

DISTRIBUTION AND MOVEMENT OF
SEDIMENT DURING PRE-MONSOON AND
MONSOON AT PANTAI PENARIK, TERENGGANU

QURRATU'AIN BINTI SAMION

BACHELOR OF SCIENCE (MARINE SCIENCE)
SCHOOL OF MARINE AND ENVIRONMENTAL
SCIENCES
UNIVERSITI MALAYSIA TERENGGANU

2016

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MONSOON AND MONSOON AT PANTAI PENARIK, TERENGGANU.**

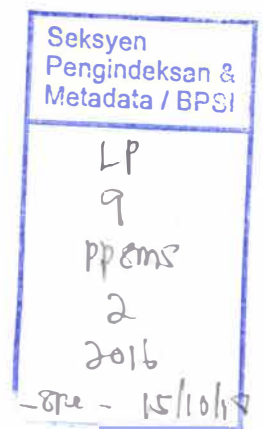
By

Qurratu'ain binti Samion

**Research Report submitted in partial fulfilment of
the requirements for the degree of
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UNIVERSITI MALAYSIA TERENGGANU

FINAL YEAR PROJECT REPORT VERIFICATION

PENAKUAN DAN PENGESAHAN LAPORAN

It is hereby declared and verified that this project report titled **Distribution and Movement of Sediment during Pre-monsoon and Monsoon at Pantai Penarik, Terengganu** by **Qurratu'ain binti Samion, UK31293** have been examined and all errors identified have been corrected. This report is submitted to the School of Marine and Environmental Sciences as partial fulfillment towards obtaining the **Bachelor of Science (Marine Science)** from School of Marine and Environmental Sciences, Universiti Malaysia Terengganu.

Verified by:

.....

Main Supervisor

Name:

Official stamp:

ASSOC. PROF DR. ROSNAN YAACOB
Lecturer
School of Marine and Environmental Sciences
Universiti Malaysia Terengganu
21030 Kuala Terengganu

Date: 26 MAY 2016.....

.....

Co- Supervisor

Name:

Official stamp:

Date:

(*Insert if applicable)



SCHOOL OF MARINE AND ENVIRONMENTAL SCIENCES
UNIVERSITI MALAYSIA TERENGGANU

DECLARATION

It is hereby declared and verified that this project report titled **Distribution and Movement of Sediment during Pre-monsoon and Monsoon at Pantai Penarik, Terengganu** by **Qurratu'ain binti Samion, UK31293** have been examined and all errors identified have been corrected. This report is submitted to the School of Marine and Environmental Sciences as partial fulfillment towards obtaining the **Bachelor of Science (Marine Science)** from School of Marine and Environmental Sciences, Universiti Malaysia Terengganu.

Verified by:

ASSOC. PROF DR. ROSNAN YAACOB
Lecturer

School of Marine and Environmental Sciences
Universiti Malaysia Terengganu
21030 Kuala Terengganu

Main Supervisor

Name:

Official stamp:

Date: *26 MAY 2016*

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	xii
LIST OF APPENDICES	xiii
ABSTRACT	xiv
ABSTRAK	xv
CHAPTER 1: INTRODUCTION	
1.1 Background of Study	2
1.2 Justification of Study	3
1.3 Objectives of Study	4
CHAPTER 2: LITERATURE REVIEW	
2.1 Beach	7
2.1.1 Beach morphology	7
2.1.2 Beach profile	7
2.1.3 Beach sediment	8
2.1.4 Beach steepness	8
2.1.5 Beach erosion	9
2.2 Sedimentology	9
2.2.1 Sediment	10
2.2.2 Sediment transport	10

2.3	Physical Factors	10
2.3.1	Wind	10
2.3.2	Tide	11
2.3.3	Wave	11
2.3.4	Monsoon	13
2.4	Net-Shore Drift	13

CHAPTER 3: METHODOLOGY

3.1	Study Area	15
3.2	Beach Profile Method	17
3.3	Dry Sieving Method	18
3.3.1	Mean	19
3.3.2	Standard deviation	19
3.3.3	Skewness	20
3.3.4	Kurtosis	20
3.4	Net-Shore Drift	21
3.4.1	Littoral environmental observation (LEO)	21
3.4.2	Sedimentology and geomorphology	22

CHAPTER 4: RESULTS

4.1	Physical Parameter Analysis	24
4.1.1	Rain distribution	24
4.1.2	Wind	27
4.2	Beach Profile Analysis	28
4.2.1	Beach profile	28

4.2.2	Beach slope	38
4.3	Grain Size Analysis	40
4.3.1	Mean	40
4.3.2	Sorting	43
4.3.3	Skewness	45
4.3.4	Kurtosis	47
4.4	Net-Shore Drift	49
4.4.1	Grain size distribution	49
4.4.1	(a) Mean	49
4.4.1	(b) Sorting	51
4.4.2	Beach slope	57

