

SPATIAL DISTRIBUTION AND SEAGRASS MAPPING AT
SETIU WETLANDS, TERENGGANU

RUSTAM BIN MORAT

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

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Terengganu / Rohaniza Mohamed Zin.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

1100088857		

Lihat sebelah

HAK MILIK
PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

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**SPATIAL DISTRIBUTION AND SEAGRASS MAPPING AT SETIU
WETLANDS, TERENGGANU**

By

Rustam Bin Morat

Bachelor of Science (Marine Biology)

**Research Report submitted is partial fulfilment of the requirement for the
degree of Bachelor of Science (Marine Biology)**

Department of Marine Science

Faculty of Maritime Studies and Marine Science

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**DEPARTMENT OF MARINE SCIENCE
 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:

Spatial Distribution and Seagrass Mapping at Setiu Wetlands, Terengganu by Rustam Bin Morat, Matric No. UK 18112 have been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the Degree of Science (Marine Biology), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

Verified by:

Christie A. Cross

DR. SITI AISHAH ABDULLAH @ CHRISTINE A. CROSS
 Penolong Pendaftar
 Fakulti Pengajian Maritim dan Sains Marin
 Universiti Malaysia Terengganu
 21050 Kuala Terengganu

Principal Supervisor

Name: Dr. Siti Aishah Bt. Abdullah

Official stamp:

Date: 27/4/2011

Razak bin Zakariya

Head of Department of Marine Science

Name: Dr. Razak bin Zakariya

Official stamp:

Date: 29/4/11

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

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LIST OF ABBREVIATIONS

g	-	Gram
mm	-	millimetre
ppt	-	part per thousand
cm	-	centimetre
s.e	-	standard error
mg	-	milligram
L	-	Litre
°C	-	degree Celsius
km	-	kilometre

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ABSTRACT

There is no study regarding to seagrass distribution at Setiu Wetlands for a long time period. Because of that reason, this study was conducted. The main objective of this study is to identify the seagrass species present at Setiu Wetlands and also to map its distribution. Sampling were designed and conducted to collect the seagrass and sediment samples, brought back for further analysis and identification work at the laboratory. In-situ data such as hydrological parameters and seagrass patch coordinates were also recorded. Four species of seagrass from sixteen stations were identified: *Halodule pinifolia*, *Halophila beccarii*, *Halophila ovalis* and *Halophila minor*. *Halophila minor* is a rediscovered species while *Halophila beccarii* is first reported for Setiu Wetlands. Furthermore, there are two varieties of *Halophila ovalis* identified: small and big leaved variant. Based on the seagrass distribution in 2003, there is no variant of *Halophila ovalis* identified. The dominant seagrass species in this study is *Halodule pinifolia*, where this species also consist of two variants: long and short leaved variant. A study on biomass showed that the biomass of belowground for both species (*Halophila* species and *Halodule pinifolia*) has the higher value compare to biomass of above ground. The use of technology in mapping has help a lot in conservation work and to monitor at the same time.

ABSTRAK

Kajian berkaitan taburan rumput laut dijalankan di tanah Lembab Setiu, Terengganu. Tujuan utama kajian ini dijalankan adalah untuk memeta taburan rumput laut selain bertujuan mengenalpasti spesies-spesies rumput laut yang terdapat di kawasan tersebut. Koordinat dan data in-situ seperti pH, oksigen terlarut dan suhu turut dicatat semasa kajian dijalankan. Sampel rumput laut yang dikutip akan dibawa pulang ke makmal untuk proses pengecaman dan penamaan. Secara keseluruhannya, terdapat empat spesies rumput laut di kawasan ini iaitu, *Halodule pinifolia*, *Halophila beccarii*, *Halophila minor* dan *Halophila ovalis*. *Halophila beccarii* adalah rekod baru manakala *Halophila minor* adala penemuan semula dalam kajian ini. Spesies dominan di Tanah Lembab Setiu adalah *Halodule pinifolia* dan adalah dicadangkan bahawa keadaan persekitaran di Tanah Lembab Setiu adalah sesuai untuk spesies ini membiak. Kajian biojisim turut mendapati bahagian bawah tanah (below ground) akan memberikan nilai biomass yang lebih berbanding bahagian atas tanah (above ground). Ternyata penggunaan teknologi dalam kerja-kerja pemetaan amat membantu dalam memastikan usaha pemuliharaan rumput laut dapat dijalankan dengan lebih cekap dan efisien.