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Full Length Research Paper

An assessment of the effect of industrial pollution on Ibese River, Lagos, Nigeria

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This paper deals with pollution aspect of environmental management and monitoring of the river for its sustainable development. The water quality assessment of Ibese River, which is the principal river of the Igbogbo Abayeku Areas of Ikorodu in Lagos, was performed. Assessment was undertaken according to different physical and chemical parameters including biological oxygen demand (BOD), dissolved oxygen (DO), electric conductivity (EC), total dissolved solids (TDS), alkalinity, acidity, total hardness (TH), grease content, major cation and anion, and some heavy metals. Results showed that the river, which was of good water quality at its upstream, in terms of the aforementioned parameters, becomes progressively polluted by the waste materials discharged along its course. A general downstream trend of increase in organic and inorganic pollution was declared. Thus, Ibese River currently faces a number of serious environmental and ecological challenges. Urbanization and industrialization of the watershed at Ibese area in Ikorodu contributed to the water quality deterioration with regional consequences on the aquatic ecosystem and on the health of the downstream's user groups. This synergetic effect is of concern for the sustainable use of the resources.

Key words: Nigeria, Ibese River, water pollution, major cation and anion, heavy metals, water quality deterioration.

INTRODUCTION

The Ibese River currently faces a number of serious environmental and ecological challenges. Uncontrolled discharge of untreated wastewater and solid wastes into the river in the mid section has degraded the quality of surface water beyond the acceptable limits. Ajayi and Osibanjo (1981); Paudel (1998); Osibanjo (1990) conducted a research on the effect of effluents from two breweries on Ikopoba River in Benin, Nigeria, where a rise in pH, a decrease in dissolved oxygen and increase in biological oxygen demand (BOD), chemical oxygen demand (COD)and total suspended solids, were noticed to have their own bearing on the aquatic life of the river. The impacts of water quality deterioration have regional consequences on the aquatic eco-system and on the health and cultural, religious and aesthetic values of the downstream user groups (Awomeso et al., 2009). The overall damage caused by the continuous discharge of unregulated and uncontrolled solid and liquid wastes into the Ibese River has provided impetus to community, environmentalists, policy makers and all other stake-holders to brainstorm on the environmental perspectives for the overall sustainability of the environment. The present study was performed to evaluate the pollution extent of the River. The Ibese River is located in Ibese Igbogbo Abayeku Areas of Ikorodu (Figure 1) in Lagos State of Nigeria. The River up streamed from about 1.2 km to the north of Abuja Village and flows along the river channel to Abuja Village to join the Lagos Lagoon at Oripodi. The study area has a relatively flat terrain with topographic elevation of less than 25 m above sea level

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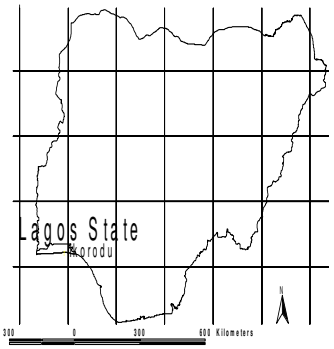
Lagos State
Ikorodu
N
300 0 300 600 Kilometers

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OFFENDING COMMAND: .buildcmap

STACK:

-dictionary-
/WinCharSetFFFF-V2TT9BF4ACCAt
/CMap
-dictionary-
/WinCharSetFFFF-V2TT9BF4ACCAt
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