

COMPARISON OF COASTAL MORPHOLOGY AND ASSOCIATED GRAIN
SIZES DISTRIBUTION AT BIDONG ISLAND, TERENGGANU

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SIZES DISTRIBUTION AT BIDONG ISLAND, TERENGGANU**

By

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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: **Comparison of Coastal Morphology and Associated Grain Sizes Distribution at Bidong Island, Terengganu** by **Maisarah Izzah bt Tajaruddin**, Matric No. **UK 20846** 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

Abbreviation

g - gram

km - kilometer

km/h - kilometer per hour

mm - millimeter

m/s - meter per second

μm - micrometer

ST - station

NSD - Net Shore Drift

ABSTRACT

This study was carried out at Bidong Island, Terengganu in order to study on comparison of costal morphology and associated of grain size distribution. The Island was located at off coast of Terengganu in South China Sea. The study was carried out in July 2011 in order to determine the recent beach slope and sediment characteristic and their relationship. Sampling was done in four stations which conducted at UMT Beach and Vietnam Beach which were two stations between the two beaches. Total Station TOPCON GPT-3000 had been used to measure beach profile. Meanwhile, moment method was used to calculate the sedimentological parameters. Based on the beach profile analysis, Vietnam Beach has a steeper and scatters slope compared to UMT Beach which has smoothly slope. However, for the sediment characteristic, the mean value shows the beaches were covered mostly medium, coarse and very coarse sand. When the mean values decrease, the grains sizes were getting coarser. Other than that, the sediment sorting was composed with moderately well sorted, moderately sorted and poorly sorted. As the value sorting increase, the beaches were generated poorly sorted of sediments. As a result, the direction of Net Shore Drift (NSD) was also affected based on the sedimentological characteristic and beach profile. Overall, the Vietnam Beach has much coarser grain sand with poorly sorted due to the changes of physical parameters compared to last year study on 2010.

Perbandingan Morfologi Pantai Dan Dikaitkan Taburan Saiz Sedimen Di Pulau Bidong,
Terengganu

ABSTRAK

Kajian ini telah dijalankan di Pulau Bidong, Terengganu untuk kajian perbandingan morfologi pantai dan mengaitkan taburan saiz sedimen. Pulau Bidong terletak di Laut China Selatan. Kajian telah dijalankan pada Julai 2011 supaya menentukan kecerunan pantai dan ciri-ciri sedimen serta hubungkait antaranya. Penyampelan telah dilakukan di empat stesen yang dijalankan di Pantai UMT dan Pantai Vietnam dengan membahagikan dua stesen setiap satu pantai. Total Station TOPCON GPT-300 kedua-dua pantai telah digunakan untuk mengukur profil pantai. Sementara itu, kaedah 'Moment' ada digunakan untuk mengira parameter sedimen. Berdasarkan analisis profil pantai, Pantai Vietnam mempunyai satu lebih curam dan cerun serakan berbanding dengan Pantai UMT yang mempunyai dengan cerun yang landai. Bagaimanapun, bagi ciri-ciri sedimen, nilai min menunjukkan pantai-pantai telah diliputi sederhana, pasir sangat kasar dan kasar. Bila, saiz butiran mendapat lebih kasar, nilai min akan berkurangan. Penurunan nilai min menunjukkan bahawa sedimen pantai menjadi semakin kasar. Peningkatan pada nilai penyusunan sedimen pula menunjukkan bahawa pantai mengalami taburan sedimen yang tidak sekata. Hasilnya, arah hanyutan bersih (NSD) juga terjejas berdasarkan *sedimentological* biasa dan profil pantai. Secara keseluruhan, Pantai Vietnam mempunyai pasir sedimen saiz lebih kasar disebabkan perubahan fizikal parameter berbanding dengan tahun lepas kajian pada 2010.