

A STUDY ON COASTAL FOREST ALONG THE  
COAST OF PENOR, PAHANG DARUL MAKMUR  
USING REMOTE SENSING.

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**By:**

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**This project is submitted as a partial fulfillment and requirement for  
the degree of Bachelor of Science (Marine Science).**

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*“To Pa, Ma, Shafin and Abul”*

“I dedicate this project to my wonderful and loving parents, sister and brother. For without their help, support and understanding I would never have been able to present this paper as I have today.”

**“MA AND PA ...THANKS FOR EVERYTHING”**

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## ABSTRACT

This study involves the application of remote sensing in the mapping of coastal forest. Landsat-TM scene taken on 26/6/ 1997 covering an area of 10 x 10km was used. The image was process using PCI EASI/PACE ver. 6.2 software. The image was viewed and displayed using band 4, 5, 3 combinations. After linear enhancement and classification, 16 classes were determined. After ground truthing was done, only 14 classes recognized. They are: Coconut and Rhu Associate (Class 1), Fresh Water swamp (Salvinia) (Class 2), Lalang Field with short vegetation (Class 3), Mangrove (Class 4), Fresh Water Swamp (Class 5), High Trees Beach Forest (Class 6), Peat Swamp with Disperse vegetation (Class 7), Shrub and Crop (Class 8), Water body (Class 9), Mixed Mangrove (Class 10), Grass Field (Class 11), Clear Area (Class 12), Water (Class 13) and Paddy Field (Class 14). The overall accuracy of the map produce is 85%. Identification of trees is also done to determine type of trees present in the area with the emphasis on vegetation on Bris soil. The dominant species are *Rhodomyrtus tomentosa* (Kemunting), *Vitex ovata*, *Pandanus odoratissimus* and *Spinifex littorale*. Soil sample was also taken. From dry sieving the average percentage of sand 95.99% and silt 3.99% to confirm that the soil type is Bris soil. Using remote sensing it is easier to update and presenting data on coastal area. For future study, it is suggested that an inventory of the whole area should be done, as the inventory result is very vital tool in managing the coastal area.

## ABSTRAK

Kajian ini melibatkan penggunaan Penderiaan Jarak Jauh bagi melakar peta kawasan hutan pantai. Imej satelit yang digunakan adalah dari Landsat-TM yang bertarikh pada 26/6/97. Imej ini di proses dengan menggunakan perisian PCI EASI/PACE v. 6.2. Imej ini dipaparkan dengan menggunakan kombinasi band 4, 5, 3. Selepas pengkelasan, 16 kelas telah ditentukan. Setelah menjalankan kerja lapangan, 14 kelas telah dikenalpasti. Kelas-kelas tersebut ialah: Kelapa dan Ru (Kelas 1), Paya Air Tawar (*Salvinia*) (Kelas 2), Padang Lalang (Kelas 3), Hutan Bakau (Kelas 4), Paya Air Tawar (Kelas 5), Hutan Pantai Pokok Tinggi (Kelas 6), Paya tanah Gambut (Kelas 7), Belukar dan Pokok Baka (Kelas 8), Kawasan Berair (Kelas 9), Hutan Bakau Campur (Kelas 10), Padang Rumput (Kelas 11), Kawasan Tanah Lapang (Kelas 12), Air (Kelas 13) dan Sawah Padi (Kelas 14). Ketepatan peta yang diperolehi adalah 85%. Pengecaman spesis tumbuhan terutamanya tumbuhan dilakukan di tanah bris. Spesis tumbuhan yang dominan ialah *Rhodomyrtus tomentosa* (kemunting), *Vitex ovata*, *Pandanus odoratissimus* dan *Spinifex littorale*. Bage kajian sampel tanah, kaedah ayak kering dilakukan bagi memastikan bahawa tanah itu tanah bris. Peratus pasir dan lumpur ialah 95.99% dan 3.99%, ini membuktikan bahawa tanah itu adalah tanah bris. Kaedah penderiaan jarak jauh didapati adalah mudah untuk mengemaskini dan mempersembahkan data kawasan persisiran. Bagi kajian di masa hadapan, adalah disyorkan supaya inventori bagi keseluruhan kawasan dijalankan kerana maklumat yang diperolehi adalah penting dalam menguruskan kawasan persisiran pantai.