SEDIMENT ACCUMULATION IN THE MANGROVE WATER CHANNELS OF TUMPAT, KELANTAN DELTA: AN APPROACH FOR THEIR DETECTION USING REMOTE SENSING AND GIS

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Lihat sebelah

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By

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

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LIST OF ABBREVATION

%	Percentage
^{o}C	Degree Celsius
mL	Milliliter
ms^{-1}	Meter per second
TSS	Total Suspended Sediment
q	Water Discharge
v	Velocity
a	Area
h	Hour
kg	Kilogram
s	Second
IMWQS	Interim Marine Water Quality Standards
DOE	Department of Environment

ABSTRACT

The application of Remote Sensing and GIS is a modern technology that has capability to provide authenticated information, which has proven useful in change detection, defining problems and in trying to manage them efficiently. This project involves the implementation of Remote Sensing and GIS to analyze and determine the area statistics of sediment change detection at Tumpat Kelantan Delta. This project also involve in determining the Total Suspended Sediment (TSS) in 3 water channel at Tumpat, Kelantan using ground data sampling. In determination of sediment change detection, satellite images of Landsat year of 1988, 1993 and 2000 were used. In order to detect the changes from two images, the band differentiation technique was applied using band 5. There has been estimated 1.422 sq km of new sediment cover and 1.709 sq km of new formation of sand bar detected in the band differentiation images of 1988 and 1993. Meanwhile, for the band differentiation image of 1993 and 2000, there has been estimated 1.459 sq km of new sediment and 1.619 sq km of new formation of sand bar. For the TSS study, it shows that averages of TSS (mg/L) are 61.4, 55.86 and 65.29 mg/L for both 3 stations. All of these 3 stations don't pass the IMWQS standard that is 50 mg/L. It also shows that about198.0, 138.0, 32.0 mg amount of excess sediment per liter found at 3 stations.