

MONSOON EFFECTS ON THE DISTRIBUTION OF TOTAL NITROGEN IN
SEDIMENT AT SETIU LAGOON, TERENGGANU, SOUTH CHINA SEA

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By

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PROJEK PENYELIDIKAN I DAN II**

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	iii
LIST OF FIGURES	iv
LIST OF ABBREVIATIONS	v
LIST OF APPENDICES	vi
ABSTRACT	vii
ABSTRAK	viii
CHAPTER 1: INTRODUCTION	1
1.1 Introduction	1
1.2 Objectives of study	6
CHAPTER 2: LITERATURE REVIEW	7
2.1 Importance of Nutrients	7
2.2 Sources of Nutrients	7
2.3 Nitrogen Compound	9
2.4 Nitrogen Cycle	11
2.5 Impacts of Nitrogen	15

CHAPTER 3: METHODOLOGY	17
3.1 Location of Sampling Sites	17
3.2 Hydrological Parameters	17
3.3 Glassware	20
3.4 Sampling Method	20
3.5 Analytical Techniques	21
3.5.1 Preparation of Standard Solution for Total Nitrogen	21
3.5.2 Preparation of total Nitrogen Analysis	23
3.5.3 Recovery Test	27
3.5.4 Statistical Analysis	27
CHAPTER 4: RESULTS	28
4.1 Hydrological Parameters	28
4.1.1 Temperature	28
4.1.2 Salinity	29
4.1.3 Dissolved Oxygen	29
4.1.4 pH Reading	30
4.1.5 Depth of Lagoon Water	30
4.2 Total Nitrogen Content in Sediment	34
4.3 Statistical Analysis	37

CHAPTER 5: DISCUSSION	38
5.1 Hydrological Parameters	39
5.2 Between Sampling Stations	41
5.2.1 Pre-monsoon (1 st Sampling)	41
5.2.2 Inter-monsoon (2 nd Sampling)	42
5.2.3 Monsoon (3 rd Sampling)	43
5.3 Between Seasons	44
5.4 Comparison to the Previous Study	46
CHAPTER 6: CONCLUSION	48
REFERENCES	50
APPENDICES	53
CURICULUM VITAE	70

LIST OF TABLES

Table		Page
3.1	Location of sampling stations in Setiu Lagoon, Terengganu recorded by portable GPS	19
4.1	Average of hydrological parameters reading during first, second, and third sampling seasons in Setiu Lagoon, Terengganu	31
4.2	Total nitrogen content in sediment (mg/kg) for each sampling stations during the first, second and third sampling seasons in Setiu Lagoon ,Terengganu	36
5.1	The average amount of precipitation (mm/day) in Kuala Terengganu for year 2007	40
5.2	Average amount of total nitrogen content in sediment at Setiu Lagoon ,Terengganu for year 2006 and year 2007	46

LIST OF FIGURES

Figure		Page
2.1	Diagram of the nitrogen cycle	12
3.1	Location of sampling station in Setiu Lagoon , Terengganu	18
3.2	Map of sampling station at Setiu Lagoon, Terengganu	18
3.3	Flow chart for procedures of total nitrogen in sediment	26
4.1	The temperature reading in Setiu Lagoon, Terengganu for each sampling station during pre-monsoon (1 st sampling), inter-monsoon (2 nd sampling) and monsoon seasons (3 rd sampling)	32
4.2	The salinity reading in Setiu Lagoon , Terengganu for each sampling station during pre-monsoon (1 st sampling), inter-monsoon (2 nd sampling) and monsoon seasons (3 rd sampling)	32
4.3	The dissolved oxygen (DO) reading in Setiu Lagoon, Terengganu for each sampling station during pre-monsoon (1 st sampling), inter-monsoon (2 nd sampling) and monsoon seasons (3 rd sampling)	33
4.4	The pH reading in Setiu Lagoon, Terengganu for each sampling station during pre-monsoon (1 st sampling), inter-monsoon (2 nd sampling) and monsoon seasons (3 rd sampling)	33
4.5	The depth reading in Setiu Lagoon, Terengganu for each sampling station during pre-monsoon (1 st sampling), inter-monsoon (2 nd sampling) and monsoon seasons (3 rd sampling)	34
4.6	The result of total nitrogen content in sediment for each sampling station during the pre-monsoon, inter-monsoon and monsoon seasons in Setiu Lagoon, Terengganu	37
5.1	Monthly rainfall in Kuala Terengganu for year 2007	41
5.2	Comparisons of total nitrogen content in sediment at Setiu Lagoon, Terengganu for year 2006 and 2007	47

