

THE STUDY OF PHYSICAL PARAMETERS AND CURRENT DYNAMICS OF  
KUALA TERENGGANU COASTAL ZONE DURING TRANSITIONAL PERIOD OF  
NORTHEAST AND SOUTHWEST MONSOON.

POH BAN TAT

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU

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KUALA TERENGGANU COASTAL ZONE DURING TRANSITIONAL PERIOD OF  
NORTHEAST AND SOUTHWEST MONSOON.

By

Poh Ban Tat

Research Report submitted in partial fulfillment of  
the requirement for the degree of  
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**DEPARTMENT OF MARINE SCIENCE  
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU**

**DECLARATION AND VERIFICATION  
FINAL YEAR RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled:

**The Study of Physical Parameters and Current Dynamics of Kuala Terengganu Coastal Zone during Transitional Period of Northeast and Southwest Monsoon by POH BAN TAT, Matric No. UK16950** has 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 Science)**, Faculty of Maritime Studies and Marine Science, University Malaysia Terengganu.

Verified by:

Principal Supervisor

Name: Dr. Mohd Fadzil Mohd Akhir

Official stamp:

Date: 25/4/11

Head Department of Marine Science

Name: Dr. Razak bin Zakariya

Official stamp:

Date: 29/4/11

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## ABBREVIATION

m/s	metre per second
ppt	parts per thousand
°	degree
°C	degree Celsius

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## **ABSTRACT**

The study was conducted at the coastal zone along Kuala Terengganu which is between Pulau Kapas and Pulau Bidong. The physical parameters such as temperature, salinity, current speed and current direction were recorded using Hydrolab Data Sonde 4a and Acoustic Doppler Current Profiler. The study was conducted during March, April, July and October of 2010 where the sea is suitable for sampling so that the study of the physical parameter and current dynamic can be done. The data acquired was then processed using software, Microsoft Excel and MATLAB. From the result, the current around the coastal zone of Kuala Terengganu differ during different monsoon season. The current flow away from the coastal zone at the end of Northeast Monsoon (March) and flow to the north when the Southwest Monsoon starts (October). The change in temperature and salinity also closely related to monsoon. For further study, more frequent sampling can be planed so that more information can be acquired.

**Kajian diatas parameter fizikal dan dinamik arus di kawasan persisiran Kuala Terengganu ketika perukaran monsoon antara Monsoon Timur Laut dan Monsoon Barat Selatan**

**ABSTRAK**

Kajian ini dijalankan sepanjang kawasan persisiran Kuala Terengganu iaitu di antara Pulau Kapas dan Pulau Bidong. Parameter fizikal seperti suhu air, saliniti air, kelajuan arus dan arah arus direkod dengan menggunakan Hydrolab Data Sonde 4a dan Acoustic Doppler Current Profiler. Kajian ini dijalankan pada bulan Mac, April, July dan Oktober tahun 2010 dimana laut itu sesuai untuk pengambilan data supaya kajian ini dapat dijalankan dengan lancar. Data tersebut akan diproses menggunakan Microsoft Excel dan MATLAB. Daripada kajian ini, arus di kawasan persisiran Kuala Terengganu berubah mengikut monsoon. Arus mengalir menjauhi daratan Kuala Terengganu sebaik sahaja Monsoon Timur Laut berakhir dan ke arah utara sebelum Monsoon Barat Selatan mula sepenuhnya. Perubahan suhu dan saliniti air di kawasan persisiran Kuala Terengganu turut berkait rapat dengan monsoon. Untuk kajian yang selanjutnya, pengumpulan data harus dijalankan lebih kerap supaya informasi yang lebih teliti dapat direkodkan.