STUDY ON BEACH PROFILE AND SEDIMENT CHARACTERISTICS ALONG KERTEH COASTLINE

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FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
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2011

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Universiti Malaysia Terengganu

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STUDY ON BEACH PROFILE AND SEDIMENT CHARACTERISTICS ALONG KERTEH COASTLINE.

By

Muhammad Haqim bin Lokman

Research Report Submitted in partial fulfillment of
the requirement for the degree of
Bachelor of Science (Marine Science)

Department of Marine Science
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DEPARTMENT OF MARINE SCIENCE
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
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DECLARATION AND VERIFICATION REPORT

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled:

STUDY ON BEACH PROFILE AND SEDIMENT CHARACTERISTICS ALONG KERTEH COASTLINE by **MUHAMMAD HAQIM BIN LOKMAN**, Matric No. **UK 17653** 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 Science (Marine Science),** Faculty of Maritime Studies and Marine Science, University Malaysia Terengganu.

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ABBREVIATIONS

MT	Middle Tide
HT	High Tide
LT	Low Tide
GPS	Global Positioning System

SYMBOLS

Ø	Phi
Km	Kilometre
m	Meter
cm	Centimetre
mm	Millimetre
µm	Micrometre
g	Gram
%	Percentage
°	Degree
‘	Minute
N	North (Utara)
E	East (Timur)

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ABSTRACT

A study on beach profile and sediment characteristics along Kerteh coastline was conducted by two separate sampling, on April and October 2010. The aim of this study was to determine the beach profile changes and sediments characteristics at the study area, where a total 20 stations are available for the sampling. The samples were collected at each station which represent for high tide, mid tide and low tide respectively. From the study, it can be concluded that the grain size characteristics were dominated by fine sand, coarse sand, moderately skewed, negatively skewed, very leptokurtic and extremely leptokurtic for both sampling. Besides that, it also showed that the beach profile changes were influenced by the physical parameter surrounding such as wind, wave and current. Most of the study area faced the erosion process little far away than source of the sediment, while the accretion process happened near at the source of the sediment. This pattern is totally different from the usual pattern where usually the erosion process occurred near the source of the sediment and vice versa. The direction of sediment movement also resulted by these physical parameter.

Kajian Mengenai Perubahan Profil Pantai Dan Ciri-ciri Sedimen Di Sepanjang Kawasan Pesisir Pantai Kerteh.

ABSTRAK

Kajian terhadap perubahan profil pantai dan cirri-ciri sedimen di sepanjang pesisiran pantai Kerteh, Terengganu telah dilakukan pada dua sesi penyampelan yang berbeza, iaitu pada bulan April dan seterusnya pada bulan Oktober 2010. Objektif utama kajian ini adalah untuk menentukan perubahan profil pantai dan cirri-ciri sedimen di kawasan kajian, di mana sebanyak 20 stesen telah ditetapkan sebagai kawasan penyampelan. Sampel yang telah diambil dari setiap stesen merangkumi tiga zon utama, iaitu air pasang tinggi, air pasang pertengahan dan air pasang rendah. Daripada kajian ini, boleh disimpulkan bahawa cirri-ciri saiz butiran adalah terdiri daripada pasir halus dan pasir kasar, kepencongan sederhana dan kepencongan sangat negative, kurtosis yang sangat leptokurtik dan yang teramat leptokurtik. Selain itu, kajian ini juga mendapati perubahan profil pantai dipengaruhi oleh tindak balas daya luar dan kawasan sekeliling seperti angin, ombak, dan arus. Kebanyakan kawasan penyampelan yang mengalami proses hakisan berlaku agak jauh dari punca sedimen, manakala proses pemendapan berlaku pada kawasan penyampelan yang agak dekat dengan punca sedimen. Keputusan ini sangat berlainan dengan keputusan normal, kerana selalunya kawasan hakisan berlaku di kawasan berhampiran punca sedimen, dan sebaliknya. Pergerakan sedimen juga dipengaruhi oleh faktor-faktor ini.