

**ANALYTICAL STUDIES OF BATTICALOA AND
VALAICHCHENAI LAGOONS**

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ABSTRACT

This thesis is concerned with the analytical studies of the lagoon waters of Batticaloa and Valaichchenai and Valaichchenai paper mills effluent. The literature available does not quantify the physical and chemical factors of the Batticaloa lagoon. Only a few reports available refer to the presence of pollutants in the Valaichchenai lagoon. A complete report is urgently needed to advise the individuals/organisations/funding bodies who are interested to promote production of seafoods such as fish, prawns, crabs and oyster using this lagoon as a resource.

Physical, biological and chemical analysis were carried out to identify the levels of pollution in Batticaloa lagoon and the results were reported. These results are compared with Sri Lankan Standards (SLS) and International Standards thus providing information regarding acceptable level for the living condition of organisms such as fish and prawns. The analysis elucidate that the Batticaloa lagoon water is very unlikely harmful for the living conditions of fish, prawn and other organisms that are currently present in this lagoon.

The level of physical, biological and chemical characters of Valaichchenai paper mills effluent and the surrounding lagoon in that area were monitored. The estimated level of all the parameters in the paper mills effluent comply with the Sri Lankan standards (SLS), except DO, BOD, suspended solids and turbidity. High turbidity and high suspended solids of lagoon water may be a draw back and perhaps, provide an unsuitable condition for the survival of fish, prawns and other living organisms.