

Shoreline Detection and Changes of North Banggi Island, Sabah, Malaysia

By

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The shoreline of north Banggi Island located north of Sabah is directly exposed to seasonal monsoons. The western part of the island is affected by the South West Monsoon (SWM) from the South China Sea where the north and east side of the island is exposed to the North East Monsoon (NEM) from the Sulu Sea. There are a few studies on its shoreline due to lack of reliable data and also due to its remote location from the mainland of Sabah. The aim of the current study is to investigate the shoreline changes caused by erosion and/or sedimentation using aerial images and field surveys. Detection of shoreline changes was conducted using aerial photos taken in 1970 and compared to the Spot 5 image taken in 2000 to provide an overview of shoreline changes within the study area. Details of deposition and erosion were detected by dividing the shoreline into 3 sections. Shoreline changes were extracted by overlaying those images. Results showed that erosion occurred at section 1 which was mainly affected by the strong winds and waves during the SWM. There were not only minimal changed in sections 2 and 3 except in the northern part of section 3. The paper provides information of most unstable area along the coastline of north Banggi Island which is useful for seaweed farming, fisheries, infrastructures development and management planning for the local community.

Keywords; Banggi Island, shoreline, erosion, deposition, monsoon