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## Sedimentology and accretion rate of Pulau Busung mangrove Setiu, Terengganu / Nur Izeanty Hamidon.



PERPUSTAKAAN

**KOLEJ UNIVERSITI SAINS & TEKNOLOGI MALAYSIA  
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1100036867

21058 KUALA TERENGGANU  
**1100036867**

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HAK MILIK  
PERPUSTAKAAN KUSTEM

**SEDIMENTOLOGY AND ACCRETION RATE OF PULAU BUSUNG  
MANGROVES, SETIU, TERENGGANU**

By

Nurhanis binti Abbas

Research Report submitted in partial fulfillment of  
the requirements for the degree of  
Bachelor of Applied Science (Biodiversity Conservation and Management)

Department of Biological Sciences  
Faculty of Science and Technology  
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA  
2005

This project should be cited as:

Nurhanis, A. 2005. Sedimentology and accretion rate of Pulau Busung mangroves, Setiu, Terengganu. Undergraduate thesis, Bachelor of Applied Science in Biodiversity Conservation and Management, Faculty of Science and Technology, Kolej Universiti Sains dan Teknologi Malaysia, Terengganu. 106p.

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JABATAN SAINS BIOLOGI  
FAKULTI SAINS DAN TEKNOLOGI  
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: Sedimentology and accretion rate of Pulau Busung Mangroves, Setiu, Terengganu oleh Nurhanis binti Abbas, no. Matrik: UK 6682 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains Gunaan (Pemuliharaan dan Pengurusan Biodiversiti) Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

Disahkan oleh:

Penyelia Utama

Nama: PROF. DR. MOHD LOKMAN HUSAIN  
Pengarah  
Cop Rasmí: Institut Oseanografi  
Kolej Universiti Sains dan Teknologi Malaysia  
21030 Kuala Terengganu, Terengganu.

Tarikh: 6/4/15

Penyelia Kedua (jika ada)

Nama: Kasawani Ibrahim  
Pensyarah  
Cop Rasmí: Jabatan Sains Biologi  
Fakulti Sains dan Teknologi  
Kolej Universiti Sains dan Teknologi Malaysia  
21030 Kuala Terengganu.

Tarikh: 6/4/15

Ketua Jabatan Sains Biologi

Nama: PROF. MADYA DR. NAKISAH BT. MAT AMIN  
Ketua  
Cop Rasmí: Jabatan Sains Biologi  
Fakulti Sains dan Teknologi  
Kolej Universiti Sains dan Teknologi Malaysia  
(KUSTEM)  
21030 Kuala Terengganu.

Tarikh: 6/4/15

## **ACKNOWLEDGEMENT**

In the name of Allah, the Most Gracious, the Most Merciful  
Praise to the Allah Almighty for His blessings which enabled me to complete this thesis. I would like to express my deepest appreciation to my main supervisor, Prof. Dr. Mohd Lokman Husain for his invaluable guidance and constructive criticisms throughout this study. Sincere thanks are also due to my co-supervisor, Mr. Kasawani Ibrahim for the advice, suggestions and useful comments.

It is my pleasure to thank Mr. Mohd Nasir, Mr. Abdull Habir Alias, Mr. Karthigeyan, Mr. Yunus, Mr. Azam, Mr. Fathy Kameel, the staffs of Oceanography Institute (INOS), Netloft Technical Unit and Transportation Unit (KUSTEM) for their guidance, advice, cooperation and providing the necessary facilities throughout the period of the project.

Special appreciation to my beloved parents Mr. Abbas Abdullah and Madam Zaini Ismail, my brother and his wife (Mr. Hafidzi & Azlin) and my sisters (Hartinee , Hasnah & Adik Salwati) for their love, understanding and encouragement. Last but not least, I would like to express my acknowledgement to my friends and housemates; Hilmi, Saifullah, Siti, Izeanty, Zalila, Tini, Irni, Aziah, and all coursemates (Biodiversity 02/05) for their moral supports and help throughout the sweet and hard moments, may Allah bless all of you.

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## **LIST OF ABBREVIATIONS & SYMBOLS**

CEC Cation exchange capacity

GPS Global Positioning System

ha Hectare

ppt Parts per thousand

PSA Particle size analysis

Tr Transect

UV Ultra violet

$y^{-1}$  Per year

$\emptyset$  Phi

$\mu m$  Micron metre

$^{\circ} N$  North in degree

$^{\circ} E$  East in degree

$P > 0.05$  No significant differences

$P < 0.05$  Significant differences

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## **ABSTRACT**

A study on the accretion rate and surface sediment characteristics were conducted at Pulau Busung Mangroves, Setiu. The study on sedimentation rate on the surface mangroves is to understand the process and dynamic changes occurring on the surface of the mangroves. The surface sediment were collected from three transects (50 stations in June and 35 station in November). On average, the accretion rate on this study area is approximately 0.10 cm/month. The accretion rate and distribution of mangroves sediment varied between transects. The surface sediment of Pulau Busung was dominated by moderately coarse sediment with average mean grain size of 1.00 phi (moderately coarse sand). The average sorting, skewness and kurtosis were 0.91 phi (moderately sorted), 0.13 (positively skewed) and 2.60 phi (very leptokurtic) respectively.

## **KAJIAN CIRI-CIRI SEDIMEN PERMUKAAN DAN KADAR PEMENDAPAN DI PULAU BUSUNG, SETIU, TERENGGANU**

### **ABSTRAK**

Suatu kajian ke atas kadar enapan dan ciri-ciri sedimen di bahagian permukaan telah dijalankan di Pulau Busung, Setiu. Tujuan kajian ini dijalankan adalah untuk menentukan corak pemendapan di kawasan permukaan hutan paya laut yang berkaitan dengan kadar pemendapan dan ciri-ciri enapan di permukaan hutan paya laut dan untuk memahami proses dan perubahan dinamik yang berlaku di permukaan hutan paya laut. Sedimen di bahagian permukaan dikutip pada tiga transek yang berlainan ( 50 stesen pada bulan Jun dan 35 stesen pada bulan November). Secara amnya, kadar pemendapan adalah 0.10 cm/ bulan pada kajian ini. Kadar pemendapan dan taburan sedimen hutan paya laut adalah berbeza mengikut tempat. Sedimen di bahagian permukaan di Pulau Busung di dominasi oleh pasir sederhana kasar dengan purata saiz butiran 1.00 phi. Penyisihan, kepencongan dan kurtosis masing-masing adalah 0.91 phi (sisihan sederhana sempurna), 0.13 (kepencongan positif) dan 2.60 phi (sangat leptokurtik).