

STUDY OF WATER RESOURCES IN PARTS OF THE NIGER DELTA REGION OF NIGERIA: PAPER II

Davidson Egirani
(Corresponding)
Niger Delta University
NIGERIA

Napoleon Wessey
Niger Delta University
NIGERIA

ABSTRACT

This study investigates community water quality assessment and management in the south-southern Niger Delta Region of Nigeria. A total of 16 community water samples, harvested rain water, surface water and ground water samples were collected and analysed for their physico-chemical and bacteriological constituents. Analyses involved standard field and laboratory procedures. The chemical data set generated were subjected to Principal Component Analysis (PCA), other theoretical models and graphical interpretation. The results indicate that these community waters are suitable for drinking purpose, especially where the *Escherichia coli* and total coliforms do not exceed the international and regional recommended limits of 0 per 100ml of sample. In addition, the community waters are good for livestock and excellent for both recreation and irrigation purposes. Possible sources of community water contamination have been suggested. Land use planning, enactment and implementation of environmental laws are necessary in this region, in order to have effective surface water and ground water resource management.

Keywords: water resources, Niger Delta, management, bacteriological, physico-chemical