

DETERMINATION OF MICROPHYTOPLANKTON IN
TERENGGANU COASTAL AREA DURING SOUTHWEST
MONSOON USING SATELLITE IMAGERY

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SCHOOL OF MARINE SCIENCE AND ENVIRONMENT
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**DETERMINATION MICROPHYTOPLANKTON IN TERENGGANU COASTAL
AREA DURING SOUTH-WEST MONSOON USING SATELLITE IMAGERY**

By

Norsyaidah bt Md Chan

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

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**DECLARATION AND VERIFICATION REPORT
FINAL YEAR RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled Determination Microphytoplankton In Terengganu Coastal Area During South-West Monsoon Using Satellite Imagery by Norsyaidah bt Md Chan, Matric Number UK25521 have been examined and all errors identified have been corrected. This report is submitted to the School of Marine Science and Environment as partial fulfilment towards obtaining Degree of Bachelor of Science (Marine Biology), Universiti Malaysia Terengganu.

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LIST OF ABBREVIATIONS

mg	-	milligram
Chl a	-	Chlorophyll a
ml	-	milliliter
mg ³	-	milligram cube

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ABSTRACT

Microphytoplankton are the microscopic marine plant that wander in water column. The objectives of this study are to determine the microphytoplankton from ground survey, to determine the chlorophyll concentration in Terengganu coastal area using satellite imagery and also to determine the relationship between chlorophyll a concentration and microphytoplankton. This study being conducted in Marang, Kemaman and Bidong Island coastal water and divide to few layer of water column. Sampling was being done during southwest monsoon(5 July until 14 September 2013). The microphytoplankton divided to Ochrophyta, Cyanophyta and Myzozoa. Among all species, *Coscinidiscus*, *Chaetoceros* and *Trichodesmium* were dominantly found in all station. In Kemaman, the density of Ochrophyta and Cyanophyta were 328214 no. of cell/ mL, and 49087.5 no. of filament / mL. Marang show the density of Ochrophyta were 917235 no. of cell/ mL and Cyanophyta were 100065 no. of filament / mL. Bidong Island had density of Ochrophyta in about 6571 no. of cell/ mL and 2122 no. of filament / mL.

Keywords:Microphytoplankton, satellite imagery, chlorophyll a.

ABSTRAK

Penentuan Mikrofitoplankton di Perairan Terengganu semasa Monsun Barat Daya Menggunakan Imej Satelit

Mikrofitoplankton adalah tumbuhan marin mikroskopik yang dijumpai dalam lapisan air laut. Objektif kajian ini adalah untuk menentukan mikrofitoplankton daripada kawasan kajian, menentukan kepekatan klorofil di kawasan persisiran pantai Terengganu menggunakan imej satelit dan menentukan hubungan diantara kepekatan klorofil a dan mikrofitoplankton. Kajian ini dijalankan di persisiran pantai Marang, Kemaman dan Pulau Bidong dan dibahagikan pada beberapa lapisan air laut. Penyampelan dilakukan sewaktu monsun barat daya (5 Julai hingga 14 September 2013). Mikrofitoplankton dibahagikan kepada Ochrophyta, Cyanophyta dan Myzozoa. *Coscinidiscus*, *Chaetoceros* and *Trichodesmium* adalah sepsis dominan yang boleh dijumpai di dalam semua stesen. Di Kemaman, densiti Ochrophyta dan Cyanophyta ialah 328214 no. of sel/ mL, and 49087.5 no. of filament/ mL. Marang menunjukkan densiti Ochrophyta bernilai 917235 no. of sel/ mL dan Cyanophyta ialah 100065 no. of filamen / mL. Densiti Ochrophyta di Pulau Bidong ialah 6571 no. of sel/ mL and 2122 no. of filamen / mL.

Kata kunci: Mikrofitoplankton, imej satellite, klorofil a.