

**BATHYMETRY AND SEDIMENT DISTRIBUTION AS INDICATOR OF
EROSION AT BIDONG ISLAND, TERENGGANU**

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2012

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Perpustakaan Sultanah Nur Zahirah (UMT)
Universiti Malaysia Terengganu



LP 19 FMSM 3 2012



1100088888
Bathymetry and sediment distribution as indicator of erosion at
Bidong Island, Terengganu / Mohd Syafiq Manan.

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**BATHYMETRY AND SEDIMENT DISTRIBUTION AS INDICATOR OF EROSION AT
BIDONG ISLAND, TERENGGANU**

**By
Mohd Syafiq Bin Manan**

**Research Report submitted in partial fulfillment of
the requirement for the of
Bachelor of Science (Marine Science)**

**Department of Marine Science
Faculty of Maritime Studies and Marine Science
UNIVERSITI MALAYSIA TERENGGANU**

2012

Syafiq, M. 2012 Bathymetry And Sediment Distribution As Indicator Of Erosion At Bidong Island, Terengganu., Bachelor of Science (Marine Science) Department of Marine Science, Faculty of Maritime Studies and Marine Science Universiti Malaysia Terengganu, Terengganu. 50p.

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DECLARATION AND VERIFICATION FORM

FINAL YEAR RESEARCH PROJECT

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

Bathymetry and Sediment Distribution as Indicator of Erosion at Bidong Island, Terengganu) by Mohd Syafiq Bin Manan, Matric No. UK 21679 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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ACKNOWLEDGEMENT

First and foremost, my deepest gratitude goes to Illahi and its gracious, whose help and guidance gave me the strength to complete this final year project. Here I would like to express my sincere appreciation and thank fullness to my supervisors, Assoc. Prof Dr. Hj Rosnan Yacob and my fellow academic Mr. Effi Helmy Ariffin for their profesional guidance, concerned advice and constructive comments from the beginning of the research till the final submission of the thesis.

Special thanks also been dedicated to Institute oceanography staff, Mr Roslan for allowing me to use bathymetry set and give me some guidance for handling this instrument.

Especially also for the family who always give moral encouragement to me more successful and provide the best for the project that I have done this. Do not forget to fellow companions, especially in the Marine Science program, which also provides ideas and share information that is useful to ensure that work better and more efficient.

Finally, thanks goes out to all parties who were willing to cooperate in mejayakan yield a final year project I had done this. Service and sacrifice by all of you will always be remembered at all times.

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LIST OF ABBREVIATIONS

Abbreviations

g	-	Gram
mm	-	Milimeter
m	-	Meter
μm	-	Micrometer
NSD	-	Net Shore Drift
N	-	North
E	-	East
ST	-	Station
ms^{-1}	-	meter per second
%	-	Percentage
\emptyset	-	Phi
$^{\circ}$	-	Degree

ABSTRACT

The study of seabed erosion and sediment distribution was carried out in the Bidong Island, Terengganu. This study was conducted to determine the size characteristics of sediment as an indicator of erosion that occurs in the presence of Bidong island in June. Sampling process was carried out by building to facilitate the process of transect bathymetry. Based on the transect has been built we can break the 12 station to collect sediment. Based on the information obtained from the bathymetry there is severe erosion occurred in the presence Bidong island using 3D diagrams that have been processed to remove the area is not applicable and correct to include tidal data to the data obtained is really accurate without any error. Based on some basic characteristics of the sediment size distribution and the depth of the seabed. Sediment distribution is obtained that consists of the mean of coarse sand, medium sorting perfect and very negative skewness that dominates almost all stations. There was no significant change can be seen in terms of kurtosis in the most leptokurtic kurtosis dominate almost all the stations in the study area. However, the erosion that occurs in the presence of Bidong Island this happens because there are many agents that induce erosion such as wind, and currents.

ABSTRAK

Kajian mengenai hakisan dasar laut dan taburan sediment ini telah dijalankan di kawasan Pulau Bidong, Terengganu. Kajian ini telah dijalankan untuk menentukan ciri-ciri saiz sediment sebagai penunjuk hakisan yang berlaku di hadapan pulau Bidong pada bulan June. Proses pensampelan telah dijalankan dengan membina transect bagi memudahkan aktiviti proses bathymetry. Berdasarkan transect yang telah dibina kita dapat pecahkan kepada 12 station untuk mengambil sediment. Berpandukan kepada maklumat yang diperolehi dari proses bathymetry memang terdapat hakisan yang teruk berlaku di kawasan hadapan pulau Bidong dengan menggunakan gambar rajah 3D yang telah diproses dengan membuang kawasan yang tidak berkenaan dan perbetulkan dengan memasukkan data pasang surut supaya data yang diperolehi adalah benar-benar tepat tanpa sebarang ralat. Berpandukan kepada beberapa ciri-ciri asas iaitu taburan saiz sedimen dan kedalaman dasar laut. Taburan sedimen yang didapati ialah terdiri daripada mean pasir kasar, bersisihan sederhana sempurna dan berkepencongan sangat negatif yang mendominasi hampir semua station. Tidak ada perubahan yang ketara dapat dilihat dari segi kurtosis di mana kurtosis yang paling leptokurtic hampir mendominasi kesemua station di kawasan kajian. Namun begitu hakisan yang berlaku di hadapan Pulau Bidong ini berlaku kerana terdapat pelbagai agen hakisan yang mendorong berlakunya hakisan seperti angin, arus dan ombak.