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Land use pattern and their impact on water quality in Bolgoda Lake basin- Sri Lanka

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Water quality monitoring of a river can be used to define the existing conditions, detect trends and sources of pollution. The water quality of the Bolgoda river was studied by sampling the river water at eight locations along its course within Colombo district, Sri Lanka. Bolgoda basin has been mostly encroached grasslands and agricultural lands have been converted into commercial purposes due to urbanization. The Bolgoda river and lake receive water from rainfall. Water which falls within the catchment area accumulates in the Bolgoda basin and flows from the North Lake through the South Lake and finally into the Indian Ocean at Northern and Southern outfalls of the river. This water plays a role to reduce the pollution level and salinity level in the water body in the basin. Saline water intrusion in the river was studied to identify the variation of the salinity in the river during the 2008 August to 2009 January. The study revealed that the salinity and pH variation depends on the water flow direction in the basin and rainfall. Salinity intrusion and depletion of vegetation cover are the badly effect existence of endemic and rare species. It also affects the development of riverside community.