION  
SYSTEM**

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Thesis submitted in fulfilment of  
the requirements for the degree of Bachelor in  
Surveying Science and Geomatics (Honours)

**Faculty of Architecture, Planning and Surveying**

**JULY 2018**

## **AUTHOR'S DECLARATION**

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

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## **ABSTRACT**

The main objective of the present study is to develop a coastal vulnerability index (CVI) for the Pahang coastline that starting from Cherating to Tanjung Agas, Kuala Pahang. That area has been divided into 18 regions that called as a management unit. This study incorporated six variables to assess the CVI for the study area. These six variables consist of geomorphology, shoreline change rate, coastal slope, average tides range, significant wave height and sea level rise. The ranking is on a linear scale from 1 to 5 in order of increasing vulnerability; value 1 represents the lowest risk ranking assigned to the coastline whereas value 5 ranks the coastline with the highest risk. A total of 85.4 km of coastline was evaluated and of this, 18.9% of the mapped shoreline is classified as being extreme vulnerability, 42.7% of Pahang Coast shoreline is classified as high vulnerability and 12.1% as moderate vulnerability. The implementation of the Management Plan would dependent on the co-operations of the government departments and agencies, private sector and the public.

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