CHAPTER 5: DISCUSSION

5.1	Physical Parameters	58
5.2	Beach Profile	59
5.3	Grain Size Analysis	63
5.3.1	Mean	63
5.3.2	Sorting	65
5.3.3	Skewness	67
5.3.4	Kurtosis	69
5.4	Net-Shore Drift	71
5.4.1	Grain size distribution	71
5.4.1	(a) Mean	71
5.4.1	(b) Sorting	73

5.4.2 Beach slope	74
5.4.3 Movement of sediment	75
CHAPTER 6: CONCLUSION	77
REFERENCES	79
APPENDICES	86
CURRICULUM VITAE	89

LIST OF TABLES

Table		Page
3.1	The coordinate of sampling locations	16
4.1	The average of rainfall distribution in Kuala Terengganu	25
4.2	The number of raindays in Kuala Terengganu	26
4.3	The average of wind speed (m/s) in Kuala Terengganu	27
4.6	The beach slope and degree of slope during October 2015, December 2015 and February 2016	39
4.7(a)	Mean Value on October 2015	42
4.7(b)	Mean Value on December 2015	42
4.8(a)	Sorting value on October 2015	44
4.8(b)	Sorting value on December 2015	44
4.9(a)	Skewness value on October 2015	46
4.9(b)	Skewness value on December 2015	46
4.10(a)	Kurtosis value on October 2015	48
4.10(b)	kurtosis value on December 2015	48
4.11	The comparison of mean size value in mid tide area during pre-monsoon and monsoon	50
4.12	The comparison of sorting value in mid tide area during pre-monsoon and monsoon	51
4.14	The order of beach slope	57
5.9	The order average of mean value at mid tide area	72
5.10	the order average of sorting value at mid tide area.	74
5.11	The order of beach slope of each stations.	75

LIST OF FIGURES

Figure		Page
2.1	The comparison between Emery Method and Beach Profile Method.	6
2.2	A typical beach profile	8
2.3	The wave travel in the ocean	12
3.1	Sampling stations	16
4.1	The average monthly rainfall (mm) distribution in Kuala Terengganu.	25
4.2	The average monthly number of raindays (mm) distribution in Kuala Terengganu.	26
4.3	The average of wind speed in Kuala Terengganu.	27
4.4(a)	The combination of Beach Profile (October 2015 & December 2015) at Station 1	30
4.4(b)	The combination of Beach Profile (October 2015 & December 2015) at Station 2.	30
4.4(c)	The combination of Beach Profile (October 2015 & December 2015) at Station 3.	31
4.4(d)	The combination of Beach Profile (October 2015 & December 2015) at Station 4.	31
4.4(e)	The combination of Beach Profile (October 2015 & December 2015) at Station 5.	32
4.4(f)	The combination of Beach Profile (October 2015 & December 2015) at Station 6	32
4.4(g)	The combination of Beach Profile (October 2015 & December 2015) at Station 7	33
4.4(h)	The combination of Beach Profile (October 2015 & December 2015) at Station 8.	33
4.5(a)	The combination of Beach Profile (December 2015 & February 2016) at Station 1	34

4.5(b)	The combination of Beach Profile (December 2015 & February 2016) at Station 2	34
4.5(c)	The combination of Beach Profile (December 2015 & February 2016) at Station 3	35
4.5(d)	The combination of Beach Profile (December 2015 & February 2016) at Station 5	35
4.5(e)	The combination of Beach Profile (December 2015 & February 2016) at Station 6	36
4.5(f)	The combination of Beach Profile (December 2015 & February 2016) at Station 7	36
4.5(g)	The combination of Beach Profile (December 2015 & February 2016) at Station 8	37
4.6	The Degree of slope on October 2015, December 2015 and February 2016	39
4.13(a)	The type of mean in mid tide area during pre-monsoon	53
4.13(b)	The type of mean in mid tide area during monsoon.	53
4.13(c)	The type of sorting in mid tide area during pre-monsoon.	54
4.13(d)	The type of sorting in mid tide area during monsoon	54
4.13(e)	The type of skewness in mid tide area during pre-monsoon.	55
4.13(f)	The type of skewness in mid tide area during monsoon	55
4.13(g)	The type of kurtosis in mid tide area during pre-monsoon.	56
4.13(h)	The type of kurtosis in mid tide area during monsoon.	56
5.1(a)	The average of mean value on October 2015	64
5.1(b)	The average of mean value on December 2015.	64
5.2	The comparison average of mean values on October 2015 and December 2015	64
5.3(a)	The average of sorting value on October 2015.	66
5.3(b)	The average of sorting value on December 2015.	66

5.4	The comparison average of sorting values on October 2015 and December 2015	66
5.5(a)	The average of skewness value on October 2015.	68
5.5(b)	The average of skewness value on December 2015.	68
5.6	The comparison average of skewness value on October 2015 and December 2015.	68
5.7(a)	The average of kurtosis value on October 2015.	70
5.7(b)	The average of kurtosis value on December 2015.	70
5.8	The comparison average of kurtosis value on October 2015 and December 2015	70
5.9	The movement of sediment along Pantai Penarik, Terengganu	76
5.10	The concept of movement of sediment	76

