C-40: An investigation on the impact of influent water quality on the Kandy Lake

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The Kandy Lake attracts thousands of local pilgrims and foreign tourists for its aesthetic appearance. However, due to untreated sewage and household waste draining from the nearby houses, hotels and other institutions, the lake is increasingly becoming polluted. During festival seasons, the lake becomes a dumping ground for garbage. The intensity of new constructions around the lake has resulted in the addition of substances like tar and cement. Research was carried out to determine the current pollution levels of the Kandy Lake based on both physical and chemical water quality parameters of influents. During the study period sampling and *in-situ* testing were carried out using portable instuments for 12 selected sampling points. The following parameters were measured on a weekly basis: pH, Dissolved Oxygen, Turbidity, Conductivity, Salinity and Total Dissolved Solids. In addition, Heavy metals and BOD were laboratory tested for some selected sampling points. Weather data including temperature of each sampling day and weekly rainfall data of the study area were collected.

Considerable variations of the water quality parameters were observed especially near hotels, and the hospital. The possible causes for such variation can be, rainfall, discharge of waste and chemicals. This resulted in an unbalanced ecosystem, which in turn led to odour and fish mortality. Inconsistent BOD levels revealed that the lake is under severe organic pollution. It is becoming unfit for the living organisms and its aesthetic appearance is deteriorating very fast.

Educating the general public, institutions and homes around the lake will no doubt enhance the quality of influent to the Kandy Lake. Further, the relevan local bodies and sewerage authorities can assist in constructing and monitorin waste treatment facilities.