

Self Purification of a Freshwater Stream in Ile-Ife: Lessons for Water Management

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ABSTRACT Stream flow samples were collected with distances downstream over a river stretch of 6.5km. The rivers transcend different land use pattern and took its source from a large refuse dump in the central market (Ogbe market) Ile-Ife before flowing into a dam. Seven sampling points were carefully selected downstream the channel. The examined water parameters were sodium (Na^+), calcium (Ca^+), potassium (K^+), magnesium (Mg^+), phosphorous (P), Nitrate (NO_3^-), water hardness, pH and suspended particles. Descriptive and inferential methods were employed on the study. Chemical parameters highly varied with distances downstream. A comparison of the chemical parameters at sampling point 1 and 7 shows that Mg^+ , Ca^+ , Na^+ , P, NO_3^- , water hardness, suspended particles reduced at the river's mouth (dam) correlation statistics further shows that only Ca^+ , P, NO_3^- and suspended particles actually showed evidences of self purification. Further, pH and Na^+ in the river actually exceeded the WHO highest permissible drinking water standard. The paper calls for further research in the area of monitoring water quality.