

TOTAL SUSPENDED SOLID (TSS) MONITORING IN  
BIDONG ISLAND BY USING REMOTE SENSING

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**TOTAL SUSPENDED SOLID (TSS) MONITORING IN BIDONG ISLAND BY  
USING REMOTE SENSING**

**By**

**Dessy Dira Binti Kais**

**Research Report submitted in partial fulfillment of  
the requirements 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 REPORT  
FINAL YEAR RESEARCH PROJECT**

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

**Total Suspended Solid (TSS) Monitoring In Bidong Island By Using Remote Sensing by Dessy Dira Binti Kais, Matric No. UK 18224** 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 on Bachelor of Science (Marine Science)**, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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## **LIST OF ABBREVIATIONS**

<b>TSS</b>	<b>-</b>	<b>Total Suspended Solid</b>
<b>mg</b>	<b>-</b>	<b>milligram</b>
<b>L</b>	<b>-</b>	<b>Litre</b>
<b>mL</b>	<b>-</b>	<b>millilitre</b>
<b>m</b>	<b>-</b>	<b>Meter</b>
<b>°C</b>	<b>-</b>	<b>degree Celsius</b>

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## **ABSTRACT**

This study was conducted in Bidong Island. There are two times of sampling. The first sampling was done in March 2010 while the second sampling was done in July 2010. There are 32 stations that set up in this study. The 32 stations are covered the whole Bidong Island. The water samples were collected by using Niskin water sampler according to the depth of each station. Then, the water samples were filtered and the filter papers were kept in ice box as the preservation step. Then, filter papers were dried and weighted. The TSS formula was applied to calculate the concentration of TSS. The image that has been used in this study is QuickBird satellite image that was captured in 2007. The images are corrected and analysed. There are lots of differences of TSS data for the first and second sampling. The TSS concentrations are affected by many factors such as land runoff, domestic wastes and so on.

Pemantauan Jumlah Pepejal Terampai di Pulau Bidong dengan menggunakan kaedah  
Penderiaan Jauh

**ABSTRAK**

Kajian ini telah dijalankan di Pulau Bidong sebanyak dua kali. Kali pertama adalah pada bulan Mac 2010 dan yang kedua pula adalah pada bulan Julai 2010. Terdapat 32 stesyen yang telah ditetapkan untuk kajian ini. Di mana, kesemua stesyen ini merangkumi keseluruhan kawasan Pulau Bidong. Sampel air diambil dengan menggunakan Penyampel air "Niskin" mengikut kedalaman air setiap stesyen. Kemudian, sampel air ditapis dan kertas turas akan disimpan di dalam bekas ais sebagai langkah pengawetan. Seterusnya, kertas turas akan dikeringkan dan ditimbang. Kepekatan TSS dikira dengan menggunakan formula TSS. Imej satelit yang digunakan dalam kajian ini adalah imej QuickBird tahun 2007. Imej tersebut diperbetulkan dan dianalisa. Terdapat perbezaan yang dapat diperhatikan pada data TSS untuk kajian kali pertama dan kali kedua. Kepekatan TSS dipengaruhi oleh pelbagai faktor seperti limpasan tanah, bahan buangan domestik dan lain-lain lagi.