

CASE STUDY OF COASTAL EROSION FROM TOK JEMBAL UNTIL  
TELUK KETAPANG BEACH, KUALA TERENGGANU, TERENGGANU

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2011

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LP 27 FMSM 2 2011



1100088844  
Case study of coastal erosion from Tok Jembal until Teluk  
Ketapang Beach, Kuala Terengganu, Terengganu / Nurul  
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**CASE STUDY OF COASTAL EROSION FROM TOK JEMBAL UNTIL TELUK  
KETAPANG BEACH, KUALA TERENGGANU, TERENGGANU**

**By**

**Nurul Muizzah Binti Mohd Ali**

**Research Report submitted in partial fulfillment of  
the requirements for the degree of  
Bachelor of Science (Marine Science)**

**Department of Marine Science  
Faculty of Maritime Studies and Marine Science  
UNIVERSITI MALAYSIA TERENGGANU  
2011**

This project report should be cited as:

Muizzah, N. 2011. Case Study of Coastal Erosion from Tok Jembal until Teluk Ketapang Beach, Kuala Terengganu, Terengganu. Undergraduate Thesis, Bachelor of Science (Marine Science), Faculty of Maritime Study and Marine Science, University Malaysia Terengganu, Terengganu. 84p.

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**DEPARTMENT OF MARINE SCIENCE  
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**DECLARATION AND VERIFICATION REPORT  
FINAL YEAR RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled:  
CASE STUDY OF COASTAL EROSION FROM TOK JEMBAL UNTIL TELUK  
KETAPANG BEACH, KUALA TERENGGANU, TERENGGANU by NURUL  
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## ACKNOWLEDGEMENTS

Alhamdulillah and praise be to Allah SWT for enabling me to finish and complete my final year project without any complications. There are so many people who provided their help to me in writing this report. A lot of thankful to Associate Professor Dr. Rosnan Yaacob, my beloved supervisor for his advice and encouragement. Not forgetting his Research Assistant alias his Master student, Mr. Effi Helmy, Mr. Zaini and Ms. Aisyah which helped me a lot in finishing my report. My greatest thanks go to all lab assistant which helped me at the laboratory. Without their help, I'm enabling to do my analysis.

I also would like to take this opportunity to give my greatest gratitude to my lovely family: my father Mr. Mohd Ali Bin Awi, my mom Mrs. Salasiah Binti Hasbullah, my big sister Nurul Waahidah Mohd Ali, and to both my lil sis Nurul Haida and Nurul Husnina for their fully support.

My greatest thanks also to all my coursemates for leading a big hand for helping me to complete my project. Last but not least my deepest appreciation goes to my best buddy Priscilla Puyang, Zaiesha Othman and Siti Asiah Awang who had given their moral support and ideas and willingly to help me finishing my final year project effectively. A lot of thankful to my lovely friend.

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## LIST OF ABBREVIATIONS

$\text{ms}^{-1}$	- meter per second
$\mu\text{m}$	- micrometer
m	- meter
mm	- millimeter
g	- gram
°	- degree
Ø	- phi
NSD	- Net Shore Drift

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## ABSTRACT

Study on beach profile changes and sediments characteristics was conducted along Tok Jembal until Teluk Ketapang beach, Kuala Terengganu, Terengganu. This study was done in order to determine the beach profile and sediment characteristics at study area. Sampling has been carried out three times which is on May, October 2010 and January 2011. Sampling was done in eight stations with interval of distance ranging from 300 m to 500 m. Transit Sokkia C10 was used to measure beach profile. Meanwhile, for sediment characteristic analysis, sample of sediment was collected at three water levels which is at high tide, mid tide and low tide. A method of moments was employed to calculate the sedimentological parameters. Based on beach profile analysis, deposition process dominated the beach on May to October 2010. Meanwhile, beach had undergone erosion on October 2010 to January 2011. Station 1, 2, 3, 4, 5, and 7 experienced deposition on May to October 2010, while Station 6 and 8 undergone erosion. On October 2010 to January 2011, Station 1, 2, 3, 4, 7 and 8 had undergone erosion. However, Station 5 and 6 experienced deposition process. Based on the study of sediment characteristics, the study area is composed of coarse sand, moderately sorted and poorly sorted sediments. This shows that the study area is active in terms of hydraulic energy level.

## Kajian Kes Hakisan Pantai daripada Pantai Tok Jembal sehingga Pantai Teluk Ketapang, Kuala Terengganu, Terengganu

### ABSTRAK

Kajian mengenai profil pantai dan ciri-ciri sedimen telah dijalankan di pantai Tok Jembal sehingga pantai Teluk Ketapang, Kuala Terengganu, Terengganu. Kajian ini telah dijalankan untuk menentukan profil pantai dan ciri-ciri sedimen di kawasan kajian. Kajian telah dijalankan sebanyak tiga kali iaitu pada Mei, Oktober 2010 dan Januari 2011. Transit Sokkia C10 digunakan untuk mengukur profil pantai. Manakala, bagi analisis ciri-ciri sedimen, sampel sedimen diambil di tiga kawasan aras air iaitu kawasan air pasang tinggi, air pasang tengah, dan air pasang rendah. Kaedah momen digunakan untuk mengukur parameter sedimentologi. Berdasarkan analisis profil pantai, didapati bahawa proses pemendapan mendominasi kawasan pantai pada Mei hingga Oktober 2010. Manakala kawasan pantai mengalami hakisan pada Oktober 2010 hingga Januari 2011. Stesen 1, 2, 3, 4, 5, dan 7 mengalami pemendapan pada Mei hingga Oktober 2010, manakala Stesen 6 dan 8 mengalami hakisan. Pada Oktober 2010 hingga Januari 2011, Stesen 1, 2, 3, 4, 7 dan 8 mengalami hakisan. Walaubagaimanapun, Stesen 5 dan 6 tetap mengalami proses pemendapan. Berdasarkan kajian ciri-ciri sedimen, kawasan kajian mengandungi pasir kasar, tersusun secara sederhana and tidak sempurna. Ini menunjukkan kawasan kajian adalah aktif dari segi tahap tenaga hidraulik.