

LAND COVER AND BOUNDARY CHANGES IN SELECTED
ISLAND OF MELANESIA

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**LAND COVER AND BOUNDARY CHANGES IN SELECTED ISLAND OF
KELANTAN DELTA**

By

Mohd Fakhrol Razi Bin Abdul Wahab

**Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Applied Science (Biodiversity Conservation and Management)**

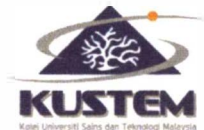
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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: LAND COVER AND BOUNDARY CHANGES IN SELECTED ISLAND OF KELANTAN DELTA oleh Mohd Fakhru Razi Bin Abdul Wahab, no. matrik UK 7806 telah diperiksa dan semua pembedaan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh ijazah Sarjana Muda Sains Gunaan (Pemuliharaan dan Pengurusan Biodiversiti), Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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LIST OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION
d.p.i	dots per inch
EMR	Electromagnetic Radiation
GCP	Ground Control Point
GIS	Geographical Information System
ha	Hectar
MACRES	Malaysian Centre for Remote Sensing
MRSO	Malaysian Rectified Skewed Orthomorphic
MSL	Mean Sea Level
VHR	Very High Resolution

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ABSTRACT

Land cover and boundary changes occur by natural process or by human activities. There are several factors that caused the changes to the Kelantan Delta Islands such as strong wind, wave action, tidal period and sediment movement, agriculture activities, fishery activities and localization. This study had been done to monitor the changes that may occur in some period of time and to collect the information about the changes rate and possible changes factor that happened to the Kelantan Delta islands. Kelantan Delta boundaries in year 1966 are covered approximately by 72.40 ha and it's changed to 113.85 ha in year 1991 and 134.33 ha in year 2004. Kelantan Delta land cover also had been reported involved in changes. In year 1966, the land covers (vegetation) was 16.03 ha of. For year 1991 and 2004, both land covers are covered by 83.94 ha and 75.87 ha of vegetation. The huge changes in both boundaries and land cover for Kelantan Delta islands that happened between year 1966 to year 2004 is because of several potential factors such as natural process and human activities. The natural process factors were amount of rainfall and rain days, tidal current and wave action, sedimentation or water flow, and wind erosion. For human activities factors, there were sand mining, fishery activities, mangrove cutting, and localization.

PERUBAHAN KAWASAN LITUPAN DAN SEMPADAN BAGI PULAU YANG TERPILIH DI KELANTAN DELTA

ABSTRAK

Perubahan sempadan dan kawasan litupan tanah di kawasan disebabkan oleh aktiviti manusia dan tindakan semulajadi. Terdapat beberapa faktor yang menyebabkan perubahan pada pulau yang terdapat di Delta Kelantan seperti angin kuat, tindakan ombak, pergerakan sedimen, aktiviti pertanian, aktiviti perikanan, dan penempatan. Kajian ini dijalankan untuk proses pemantauan terhadap perubahan yang berlaku di dalam suatu tempoh masa dan untuk mengumpul maklumat mengenai kadar dan faktor perubahan yang berlaku di Delta Kelantan. Sempadan tanah di Delta Kelantan pada tahun 1966 ialah 72.40 hektar, berubah kepada 113.85 hektar pada 1991, dan 134.33 hektar pada 2004. Kawasan litupan tanah di Delta Kelantan juga dilaporkan mengalami perubahan. Pada 1966, kawasan litupan tanah adalah seluas 16.03 hektar, pada 1991 pula luasnya berubah kepada 83.94, manakala pada 2004 luasnya adalah 75.87 hektar. Perubahan besar terhadap sempadan dan kawasan litupan yang berlaku diantara tahun 1966 sehingga tahun 2004 adalah disebabkan oleh beberapa faktor yang berkemungkinan seperti tindakan semulajadi dan aktiviti manusia. Faktor tindakan semulajadi adalah seperti kadar hujan dan bilangan hari hujan, pasang – surut, tindakan ombak, pemendakan lumpur atau aliran air, dan hakisan angin. Contoh faktor aktiviti manusia pula adalah seperti pengambilan pasir pantai, aktiviti perikanan, penebangan bakau, dan penempatan.