

SILTATION IN THE NEGOMBO LAGOON

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A survey was carried out to determine the status of siltation in the Negombo Lagoon. A hydrographic survey was carried out in 1988 and compared with a similar survey carried out in 1986. It was found that certain areas of the lagoon has been silted by as much as 1m. A historical survey indicated that about 150 ha of the lagoon has been lost due to reclamation or siltation in the past 42 years.

Siltation rates were studied using silt traps that were vertically fixed to the lagoon floor at 20 stations. The quantity of collected silt/clay was measured monthly.

Results showed that the siltation rate is directly influenced by the prevailing climatic conditions. A higher rate of siltation was observed during monsoonal periods generally at all station and a good correlation was observed between total monthly siltation and rainfall.

Highest values of mean monthly siltation rates (70.76; 63.38g/month) was obtained at locations nearer to the mouth where a salt wedge was reported. Always very low siltation rates were found at the mouth of the lagoon (1.1-2.8 g/month). Elsewhere the mean monthly siltations rates ranged from 16.9-41.26 g/months.

Using the density value of silt/clay as 1.5g/cm³ and compaction of sediments as 0.032cm/year the annual siltation rates were calculated. The highest rate obtained was 12.67cm/year and the lowest was 0.31cm/year. The results indicate that a large part of the lagoon may be in the process of being filled up if the current trends in land use continue.