ABSTRACT

The study aimed at assessing the pollution load on River Sosiani, Eldoret and its impacts to the ecosystem. It involved collection of samples for the examination of the physico-chemical parameters of the water at sampling points upstream and downstream of the river as it approaches the town where the most significant pollution is observed. The study was done during January and March, 2021 with an aim to collect data as the season changes from dry to wet.

The study showed high levels of turbidity in the river across the three sampling points. The E. coli count also showed significant levels which did not meet the required standards by the WHO and Kenya Standard guidelines. The other parameters such as total coliform count, total alkalinity, dissolved oxygen, nitrates, chlorides, iron, electrical conductivity, pH and total dissolved solids were within the stipulated range as per the WHO guidelines for effluent discharge into natural sources. The total hardness test showed that the river water is generally hard.

The river is seen to be mainly polluted as a result of human activities that encourage poor waste management and poor agricultural practises. The presence of faecal matter in the river suggests that there should be caution in the handling of raw sewage effluents and that the sanitation systems near the river require improvement. The water in the river is not suitable for direct consumption and recreational activities. The water should be treated and the municipal effluent should be channelled to effluent treatment works for pre-treatment before discharge into the river.