

THE DETERMINATION OF ACCELERATION RATE IN
FRONT-IMPACT COLLISIONS WITH A RIGID BARRIER

ANDREW J. HARRIS

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

UNIVERSITY OF CALIFORNIA, BERKELEY, CALIFORNIA 94720

**THE DETERMINATION OF ACCRETION RATE IN TOK BALI LAGOON,
PASIR PUTEH, KELANTAN**

NOR JANNATUL AFFANDI
(B. Sc. of Marine Science)
UK 7975

**A Project report submitted in partial fulfillment of the requirement for the degree of
Bachelor of Science
(Marine Science)**

**FACULTY OF SCIENCE AND TECHNOLOGY
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
(KUSTEM)
2006**

This project report should be cited as follows:

N.J. Affandi. 2006. The Determination of Accretion Rate in Tok Bali Lagoon, Pasir Putih, Kelantan. Undergraduate Thesis, Bachelor of Science (Marine Science). Faculty of Science and Technology, Kolej Universiti Sains dan Teknologi Malaysia.

No part of this project report may be reproduced by any mechanical, photographic or electronic process, or in the form of phonographic recording, nor may it be stored in a retrieval system, transmitted or other wise copied for public or private use, without written permission from the author and the supervisor(s) of the project.

ACKNOWLEDGEMENT

Alhamdulillah, Thanks to Allah for His blessing. Special thanks especially to my supervisor Professor Dr Mohd Lokman Hussain and my co-supervisor Mr. Mohd Suffian Idris as their support and their criticism. Without them, I would disable to finish my thesis. The very special appreciation to Mr. Nasir Mohammad for his guidance. Also not to forget all staffs in Institute of Oceanography (INOS), Faculty of Science and Technology and Netloft.

My warmth thanks to my family especially my mom, for her support and my dad for his non-stop advice. My brother Abang Wan, my sisters A'in and Wani for their non-stop criticism. I love u all always and forever.

I will not forget my friends especially Nadhr, Abduh, Dawood and Ayen. Thanks for helping me during sampling, I know we had a very hard situation, I'm sorry and believe me, I had a very good time during our sampling. And also all my friends Alipan, Jupan, Botakkun, Lala Prisyel, Oni-chan, Tonny and Raymond and all my course mate. Also my housemate Zaff, Wynn, Marr, Ju, Syued and Reza. Not to forget for SA, thanks for your support and courage, you give me strength to get through all this year.

Sometimes the best and the most beautiful things in the world cannot be seen, cannot be touched, but can be felt in the heart.

Thank you.

Nor Jannatul Affandi @ Ijann

ABSTRAK

THE DETERMINATION OF ACCRETION RATE IN TOK BALI LAGOON, PASIR PUTEH, KELANTAN

Penentuan pemendapan sedimen telah dijalankan di kawasan Tok Bali, di mana kawasan ini adalah sebuah lagun yang ditutupi oleh *sandbank* di kawasan pantainya. Kajian ini dijalankan untuk mengetahui jika kawasan ini mengalami hakisan atau pemendapan sedimen. Pulau yang mewakili untuk menentukan pemendapan sedimen adalah berdekatan dengan laluan air yang keluar dan masuk ketika pasang surut air berlaku. Kajian mendapati pada musim monsun, sediment termendap sebanyak 0.88 sm/bulan. Manakala, pada musim selepas monsun hanya 0.50 sm/bulan. Ini bermakna musim selepas musim monsun, kawasan ini mengalami hakisan. Ciri-ciri sedimen yang berada di permukaan pulau tersebut adalah pasir halus. Manakala nilai penyisihan adalah sisihan sederhana sempurna dan nilai kepencongan adalah kepencongan negatif. Bagi kurtosis ianya adalah jenis yang sangat leptokurtik. Ini bermakna kawasan ini hanya di tindak oleh pasang surut air yang datang dari Sungai Semerak kerana pada musim monsun berlaku paras pasang surut air tinggi di kawasan ini membolehkan pemendapan sedimen berlaku.

ABSTRACT

THE DETERMINATION OF ACCRETION RATE IN TOK BALI LAGOON, PASIR PUTEH, KELANTAN

Determination of accretion rate was conducted in Tok Bali area, where as the study area is a lagoon that already covered with sandbank along the shorelines. The objective of this research is to determine whether study area has undergone erosion or deposition of sedimentation. The represent island in determining accretion rate is situated near to the channel which is the main route for outgoing and ingoing water during tidal circulation. From the study, the results show that the value for accretion rate is 0.88 cm/month during the monsoon season. Meanwhile, after monsoon season, there is only 0.50cm/month. These values indicate that after the monsoon, the sediment is eroded. The type of sediment on the island's surface is fine sand, with the moderately well sorted (sorting value) and very negatively skewed (skewness value). As a conclusion on this research, this study area is influenced by tidal process on Semerak River. Sedimentation increase during monsoon season.