LIST OF ABBREVIATIONS

%	-	percentage
°C	-	degree celcius
ppt or ‰	-	part per thousand
mg/L	-	milligram per liter
mg/kg	-	milligram per kilogram
µm	-	micrometer
mL	-	milliliter
ppm	-	part per million
nm	-	nanometer
L	-	liter
m	-	meter
nm	-	nanometer
N ₂	-	dinitrogen
NH ₄ ⁺	-	ionized ammonia
NO ₃ ⁻	-	nitrate
NO ₂ ⁻	-	nitrite
N ₂ O	-	nitrous oxide
CO ₂	-	carbon dioxide
NH ₂	-	amino
g	-	gram

LIST OF APPENDICES

Appendices	Page
1 Standard Curve of Total Nitrogen	53
2 Hydrological Parameters for All Seasons	54
3 Data of Total Nitrogen in Sediment for All Seasons	61
4 Statistical Analysis for Total Nitrogen in Sediment	64
5 Daily Observation Rainfall Data of Kuala Terengganu 2007	67

ABSTRACT

This project was carried out to study the effects monsoon towards the distribution of nitrogen in sediment around the Setiu Lagoon. This study was also conducted to determine the concentration of total nitrogen content in the sediment. In this study, the kjedahl method was used to obtain the total nitrogen content in the sediment. There were 14 sampling stations and three sampling trips was conducted which were during the pre-monsoon (September), inter-monsoon (October) and monsoon (December) season. The second sampling (inter-monsoon) showed the highest of total nitrogen contents with 2.696 ± 0.046 mg/kg, compared to the first sampling (pre-monsoon) of 1.748 ± 0.043 mg/kg and the third sampling (monsoon) of 1.738 ± 0.023 mg/kg. A statistical analysis using a Two Ways ANOVA has been applied and found that there is a significant different ($P < 0.05$) among the stations and the sampling periods. From this study, it was found that the total nitrogen contents in the sediment at Setiu Lagoon area were still in a low level.

KESAN MONSOON TERHADAP TABURAN NITROGEN DI DALAM TANAH DI LAGUN SETIU, TERENGGANU.

ABSTRAK

Kajian ini telah dijalankan untuk mengenalpasti kesan monsun terhadap taburan nitrogen di dalam tanah di sekitar kawasan Laguna Setiu. Kajian ini juga telah dikendalikan untuk menentukan tahap kandungan nitrogen di dalam tanah. Kaedah Kjeldahl telah digunakan di dalam kajian ini bagi menentukan kandungan nitrogen di dalam tanah. Terdapat 14 buah stesen penyampelan telah disenaraikan dan penyampelan telah dijalankan sebanyak tiga kali iaitu pada musim sebelum monsun (September), antara monsun (Oktober) dan monsun (Disember). Penyampelan kali kedua (antara monsun) menunjukkan kandungan jumlah nitrogen di dalam tanah yang tertinggi dengan 2.696 ± 0.046 mg/kg, berbanding dengan penyampelan sebelum monsun iaitu sebanyak 1.748 ± 0.043 mg/kg dan penyampelan kali terakhir (monsun) dengan kandungan nitrogen adalah sebanyak 1.738 ± 0.023 mg/kg. Analisis secara statistik telah dijalankan dengan menggunakan ANOVA dua hala dan terdapat perbezaan yang ketara dengan ($P < 0.05$) di antara stesen-stesen dan juga masa penyampelan. Daripada kajian ini, didapati bahawa jumlah kandungan nitrogen di dalam tanah di Laguna Setiu masih berada di tahap yang rendah.