

ANALYTICAL INVESTIGATION OF POLLUTANTS IN BATHEEGAMA LAGOON, MATARA

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This paper reviews the pollution aspect of environmental management and monitoring of the lagoons for its sustainable development. Batheegama lagoon is an ecologically valuable coastal ecosystem in the Matara district and it is located close to Dickwella urban area in Matara district. Therefore this study is most important to assess the current situation of the lagoon. The water quality assessment at the principal locations of the lagoon was performed that Assessment was undertaken according to different physical and chemical parameters including Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Electric Conductivity (EC), turbidity and acidity from three sampling site (S1 to S3) for over three months.

The results indicated that physical and chemical parameters were different among sites. Average temperature levels of all three sites of the lagoon remained between 26.9 °C and 25.7 °C. The highest temperature value was recorded in the site 3 (26.90°C) & the lowest temperature value was recorded in site 1. (25.7°C). Average pH levels of all three sites of the lagoon fluctuated and remained between 5.77 and 7.74. The highest pH value was recorded in the site 1 (7.44) & the lowest pH value was recorded in site 3. (5.77) showing a slight acidic level.

Compared to other two sites, site 2 was having the lowest average conductivity and highest average turbidity and high level of average COD & BOD values compared most probably due to the fermentation of location with coconut husks, a leading income source for local women in the area. The highest average BOD & COD were recorded from site 3 connected to the release of clinical waste from the nearby hospital. Average turbidity, BOD and COD values are very low and pH and average conductivity is high at site 1 due to its high mixing with sea water. It is evident that the water quality of Batheegama lagoon is anthropogenic activities while highly threatened due to the pollution from clinical waste indicating the need of a well-planned management options to secure its natural conditions.

Keywords : *Batheegama Lagoon, Water Pollution, Water Quality*