

## **ABSTRACT**

The industrial revolution has provided significant benefits to civilization, but it has also had detrimental consequences on the environment majorly affecting air, soil and water which were polluted at alarming rates. This study focused on water pollution with an emphasis on rivers that flow through urban areas. A case study of the Nairobi River was found to be the best fitting with fieldwork and laboratory analysis conducted to determine the extent of the pollution and the pollution profile of the river. Water samples were collected from four selected sampling points as some parameters were measured at the site while others were tested at the University of Nairobi Laboratory. Sampling was done twice, during the dry season and rainy season to compare the temporal change of the river. The parameters tested included Temperature, BOD, COD, Turbidity, pH, Total Suspended Solids, Nitrates and dissolved oxygen. The data collected from the four sampling stations were representative of the flow characteristics and pollution profile of the river. The results obtained were then compared with the appropriate Kenya Standards and it was found that most of the parameters failed to meet the recommended thresholds as per the standards. The results show that the river is heavily polluted and spatially the river is heavily polluted downstream. Problems relating to physical water quality parameters were more significant during the dry season than the wet season except for turbidity and suspended solids which were of high content during the wet season. The Nairobi River is heavily polluted and its water is not safe for domestic purposes, animal consumption or even industrial use. This study has recommended various ways to protect and manage it.