

DETERMINATION OF BOUNDARIES AND PRELIMINARY CHANGES
USING DIFFERENTIAL GLOBAL POSITIONING SYSTEM FROM
REMARKING BONG BATH, CETHU WETLAND

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DETERMINATION OF BOUNDARIES AND PRELIMINARY CHANGES USING
DIFFERENTIAL GLOBAL POSITIONING SYSTEM FROM PENARIK
TO GONG BATU, SETIU WETLAND.

By

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **Determination of boundaries and preliminary changes using differential global positioning system from Penarik to Gong Batu, Setiu Wetland oleh Bahrinah Bahrim**, no. matrik: **UK 7531** telah diperiksa dan semua pembetulan 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 ABBREVIATION

BLHTOPO	- Buluh Topographical Map
CGIS	- Canada Geographical Information System
DBMS	- Database Management System
DGPS	- Differential Global Positioning System
ESRI	- Environmental Systems Research Institute
JPEG	- JPEG File Interchange Format
Ha	- Hectare
GIS	- Geographical Information System
GPS	- Global Positioning System
GUI	- Graphic User Interface
NITF	- Neutral Image Transfer Format
NMEA	- National Marine Electronics Association
RSO	- Rectified Skew Orthomorphic Projection
RTCM	- Radio Technical Commission for Marine Services
TIFF	- Tagged image format file

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ABSTRACT

This research contributes to monitoring the determination of boundaries and preliminary changes using differential global positioning system (DGPS) from Penarik to Gong Batu, Setiu Wetlands. Identification of the current boundary of study area can be determined from the differential global positioning system (DGPS) vector format. Changes in shapes of the shoreline and island with time can be obtained. Furthermore, allowed determination of the average and annual changes of the shoreline and the island moved area in hectare (ha). Process of accretion and erosion is a cycle processes that occurring through out the year. This process contributes a formation of new shoreline and island within the Setiu Wetland. Sand movement from 1980 to 2004 in Setiu Wetland around 2.73 meters per year and island exist within this area experienced high changes in accretion than erosion which the total accretion about 2.57 hectares per year and total erosion around 0.93 hectares per year. The total scope of study area increase around 10.31 hectares from 1980 to 2004.

Pengenalpastian sempadan dan perubahan dengan menggunakan Differential Global Positioning System (DGPS) dari Penarik ke Kampung Gong Batu di Setiu Wetland.

ABSTRAK

Kajian ini menyumbang ke arah mengawasi pengenalpastian sempadan dan perubahan dengan menggunakan Differential Global Positioning System (DGPS) dari Penarik ke Kampung Gong Batu di Setiu Wetland. Pengenalpastian sempadan baru bagi kawasan kajian dapat diperolehi daripada DGPS dalam format vektor. Perubahan bentuk pulau dan pantai mengikut masa dapat ditentukan. Di samping itu, ia dapat juga menentukan purata dan perubahan tahunan bagi kawasan pantai dan pergerakan kawasan pulau dalam hektar. Proses penambahan dan hakisan merupakan proses berkisar sepanjang tahun. Proses ini menyumbang kepada pembentukan pantai dan pulau yang baru di Setiu Wetland. Pergerakan pasir dari tahun 1980 hingga 2004 di Setiu Wetland adalah sebanyak 2.73 meter per tahun dan pulau yang wujud dalam kawasan ini mengalami perubahan yang lebih dalam pertambahan daripada hakisan dengan jumlah pertambahan sebanyak 2.57 hektar per tahun dan jumlah hakisan adalah sebanyak 0.93 hektar per tahun. Jumlah keseluruhan bagi kawasan kajian bertambah sebanyak 10.31 hektar dari tahun 1980 hingga 2004.