

DISTRIBUTION OF MACROBENTHOS AND MICROBENTHOS OF  
COASTAL WATERS OF TERTER ISLAND AND BAHANG

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**DISTRIBUTION OF MACROBENTHOS AND MEIOBENTHOS OF COASTAL  
WATERS OF TERENGGANU AND PAHANG**

**BY  
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JABATAN SAINS SAMUDERA  
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PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

Taburan makrobentos dan meiobentos di perairan Terengganu dan Pahang oleh **Sugana a/p Appalasaamy**, nombor matrik **UK7410** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Samudera sebagai memenuhi sebahagian daripada keperluan memperoleh **Ijazah Sarjana Muda Biologi Marin Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.**

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## LIST OF ABBREVIATIONS

Ave.	Average
Cm	centimeter
°N	Degree North
°E	Degree East
e.g	Example
Fig.	Figure
m <sup>2</sup>	Meter Square
%	Percentage
Sp.	Species
S.D.	Standard deviation
Sg.	Sungai
Ind/m <sup>2</sup>	Individual per Meter Square

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## ABSTRACT

The aim of this study was to perform a survey on the distribution of macrobenthos and meiobenthos in coastal waters of Terengganu and Pahang. This research was mainly objected to determine the differences of density of benthic fauna between pre monsoon and post monsoon. Bottom sediment samples was obtained by using Smith –McIntyre grab. Highest density of benthic fauna was found in Terengganu Coast especially during pre monsoon. Nearshore areas found to support more density and diversity of benthic fauna than offshore areas. There were 16 taxa of macrobenthos and 20 taxa of meiobenthos were encountered from Terengganu Coast. In Pahang coast, there were 9 taxa of macrobenthos and 9 taxa of meiobenthos were identified. Polychaeta was the dominant group of macrobenthos in both Terengganu and Pahang Coast. Abundance taxon for meiobenthos was Nematoda in Terengganu coast while copepoda in Pahang Coast. In Terengganu coast, the highest diversity index for macrobenthic community ( $H' = 2.1453$ ) was found in second station of transect four during pre monsoon while for meiobenthos, the highest diversity index ( $H' = 2.0138$ ) was found in fourth station of third transect during pre monsoon. In Pahang coast, highest diversity index for macrobenthos ( $H' = 1.8332$ ) was found in first station of transect six during post monsoon. Highest diversity index for meiobenthic community ( $H' = 1.4448$ ) was found in second station of second transect during pre monsoon. Muddy type bottom substrate in Terengganu coast and coarse type bottom sediment in Pahang coast support high density and diversity of benthic fauna.

## ABSTRAK

Kajian tentang taburan makrobentos dan meiobentos dijalankan di perairan Terengganu dan Pahang. Aspek utama yang dikaji adalah tentang taburan komuniti bentos sebelum musim monsun dan selepas musim monsun. Sampel tanah diambil dari dasar laut dengan menggunakan grab Smith-McIntyre. Densiti organisma bentik yang paling tinggi diperolehi daripada perairan Terengganu khasnya sebelum musim monsun. Densiti organisma bentik adalah tinggi di kawasan berhampiran pantai dan kurang di kawasan yang sangat jauh dari pantai. Terdapat 16 taksa bagi makrobentos dan 20 taksa bagi meiobentos dijumpai di perairan Terengganu. Di perairan Pahang, terdapat 9 taksa makrobentos dan 9 taksa meiobentos dijumpai. Polychaeta adalah kumpulan makrobentos yang paling dominan di perairan Terengganu dan Pahang. Bagi kumpulan meiobentos, nematoda paling dominan di perairan Terengganu manakala copepoda adalah paling dominan di perairan Pahang. Di perairan Terengganu, Indeks kepelbagaian spesis yang paling tinggi bagi makrobentos ( $H' = 2.1453$ ) dijumpai di stesen kedua dalam transek keempat sewaktu sebelum monsun. Bagi kumpulan meiobentos, Indeks kepelbagaian spesis yang paling tinggi ( $H' = 2.0138$ ) adalah dijumpai di stesen terakhir dalam transek ketiga. Di perairan Pahang, Indeks kepelbagaian spesis yang paling tinggi bagi makrobentos ( $H' = 1.8332$ ) dijumpai di stesen pertama dalam transek keenam sewaktu selepas monsun. Bagi kumpulan meiobentos, Indeks kepelbagaian spesis yang paling tinggi ( $H' = 1.4448$ ) adalah dijumpai di stesen kedua dalam transek kedua. Kedua-dua jenis tanah iaitu berlumpur di perairan Terengganu dan bertanah kasar di perairan Pahang menjadi habitat bagi pelbagai jenis organisma bentik.