

HYDROGRAPHIC STUDY OF SETU MEELAND ESTUARY,  
CHENNAI USING ECHO SOUNDER

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**BATHYMETRY STUDY OF SETIU WETLAND ESTUARY, TERENGGANU  
USING ECHO SOUNDER**

**By**

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Research Report submitted in partial fulfilment of the  
Requirements for the degree of  
Bachelor of Science (Marine Science)

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  
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**APPROVAL AND CERTIFICATION FORM  
RESEARCH PROJECT I AND II**

I certify that the research report entitled: **BATHYMETRY STUDY OF SETIU WETLAND ESTUARY USING ECHO SOUNDER** by **MOHD IZUDDIN BIN IBRAHIM**, Matric No. **UK 9760** have been read and all corrections recommended by the examiners have been done. This research report is submitted to the Department of Marine Science in partial fulfillment of the requirements for the degree of **Bachelor of Science in Marine Science**, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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## ABSTRACT

Bathymetry study was conducted at Setiu Wetland estuary which are located along the coast facing the South China Sea in the north of the state of Terengganu, belonging to the District of Setiu in the East coast of Peninsular Malaysia. Setiu Wetlands (5°36'N to 5°42'N and 6°27'E to 6°28'E) is situated approximately 60 km north of the state capital, Kuala Terengganu. This bathymetry study discussed about the sea floor mapping in Setiu estuary. Bathymetry study was conducted at Setiu Wetland estuary and near shore estuary (sea) by using portable echo sounder for collection data. 'Hypack-max' and 'Surfer 8' software were used to process and analysis data. Final output for this study was the sea floor map of Setiu estuary. Depth range in Setiu Wetland estuary ranged between 0.5meter to 4 meter depth. While at the near shore estuary (sea) ranged between 4 meter to 10 meter depth.

Setiu Wetland estuary was chosen for this study area is because this area is important as a passage for fishermen boat to or from the sea. The local population residing in the Setiu Wetlands is depending on the sea and wetlands resources for their subsistence and to generate income, particularly through fisheries. This area is also suitable for their fishing activity such as cage cultural and prawn farming. These water bodies are highly valuable ecosystems in which salt and fresh water mix and provide a rich habitat for living resources.



## ABSTRAK

Kajian bathymetry ini dijalankan di muara Setiu yang terletak di Pantai Timur Semenanjung Malaysia. Setiu terletak 60 km dari Kuala Terengganu, iaitu kawasan persisiran pantai Setiu terletak dengan keadaan menghadap ke laut China Selatan. Lokasinya ialah pada  $5^{\circ}36'N$  hingga  $5^{\circ}42'N$  dan  $6^{\circ}27'E$  hingga  $6^{\circ}28'E$ . Kajian ini membincangkan kawasan muara Sg. Setiu dari segi pemetaan kawasan dasar. Kajian bathymetry ini dijalankan di kawasan muara Sg. Setiu dan kawasan muara pantai (laut) dengan menggunakan alat 'echo sounder' untuk mendapatkan data sebagai input. Perisian 'Hypack-Max' dan 'Surfer 8' digunakan untuk memproses dan menganalisa data. Hasil akhir kajian adalah merupakan peta kawasan dasar muara Sg. Setiu. Dalam kajian ini, kedalaman kawasan muara ialah antara 0.5 meter hingga 4 meter. Manakala kedalaman kawasan mulut muara yang menghadap ke laut adalah di antara 4 meter hingga 10 meter.

Kawasan muara Sg. Setiu dipilih sebagai kawasan kajian adalah kerana kawasan ini penting dari segi laluan keluar masuk kapal-kapal nelayan ke laut. Kebanyakan penduduk tempatan di kawasan Setiu adalah bergantung kepada aktiviti penangkapan ikan sebagai sumber pendapatan. Kawasan muara Sg. Setiu juga sesuai untuk aktiviti perikanan seperti pembenihan ikan air tawar dan pembelaan udang. Ini kerana kawasan muara sungai ini mengandungi kandungan garam dan campuran air tawar dan air masin yang kandungannya penting untuk hidupan akuatik membiak.