THE COMPARISON OF SEDIMENTOLOGICAL CHARACTERISTICS AND SOIL TEXTURE BETWEEN RIVER AND COASTAL AREA OF KERTEH, TERENGGANU

SITI ASIAH BT AWANG

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

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By
Siti Asiah bt Awang

Research Report submitted in partial fulfillment of
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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:

The Comparison of Sedimentological Characteristic and Soil Texture between River and Coastal Area of Kerteh, Terengganu by Siti Asiah bt Awang, Matric No. UK18344 have been examined and all error identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtained the Degree of Science (Marine Science), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

Verified by:

.....

Principal Supervisor

Name: Assoc. Prof. Dr. Rosnan Yaacob

PROF. MADYA DR. ROSNAN YAACOB
Pensyarah
Jabatan Sains Marin
Fakulti Pengajian Maritim dan Sains Marin
Universiti Malaysia Terengganu (UMT)
21030 Kuala Terengganu

Official Stamp:

Date: 28/4/11

.....

Second Supervisor

Name: Dr. Nor Antonina Binti Abdullah

DR. ANTONINA ABDULLAH
Lecturer
Department of Marine Science
Faculty of Maritime Studies and Marine Science
Universiti Malaysia Terengganu (UMT)
21030 Kuala Terengganu

Official Stamp:

Date: 27/4/11

.....

Head of Department of Marine Science

Name: Dr. Razak Bin Zakariya

DR. RAZAK ZAKARIYA
Ketua Jabatan Sains Marin
Fakulti Pengajian Maritim dan Sains Marin
Universiti Malaysia Terengganu
(UMT)

Official Stamp:

Date: 29/4/11

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LIST OF ABBREVIATIONS

d	-	Diameter
g	-	Gram
GPS	-	Global Position System
H^2O^2	-	Hydrogen Peroxide
HCL	-	Acid Hydrocloric
L	-	Liter
Log	-	Logarithm
Km	-	Kilometre
M	-	Mol
Ml	-	Millimetre
Mg/L	-	Milligram per liter
mm	-	Millimetre
$NaHCO^3$	-	Natrium Carbonate
PSA	-	Particle Size Analyser
XΦ	-	Mean
SdØ	-	Standard Deviation
SkØ	-	Skewness
KØ	-	Kurtosis
(Ø)	-	Phi
N	-	North
E	-	East
ρ	-	Porosity
µm	-	Micrometer

$\sum$	-	Sum
%	-	Percentage
℃	-	Degree Celsius

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ABSTRACT

This study was carried out at river and coastal area of Kerteh, Terengganu in order to determine the sediment characteristic and soil texture. Sediment was collected twice which is on 25-28 April 2010 and 23-25 October 2010. There are 20 sample was collected using ponar grab which is 9 stations from coastal area and 11 stations from river area. From the determination of sediment characteristic, mean, sorting and kurtosis value at coastal river higher compare to the coastal area. The range of mean value at river is -0.034 Ø until 1.36 Ø. Meanwhile, the skewness value higher at coastal area compare to skewness value at river area. Soil texture was determined the percentage of sand silt and clay at every station. The percentage of sand higher if compare to the percentage of silt and clay. Each station has variation of sediment texture which is at river area most of the stations dominated by sandy clay while at coastal area were dominated by sandy clay loam. Some stations consist of sandy clay and sandy loam. There are some factors influence the grain size of sediment and also the soil texture at each station. The factors was identify is the wave energy, wind and also current. From that it can determine whether there is erosion or deposition process at each station.

Kajian Tentang Perbandingan Ciri-Ciri Saiz Sedimen dan Tekstur Tanah di Kawasan Sungai dan Persisir Pantai Kerteh, Terengganu.

ABSTRAK

Kajian telah di jalankan di kawasan sungai dan pesisir pantai Kerteh untuk menentukan ciri-ciri saiz sedimen dan juga tekstur tanah. Sedimen telah diambil sebanyak dua kali iaitu pada 25-28 April 2010 dan 23-25 Oktober 2010. Terdapat 20 sample tanah telah diambil dimana 9 stesen di persisir pantai dan 11 stesen di kawasan sungai. Daripada penetuan cirri-ciri saiz sedimen, nilai min, sorting dan juga kurtosis di kawasan sungai adalah lebih tinggi berbanding di kawasan persisir pantai. Julat saiz min adalah di kawasan sungai adalah -0.034 Ø hingga 1.36 Ø. Sementara itu, nilai skewness kawasan persisir pantai adalah lebih tinggi daripada kawasan sungai. Tekstur tanah adalah untuk mengenalpasti peratus pasir, lumpur dan juga tanah liat di setiap stesen. Setiap stesen menunjukkan variasi pada teksture tanah di mana di kawasan sungai kebanyakan stesen di dominasi oleh tanah liat berpasir manakala di kawasan persisiran pantai di dominasi oleh kelodak liat berpasir. Beberapa stesen terdiri daripada tanah liat berpasir dan kelodak berpasir. Terdapat beberapa faktor yang mempengaruhi saiz butir sedimen dan juga tekstur tanah di setiap stesen. Faktor-faktor yang dikenalpasti adalah tenaga gelombang, angin dan juga saat ini. Daripada faktor tersebut dapat ditentukan sama ada proses hakisan atau pemendapan berlaku stesen.