

NEGOMBO LAGOON : A SALT WEDGE TYPE ESTUARY

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An estuary is a semi-enclosed coastal body of water which has free connection with an open sea and within which sea water is measurably diluted with fresh water derived from land drainage. Therefore the Negombo lagoon can be classified as an Estuary and in order to identify the type of the Estuary a comprehensive study was undertaken.

20 sampling points were selected to extensively cover the Estuary. Sampling points were selected along 6 lines, each line consisting of 4 sampling points, except the line across the mouth (1st line) and the one at extreme end of the Estuary (6th line) both containing only 2 sampling points. At each station salinity and turbidity, both surface and bottom, were measured twice a week and fortnight analysis were carried out for suspended concentrations throughout a period of one year.

Except during high precipitation the Estuary showed a well defined salinity gradient which is characteristic of partially mixed estuaries, Understandably higher turbidity values were obtained at the upper end of the Estuary (5th and 6th line) during rainy periods. During normal conditions, however generally a turbidity maximum was observed along line No 2 which is close to the mouth of the Estuary. Suspended particle concentration also showed remarkably higher values along the 2nd line throughout the year. However, during high precipitation large loads of silt/clay is introduced to the Estuary resulting in peak values of turbidity elsewhere.

The reported higher catches experienced by fishermen in the Estuary around the area of the 2nd line indicates an area rich in fish food - a characteristic feature of a salt wedge.

These results indicate that the Negambo Estuary is a partially mixed salt-wedge type and that the salt wedge is developed up to the 2nd line for a distance of 500m.