

D-13 Preliminary studies on some limnological factors governing algal growth in an industrial effluent outlet

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The effect of the industrial effluent on algal growth was studied in the effluent outlet of the Veyangoda Textile Factory, which discharges some of its industrial wastes firstly to a small stream and secondly to the Diya Ella Oya.

This small stream and Diya Ella Oya were selected in order to investigate the spatial and temporal variation in the water quality and distribution and abundance of algae with special reference to water pollution effects by analysing monthly samples (December 1994 to May 1995). Water temperature, conductivity, turbidity, suspended solids, pH, dissolved oxygen content, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), phosphate concentration, nitrate concentration, grease and oil content, total algal count and heavy metals such as lead, copper and iron were analysed. Among physico-chemical characteristics, the conductivity, turbidity, pH, BOD, COD, phosphate concentration, nitrate concentration, grease and oil content and heavy metals were recorded to be highest at the effluent outlet. These values of downstream of these waterways recorded to be greater than their upstreams due to the effect of effluent outlet on these waterways. The upstream of the small stream recorded the normal pattern of growth of algae, and downstream of the small stream indicated some form of effects of effluent on algal growth. The downstream of Diya Ella Oya also showed the effects of effluent when compared with its upstream.