MAPPING OF LAND COVER ON PULAU TUJUH AND PULAU
LAYANG-LAYANG, KELANTAN DELTA MANGROVE

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MAPPING OF LAND COVER ON PULAU TUJUH AND PULAU LAYANG-LAYANG, KELANTAN DELTA MANGROVE

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: MAPPING OF LAND COVER ON PULAU TUJUH AND PULAU LAYANG-LAYANG AT KELANTAN DELTA MANGROVE oleh EMILIA HAZRINA BINTI ASHARI nombor matrik UK 11989 adalah hasil kerja saya sendiri kecuali nukilan dan ringkasan yang telah dijelaskan sumbernya. 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, Universiti Malaysia Terengganu.

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DECLARATION

I hereby declare that this thesis entitled Mapping of land Cover on Pulau Tujuh and Pulau Layang-layang at Kelantan Delta Mangrove is the result of my own research except as cited in the references.

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LIST OF ABBREVIATIONS

Abbreviation	
DGPS	Differential Global Positioning System
ESRI	Environmental Systems Research Institute
JPEG	JPEG File Interchange Format
Ha	Hectare
GPS	Global Positioning System
GIS	Geographical Information System
GUI	Graphic User Interface
MCL	Maximum Likehood Classifier
RS	Remote Sensing
RSO	Rectified Skew Orthomorphic Projection
TIFF	Tagged image format file

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ABSTRACT

Remote Sensing and GIS are a commonly used tools in coastal zone management, forestry and land use planning. This study was contributed to monitor the dominant species in replanted mangroves at Pulau Layang-layang and Pulau Tujuh, Kelantan Delta to estimate the boundaries and produce updated land cover map of Kelantan Delta mangrove. Based on the results, *Rhizophora apiculata* and *Rhizophora mucronata* were the dominant species for both islands with 80% accuracy. From Quickbird image and DGPS data comparison from boundaries of two islands, it was showed that accumulation had occurred, along shoreline with 7 ha increase for a Pulau Layang-layang and 6.04 ha for Pulau Tujuh. Significant of this study are to develop the management for replanted mangrove and gave new information to government and NGO about the change of mangrove ecosystem at Kelantan Delta.

ABSTRAK

GIS ialah kaedah lazim yang digunakan dalam bidang pengurusan zon pantai, perhutanan dan perancangan guna tanah. Kajian ini meyumbang kepada pengenalanpastian spesis yang dominan di Pulau Tujuh dan Pulau Layang-layang, mentafsirkan sempadan bagi pulau-pulau tersebut serta menghasilkan peta terkini keseluruhan delta. Berdasarkan keputusan kajian, *Rhizophora apiculata* dan *Rhizophora mucronata* merupakan spesis terbaru yang mendominasi kedua-dua pulau dengan kejituan 80% berdasarkan 'ground truthing'. Setelah imej Quickbird dan keputusan koordinat DGPS dibandingkan menunjukan proses pengumpulan mendakan terhasil bagi kedua-dua pulau, peningkatan 7 ha bagi pulau Layang-layang dan 6.04 ha bagi pulau Tujuh. Kepentingan kajian ini adalah untuk meningkatkan pengurusan paya bakau dan memberi maklumat terbaru pada badan-badab kerajaan dan bukan kerajaan.