

PRELIMINARY STUDY OF MANGROVE FOREST SUCCESSION AT  
PULAU CHE HANG AND PULAU BESAR, SETUAI LAGOON

SITI MARIAM BINTI MUHAMMAD NOR

FAKULTI SAINS DAN TEKNOLOGI  
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA  
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**PRELIMINARY STUDY OF MANGROVE FOREST SUCCESSION AT PULAU CHE  
HAMID AND PULAU BESAR, SETIU LAGOON**

**By**

**Siti Mariam Binti Muhammad Nor**

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **PRELIMINARY STUDY OF MANGROVE FOREST SUCCESSION AT PULAU CHE HAMID AND PULAU BESAR, SETIU LAGOON** oleh **SITI MARIAM MUHAMMAD NOR**, no. Matrik: UK 6964 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh ijazah **SAINS GUNAAN (PEMULIHARAAN DAN PENGURUSAN BIODIVERSITI)**, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

Disahkan oleh:

Penyelia Utama

Nama: **PROF. MADYA SULONG BIN IBRAHIM**  
*Fellow*

Cop Rasmi: Institut Oseanografi  
Kolej Universiti Sains dan Teknologi Malaysia  
Mengabang Telipot  
21030 Kuala Terengganu.

Tarikh: 26/4/2005

Penyelia Kedua (jika ada)

Nama:

Cop Rasmi

Tarikh: 26/4/2005

Ketua Jabatan Sains Biologi

Nama: **PROF. MADYA DR. NAKISAH BT. MAT AMIN**  
*Ketua*

Cop Rasmi: Jabatan Sains Biologi  
Fakulti Sains dan Teknologi  
Kolej Universiti Sains dan Teknologi Malaysia  
(KUSTEM)  
21030 Kuala Terengganu.

Tarikh: 25/4/05

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## **LIST OF ABBREVIATIONS**

DBH	Diameter breast height
Ppt	Part perthousand
Q	Quadrat
Ha	Hectare

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## ABSTRACT

Research on mangrove forest succession is inadequately discussed nowadays. This study is a preliminary study of mangrove forest succession at Pulau Che Hamid and Pulau Besar, Setiu Lagoon. Sampling and observation has been conducted in order to illustrate the succession of mangrove forest at these islands. A comparison between Pulau Che Hamid and Pulau Besar in term of species composition has been determined. Pulau Che Hamid has been dominated mostly by seedlings which represented 78% (35 000 seedlings perha). Meanwhile the saplings covered 21% or 9600 saplings perha and trees only covered 1% similarly to 300 trees. The abundant of seedlings indicate that there is natural regeneration occupying the land with the seedlings is belonging to *Ceriops decandra*. Meanwhile at Pulau Besar, the seedlings and saplings also can be found numerously as they covered 68% (30 000 seedlings perha) and 30% (13200 saplings perha) from total extent respectively. However the trees represented 2% as equal to 900 trees perha at Pulau Besar. The seedlings and saplings mostly dominated by *Ceriops decandra* and *Bruguiera cylindrica*. The occurrence of seedlings and saplings indicate there also regeneration reoccurring with their mother tree. This preliminary study can be seen as zones on these islands consisting of front, middle and back zones which back zones is middle of the island. The pattern colonization constituent of mangrove pioneer species colonizing the front zone, while mixed mangrove dominated the middle zone and beach vegetation occupying at back zone at both islands.

# KAJIAN AWAL HUTAN PAYA LAUT YANG TELAH MENGALAMI SESARAN DI PULAU CHE HAMID DAN PULAU BESAR, SETIU LAGOON

## ABSTRAK

Kajian tentang Hutan Paya Bakau yang telah tersesar kurang dibincangkan secara meluas. Kajian ini adalah kajian awal tentang Hutan Paya Bakau yang telah mengalami sesaran dijalankan di Pulau Che Hamid dan Pulau Besar, Setiu Lagoon. Persampelan dan pemerhatian telah dijalankan ke atas pulau tersebut untuk mengetahui keadaan tentang Hutan Paya Laut yang telah tersesar. Sejumlah 35 000 perha anak benih atau 78% tumbuh di Pulau Che Hamid. Anak pokok pula mewakili 21% atau 9600 anak pokok perha dan pokok pula hadir dalam 1% bersamaan 300 pokok perhektar. Kelimpahan anak benih pada Pulau Che Hamid menunjukkan pertumbuhan semulajadi sedang berlaku. Sementara itu, Pulau Besar pula kebanyakannya ditumbuhi oleh pokok terdiri daripada campuran Hutan paya Laut dan pantai. Anak benih juga didapati dalam bilangan banyak di Pulau Besar di mana mencatatkan 68%(30 000 perhektar) dan 30%(13 200 perhektar) daripada keseluruhan kawasan kajian dimana ia ditumbuhi oleh anak benih dan anak pokok *Ceriops decandra* dan *Bruguiera cylindrica*. Pokok pula hanya mewakili 2%(900 perhektar).Kelimpahan anak benih dan anak pokok menunjukkan kehadiran mereka berdekatan dengan induk pokok tersebut. Kajian awal ini boleh dilihat berpandukan penzonan atas pulau ini iaitu zon depan, tengah dan belakang dimana zon belakang ini terletak ditengah pulau. Corak pengkolonian dapat dilihat sebagai tumbuhan perintis menkoloni kawasan berdekatan dengan laut, manakala tumbuhan campuran hutan paya laut dan air tawar mendominasi di zon seterusnya dan tumbuhan pantai tumbuh di kawasan tengah pulau.