A STUDY ON BEACH PROFILE AND SEDIMENT CHARACTERISTICS IN RESPONSE TO MONSOONAL CHANGES AT CAHAYA BULAN BEACH, KELANTAN

NUR LIYANA BINTI FAUZI

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE UNIVERSITI MALAYSIA TERENGGANU 2012

Perpustakaan Sultanah Nur Zahirah (UMT)





A study on beach profile and sediment characteristics in respon to monsoonal changes at Cahaya Bulan Beach, Kelantan / Nur

PERPUSTAKAAN SULTANAH NUR ZAHIRAH URIVERSITI MALATSIA TERENGGARH BIRTI

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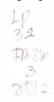
Research report submitted partial fulfillment of the requirement for the Degree of Bachelor of Science (Marine Science)

DEPARTMENT OF MARINE SCIENCE
FACULTY OF MARITIME STUDY AND MARINE SCIENCE
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DEPARTMENT OF MARINE SCIENCE FACULTY OF MARITIME STUDIES AND MARINE SCIENCE UNIVERSITI MALAYSIA TERENGGANU

DECLARATION AND VERIFICATION REPORT FINAL YEAR RESEARCH PROJECT

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

A Study on Beach Profile and Sediment Characteristics in Response to Monsoonal Changes at Cahaya Bulan Beach, Kelantan by Nur Liyana binti Fauzi, Matric No. UK21183 have 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 Bachelor of Science (Marine Science), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

Verified by:		
Principal Supervisor Name: Official Stamp:	PROF MADYA DR. ROSNAN BIN YAACOB Ketua Jabatan Sains Marin Fakulti Pengajian Maritim dan Sains Marin Universiti Malaysia Terengganu 21030 Kuala Terengganu	Date:/6 / 2012
Second Supervisor	(where applicable)	
Name:		
Official Stamp:		Date:
Jua-		
Head of Departmen	nt of Marine Science	
Name:	PROF MADYA DR. ROSNAN BIN YAACOB	
Official Stamp:	Jabatan Sains Marin	Date: 31 /6 /2012

Fakulti Pengajian Maritim dan Sains Marin Universiti Malaysia Terengganu 21030 Kuala Terengganu

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LIST OF ABBREVIATIONS

ABBREVIATIONS

HT High tide

MT Mid tide

LT Low tide

° Degree

Minute

" Second

N North

E East

S South

W West

m Metre

km² Square kilometre

°C Degree Celcius

cm Centimetre

% Percent

ms⁻¹ Metre per second

km Kilometre

g Gram

μm Micrometre

Φ Phi

mm Milimetre

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ABSTRACT

A study on beach profile and sediment characteristics was conducted along the Cahaya Bulan Beach, Kelantan. The beach profile measurement and sediment samples were taken on June 2011, October 2011 and March 2012. The objectives of this study were to determine the beach profile and sediment characteristics of Cahaya Bulan Beach in response to monsoonal changes and to study the relationship between beach profile and sediment characteristics of study area. Result showed study area experiencing deposition on October 2011 and erosion on March 2012 at major parts of the beach. The sediment at study area consisted of coarse to very coarse sand with sorting, skewness and kurtosis characteristics that changes in range of poorly sorted to moderately well sorted, very negatively skewed to positively skewed and very leptokurtic to extremely leptokurtic. The changes of beach profile and sediment characteristics at study area mostly influenced by Southwest Monsoon and the presence of rock revetment there.

Satu Kajian Mengenai Profil Pantai dan Ciri-ciri Enapan dalam Tindakbalas Terhadap Perubahan Monsun di Pantai Cahaya Bulan, Kelantan

ABSTRAK

Satu kajian mengenai profil pantai dan ciri-ciri enapan telah dijalankan sepanjang Pantai Cahaya Bulan, Kelantan. Pengukuran profil pantai dan sampel enapan telah diambil pada Jun 2011, Oktober 2011 dan Mac 2012. Objektif kajian ini adalah untuk menentukan profil pantai dan ciri-ciri enapan di Pantai Cahaya Bulan dalam tindakbalas terhadap perubahan monsun dan untuk mengkaji hubungan antara profil pantai dan ciri-ciri enapan di kawasan kajian. Keputusan menunjukkan kawasan kajian telah mengalami timbunan pada Oktober 2011 dan hakisan pada Mac 2012 di sebahagian besar pantai tersebut. Enapan di kawasan kajian terdiri daripada pasir kasar dan sangat kasar dengan ciri-ciri sisihan, kepencongan dan kurtosis yang berubah dalam kadar sisihan tidak sempurna kepada sisihan pertengahan paling sempurna, kepencongan paling negatif kepada kepencongan positif dan sangat leptokurtik kepada leptokurtik ekstrem. Perubahan profil pantai dan ciri-ciri enapan di kawasan kajian adalah kebanyakannya dipengaruhi oleh Monsun Baratdaya dan juga terdapatnya revetmen batu di sana.