LIST OF ABBREVIATIONS

g	-	Gram
Km	-	Kilometer
m	-	meter
%	-	Percentage
°	-	Degree

LIST OF APPENDICES

Appendices		Page
1	Beach of slope	84
2	Grain size classification	85
3	Sampling stations	86

ABSTRACT

The study on distribution and movement of sediment was conducted along Pantai Penarik, Terengganu. The studied was carried out in order to determine the distribution of sediment and beach profile changes. The direction of sediment movement was also revealed based on sediment characteristics and beach profiling. The physical parameters such as rain distribution and wind velocity play an important role where, they influences the changes of beach profile and sediment characteristics. The sampling was conducted in eight transects with approximately 2 kilometer distance between each transects except transect 3 and 4. The sampling coordinate was set same as the previous studied. Transit Sokkia C410 was used during the sampling to take the reading of the beach profiles. Besides that, the Moment Method was used to calculate the sedimentology characteristics. Based on the changes of beach profile, we can see that, during Northeast monsoon season, the transect 1, 5 and 8 was undergoes both erosion and deposition process, while the others transect was undergoes erosion process. Furthermore, during post-monsoon the beach profile of all transect was changed, where all transect was eroded compared to the previous studied that the beach profile of all transect was deposited. As the sediment analysis, the samples from three different beach environment which is low tide, mid tide and high tide was taken for every transect. In this study, the sediment was analysed based on the statistical parameter of grain size distribution for instance, mean, sorting, skewness and kurtosis. The movement of sediment was determined by looking the grain size distribution, where the mean, sorting, skewness and kurtosis for all transect is medium sand, moderately well sorted, strongly negative skewed and extremely leptokurtic during monsoon and post-monsoon. The sediment was moved Northward along Pantai Penarik. This indicates the study area was influenced by wave action wind direction. The different of energy that exert on the different morphology of each transect can reflect their distribution and sediment movement.

Keywords : beach, sediment, erosion, monsoon, grain size.

KAJIAN MENGENAI TABURAN DAN PERGERAKAN SEDIMEN SEBELUM MONSUN DAN SEMASA MONSUN DI PANTAI PENARIK, TERENGGANU

ABSTRAK

Satu kajian mengenai taburan dan pergerakan pasir telah dijalankan di sepanjang Pantai Penarik, Terengganu. Kajian ini telah dijalankan untuk menentukan taburan pasir dan perubahan profil pantai. Arah pergerakan pasir juga ditentukan oleh ciri-ciri pasir dan profil pantai. Parameter fizikal seperti taburan hujan dan kelajuan angin memainkan peranan yang penting dimana ia mempengaruhi perubahan profil pantai dan ciri-ciri pasir. Di kawasan kajian ini, terdapat lapan stesen dipilih dengan jarak kira-kira 2 kilometer diantara stesen kecuali pada stesen 3 an 4. Kordinat untuk stesen-stesen ini telah digunakan sama seperti kajian sebelum ini. Transit Sokkia C410 telah digunakan untuk mengambil bacaasn semasa aktiviti profil pantai. Selain itu, Kaedah Moment juga telah digunakan untuk mengira ciri-ciri pasir. Berdasarkan kepada perubahan profil pantai, semasa Monsun Timur Laut stesen 1, 5 dan 8 telah mengalami proses pemendapan dan proses hakisan. Manakala, stesen yang lain mengalami proses hakisan. Tambahan pula, profil pantai selepas musim monsun untuk setiap stesen telah berubah dimana, semua stesen berlaku proses hakisan. Berbanding dengan kajian lepas dimana, kesemua stesen mengalami proses pemendapan. Untuk menganalisa pasir, pasir telah di ambil daripada tiga tempat yang berbeza, di kawasan air surut, air pasang pertengahan dan air pasang rendah untuk setiap stesen. Salam kajian ini, pasir telah dianalisis berdasarkan parameter statistik taburan saiz butiran seperti saiz min, jenis susunan, kepencongan dan kurtosis. Pergerakan pasir telah ditentukan dengan melihat taburan saiz butiran, dimana saiz min, jenis susunan, kepencongan dan kurtosis adalah saiz sederhana, sederhana baik tersusun, sangat negative dan sangat leptokurtik semasa dan selepas monsun. Dalam kajian ini, pasir telah bergerak ke arah Utara di sepanjang Pantai Penarik. Tenaga ombak dan arah angin telah mempengaruhi pergerakan pasir ini. Perbezaan tenaga yang dikenakan pada morfologi yang berbeza bagi setiap bentuk muka bumi pantai boleh mencerminkan ciri-ciri pasir yang terdapat dikawasan tersebut.

Kata kunci : pantai, pasir, hakisan, monsun, taburan saiz butiran.