IWRM2018-16
8th International Water Resources Management Conference of ICWRS

Environment Impact of Leachate Pollution on Groundwater Sources in Ikere Metropolis, Ekiti State, Nigeria.

Bolaji Edward
Ekiti State University, Department of Zoology, Ado-Ekiti, Nigeria (josephine.edward@eksu.edu.ng)

The physical, chemical and bacteriological analyses of water samples from three wells located near landfill site at Ayetoro quarters, Ikere-Ekiti, Ekiti State, Nigeria was carried out to ascertain the magnitude of dumpsite pollution on groundwater quality in the area. Borehole locations were at radial distances of 20m, 50m, and 90m respectively away from the landfill site. The parameters determined included Turbidity, Temperature, pH, Dissolved oxygen (DO), Total dissolved solids (TDS), Total hardness, Nitrate, Nitrite, Chloride, Calcium, Magnesium, Copper, Conductivity, Sulphate, Chromium, Phosphate and Total suspended solid (TSS) using conventional equipment and standard laboratory procedures. Most of these parameters indicate traceable pollution but were below the World Health Organization (WHO), and the Nigeria Standard for Drinking Water quality (NSDWQ) limits for consumption. Bacteriological examination revealed severe pollution in all the wells. Statistical analyses indicated significant differences among all the parameters tested at 95% level of probability. Public enlightenment on waste sorting, adoption of clean technology and the use of sanitary landfill to prevent further contamination of groundwater flow should be encouraged.
Key Words: Impact, Leachate, Pollution, Groundwater, Ikere Metropolis.