

A Study of the Condition of Water Pollution in the Bolgoda River

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Water pollution in urban areas of Sri Lanka is increasing due to contaminants, especially human waste. The major water pollutants are organic matter, inorganic matter, infectious agents, toxic organics, sediments and heat. Developing nations have poorly developed sewage treatment facilities, which result in environmental pollution. This situation is relevant to Sri Lanka. Untreated or improperly treated sewage, animal waste and trade effluent dumping in the Bolgoda River causes serious environmental issues today. With this brief account, the present study aims to assess the water pollution condition of the Bolgoda River. The Bolgoda Lake is a brackish water body located in the western province of Sri Lanka. The lake has two major basins called North Bolgoda lake and South Bolgoda Lake. These two lakes are connected by a narrow stream called the Bolgoda River.

The objectives of the present study are twofold: The first objective is to test the water quality of the Bolgoda river; the second objective is to identify the impact of human activities on the pollution of river water. Primary data has been used to pursue both objectives. Five locations which are near the waste dumping sites were selected for water testing. Three parameters were taken into account in the water testing of the river: temperature, PH values and electrical conductivity values. A community based questionnaire survey was used to investigate the second objective. The G.S. division of Kadaveediya North has been selected for the questionnaire survey and 15% of the population formed the group of respondents. The preference ranking method was used for the analysis of sample data.

The results of the present study are as follows. It is clear that the temperature of the river water is higher than the normal atmospheric temperature. The PH values of the five locations range from 6.45 to 7.64. According to the World Health Organization, PH values less than 6.8 are considered polluted water. According to this, the two locations selected can be considered to have highly polluted water. Electric conductivity values for the selected locations range from 1221 to 1831 micro Siemens. This makes it evident that that, all the five locations have higher MS values when compared with the standard value of pure water (1000 MS). Domestic sewage could be considered the most significant pollutant matter which is dumped into the river, which is followed by waste water and trade effluent respectively.

Keywords: water pollution, sewage, human influence, electrical conductivity, pure water

References

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