

LAND COVER MAPPING FROM MAINTAINING PADI FIELDS
TO MAINTAINING WATER LILY

LAND COVER IN PAPUA

TRIADIKI SABU TAHUN 2001

WILAYAH PEMERINTAHAN SABU TAHUN 2001

2005

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Land cover mapping from Kg. Bari Besar to Kg. Merang / Moh Nur Sarif.



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**LAND COVER MAPPING FROM KAMPUNG BARI BESAR TO KAMPUNG
MERANG**

By

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the requirements for the degree of
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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **Land Cover Mapping (from Kampung Bari Besar to Kampung Merang)** oleh **Mohd Nur Bin Sarif**, no. matrik: **UK7108** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi **Ijazah Sarjana Muda Sains Gunaan (Pemuliharaan dan Pengurusan Biodiversiti)**, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

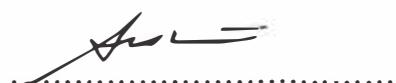
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LIST OF ABBREVIATION

ERDAS	- Earth Resources Data Analysis System
GCP	- Ground Control Points
GIS	- Geographical Information System
GPS	- Global Positioning System
HRV	- High Resolution Visible
IFOV	- Instantaneous Filed of View
ISODATA	- Iterative Self-Organizing Data Analysis Technique
LANDSAT	- Land Satellite
MACRES	- Malaysian Center for Remote Sensing
MRSO	- Malaysian Rectified Skewed Orthomorphic
MSS	- Multi-Spectral Scanner System
NOAA	- National Atmospheric and Oceanic Administrative
RMSE	- Root Means Square Error
RSO	- Rectified Skew Orthomorphic
SPOT	- Spatial Database Engine
TM	- Thematic Mapper
USGS	- United State Geological Survey

ABSTRACT

Remote sensing technology is very important to manage in one country. This technology can improve the ability in various type of study like in forestry, agriculture and also to manage in some area. This study was done to recognize the mangrove area. The satellite image (Landsat TM 2002) dated on 14th July 2002 was used in this study and had been classified and analyzed using ‘Maximum Likelihood Classifier’ (MLC)’ with overall accuracy of 94.19%. The overall area had been study are 9 414 ha. There are eleven class had been classified. There are ‘High Vegetation’, ‘Cleared Area’, ‘Mixed Mangrove Forest’, ‘Agricultural Land’, ‘Swamp Forest’, ‘Gelam’, ‘Sandy Area’, ‘Clouds’, ‘Water Bodies’, ‘Settlement’ and ‘Clouds Shadow’ using the combination of band 4, 5, 3. The highest percentage between all the classes had been shown by high vegetation with 42.11% and then followed by gelam with 15.29%. The third highest percentage is cleared area with 9.39%. The lowest percentage is from clouds shadow with 0.17%. In this study the land cover classes can be simplified into four categories, the first one is vegetation such as gelam, mixed mangrove forest, high vegetation and swamp forest. The second category is cleared area. After that an urban area such as settlement and the last category is agriculture such as coconut palm and agriculture land.

PEMETAAN LITUPAN DARI KAMPUNG BARI BESAR KE KAMPUNG MERANG MENGGUNAKAN TEKNIK PNEDERIAAN JAUH

ABSTRAK

Teknologi ini mampu meningkatkan kemampuan dalam pelbagai bidang seperti pengurusan dalam bidang perhutanan, bidang pertanian serta pengurusan di sesuatu kawasan. Kajian ini dijalankan bagi mengenal pasti kawasan hutan paya bakau yang masih ada di kawasan tersebut. Imej satelit (Landsat TM) yang digunakan dalam kajian ini bertarikh 14 haribulan Julai 2002 dan dikelaskan mengikut ‘Maximum Likelihood Classifier’ (MLC) dengan ketepatan 94.19%. Berdasarkan kepada keputusan, terdapat 11 kelas yang telah dikenalpasti iaitu ‘High Vegetation’, ‘Cleared Area’, ‘Mixed Mangrove Forest’, ‘Agricultural Land’, ‘Swamp Forest’, ‘Gelam’, ‘Sandy Area’, ‘Clouds’, ‘Water Bodies’, ‘Settlement’ and ‘Clouds Shadow’ dengan menggunakan kombinasi band 4, 5, 3. Peratusan tertinggi dilihat daripada kelas kawasan tumbuhan yang banyak dengan jumlah 42.11% and diikuti oleh gelam dengan 15.29%. Peratusan ketiga tertinggi adalah kawasan terbuka dengan 9.39%. Manakala jumlah peratusan terendah adalah daripada kelas bayang awan dengan 0.17%. Dalam kajian ini, pengelasan penggunaan tanah boleh dipermudahkan kepada empat kategori iaitu pertama adalah tumbuhan seperti gelam, hutan bakau bercampur, kawasan tumbuhan yang banyak dan hutan paya. Kategori yang kedua adalah kawasan terbuka. Seterusnya kawasan maju seperti kawasan penempatan dan kategori terakhir adalah seperti pokok kelapa sawit dan kawasan pertanian.