

STUDY ON BEACH PROFILE AND LONGSHORE SEDIMENT TRANSPORT
ALONG TELUK KETAPANG TO BATU RAKIT BEACH, TERENGGANU

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**STUDY ON BEACH PROFILE AND LONGSHORE SEDIMENT TRANSPORT
ALONG TELUK KETAPANG TO BATU RAKIT BEACH, TERENGGANU**

By

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**Research Report submitted in partial fulfilment of the requirements for the degree of
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**DEPARTMENT OF MARINE SCIENCE
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**DECLARATION AND VERIFICATION FORM
FINAL YEAR RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled: **Study on Beach Profile and Longshore Sediment Transport along Teluk Ketapang Beach to Batu Rakit Beach, Terengganu** by **Nur Azua Binti Wasis**, Matric No. **UK 20890** has been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the Degree of **Bachelor of Science (Marine Science)**, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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LIST OF ABBREVIATIONS

ABBREVIATIONS

NSD	Net shore drift
LEO	Littoral environmental observation
HT	High tide
MT	Mid tide
LT	Low tide
GPS	Global Positioning System
m/s	meter per second
m	meter
mm	millimetre
g	gram
°	degree
Ø	phi
%	percentage

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ABSTRACT

A study on beach profile changes and grain size characteristic was conducted along Teluk Ketapang beach to Batu Rakit Beach. The sampling activity was done on July 2011 and December 2011. This study was conducted to determine the beach profile changes, sediment size characteristics and the net shore drift pattern along the study area. The study area was consists of twelve stations marked and there have three littoral zones during the sampling which is high tide zone, mid tide zone and low tide zone. Based on analysis those were carried out to show that beach profile at study area constantly changing according to period and environmental circumstances. Beach profile shows the erosion and deposition at station area. Apart from that also show the grain size characteristics consist of coarse sand and medium sand that having poorly and moderately sorted, very negatively skewness and very leptokurtic kurtosis dominated in study area. Some basic features such as sediment distribution, sediment size and beach sloped determined to know the direction of sediment movement. Through this study also can be found that the action or external force like wind speed, wind direction, tidal current and rainfall distribution influenced the study area environment especially for net shore drift (NSD).

ABSTRAK

Kajian terhadap perubahan profil pantai dan ciri-ciri sedimen telah dilakukan disepanjang persisiran pantai Teluk Ketapang sehingga pantai Batu Rakit. Aktiviti penyempelan telah dilakukan pada bulan Julai 2011 dan Disember 2011. Kajian ini dijalankan untuk mengkaji perubahan profil pantai, taburan ciri-ciri sedimen dan menentukan arah pergerakan sedimen di kawasan kajian. Kajian merangkumi dua belas stesen yang dikenalpasti terdapat tiga zon littoral semasa sampel diambil iaitu zon air pasang tertinggi, air pasang pertengahan dan air pasang terendah. Berdasarkan analisis yang telah dijalankan menunjukkan bahawa profil pantai yang terdapat di kawasan kajian sentiasa berubah mengikut masa dan keadaan persekitaran. Keadaan profil pantai menunjukkan berlaku hakisan dan penimbunan di stesen-stesen kajian. Selain itu menunjukkan juga bahawa ciri-ciri saiz butiran terdiri daripada pasir kasar dan sederhana kasar yang mempunyai sisihan yang tidak sempurna, kepencongan sangat negative dan kurtosis yang paling leptokurtic yang didominasi di kawasan kajian. Beberapa ciri asas seperti taburan saiz sedimen, saiz endapan dan kecerunan profil pantai ditentukan untuk mengetahui arah pergerakan sedimen. Menerusi kajian ini juga dapat diketahui bahawa tindakan atau daya luar seperti halaju angin, arah angin, arus pasang surut dan taburan hujan mempengaruhi persekitaran kawasan kajian terutamanya untuk arah pergerakan sedimen atau NSD.