

Current status of water quality and heavy metal monitoring in water and sediments from Negombo estuary.

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Abstract

Water quality of the Negombo estuary and heavy metals elements of the water and sediments were investigated in the current work. The objectives of this study were to assess the variations of the water quality and sediment heavy metals of the Negombo estuary with special reference to selected identify the pollution sources. Sixteen different sampling points were selected along the estuary. The study was conducted within a one year period during 2013. Collected samples were taken to the laboratory, stored and analyzed using standards methods. Result indicated that higher mean value of Chemical Oxygen Demand (380.5 ± 137.5 mg/l), Biochemical Oxygen Demand (28.1 ± 3.1 mg/l), Ammonia (0.26 ± 0.48 mg/l), Nitrate (0.8 ± 1.05 mg/l), Phosphate (0.45 ± 0.5 mg/l) and Total Suspended Solid (32.2 ± 2.7 mg/l) levels were recorded in the north region of the estuary. Also heavy metals in the water and sediments were at increased levels in northern region. Such increased proves the presence of large quantities of organic and inorganic pollutants in industrial, municipal and domestic areas in the estuary water. This was expected due to the fact that the water of such canals receives high concentrations of organic and inorganic pollutants from industrial and domestic wastewater.

Keywords: water quality, aquatic pollution, heavy metals, sediment analysis