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FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

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Determination of total susoended sediment during the neap tide and spring tide at Setiu Wetland, Setiu, Terengganu / Mohamad Farizal Ismail.

Lihat sebelah

DETERMINATION OF TOTAL SUSPENDED SEDIMENT DURING THE NEAP TIDE AND SPRING TIDE AT SETIU WETLAND, SETIU, TERENGGANU.

Mohamad Farizal bin Ismail

A thesis submitted in partial fulfillment of the
requirements for the award of the degree of
Bachelor of Science (Marine Science)

Department of Marine Science
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FACULTY OF MARINE STUDIES & MARINE SCIENCE, UNIVERSITI MALAYSIA TRENGGANU (UMT), MALAYSIA.

DECLARATION AND APPROVAL FOR FINAL YEAR PROJECT (I & II)

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Title: DETERMINATION OF TOTAL SUSPENDED SEDIMENT DURING THE NEAP TIDE AND SPRING TIDE AT SETIU WETLAND, SETIU TERENGGANU.

Hereby I confirm that I have read, checked and all errors has been repaired. This thesis is to fulfill the condition to achieve Bachelor of Science (Marine Science), Faculty of Marine Studies & Marine Science, University Malaysia Terengganu (UMT).

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I hope this thesis will perform in ways not only for the purpose of references but also a simple readable material to be enjoyed.

ABSTRACT

Determination of Total Suspended Sediment (TSS) at Setiu estuaries was conducted on 23rd and 24th September during the neap tide and 29th and 30th September during the spring tide. Samples were taken at two stations for 10 hours with an interval time of 15 minutes. The amount of Total Suspended Sediment was higher with the increasing of current velocity. The current velocities were higher during the ebb tide. The average for current velocities during the neap tide were 0.0623 ms^{-1} (ebb tide) and 0.04 ms^{-1} (flood tide) for station one while 0.0654 ms^{-1} (ebb tide) and 0.0412 ms^{-1} (flood tide) for station two. Meanwhile, the average for current velocities during spring tide was 0.0510 ms^{-1} (ebb tide) for station one and 0.0488 ms^{-1} (ebb tide) for station two. The total suspended sediment is higher during the neap tide with 2.3733 kg/hr (station one) and 2.6167 kg/hr (station two). While, the Total Suspended Sediment is much lower during spring tide with 1.2963 kg/hr (station one) and 1.1846 kg/ hr (station two). The Total Suspended Sediment was higher during the neap tide compared to spring tide, caused by the tidal elevation and additional of imported sediment at the estuaries during the flood tide.

ABSTRAK

Penentuan jumlah enapan terampai di Setiu lagoon telah dijalankan pada 23 dan 24 September semasa air pasang surut anak, 29 dan 30 September bagi air pasang perbani. Sampel telah diambil di dua stesen selama sepuluh jam dengan selang masa 15 minit. Jumlah enapan terampai di dalam air adalah tingi dengan peningkatan kelajuan air. Dan kelajuan air adalah tinggi ketika fasa surut. Purata kelajuan air ketika pasang surut anak adalah 0.0623 ms^{-1} (air surut) dan 0.0400 ms^{-1} (air pasang) untuk stesen satu manakala 0.0654 ms^{-1} (air surut) and 0.0412 ms^{-1} (air pasang) untuk stesen dua. Sementara itu, purata kelajuan air ketika pasang surut perbani adalah 0.0510 ms^{-1} (air surut) untuk stesen satu dan 0.0488 ms^{-1} (air surut) untuk stesen dua. Jumlah enapan terampai adalah tinggi ketika pasang surut anak 2.3733 kg/hr (stesen satu) and 2.6167 kg/hr (stesen dua). Manakala, jumlah enapan terampai adalah lebih rendah ketika pasang surut perbani dengan 1.2963 kg/hr (stesen satu) and 1.1846 kg/ hr (stesen dua). Jumlah enapan terampai adalah lebih tinggi ketika pasang surut anak berbandng pasang surut perbani adalah disebabkan oleh ketinggian air dan tambahan sedimen yang diimport ketika air pasang.