



Preliminary Assessment of Anthropogenic Impact on Some Ecological Components of Abesan River, Lagos, Nigeria

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ABSTRACT

The impact of anthropogenic disturbances on water quality parameters, diversity of macrophytes and benthic macro fauna of Abesan River, Lagos, Nigeria is reported. Some Physico-chemical and biological assessment were carried out at three sampling stations located at downstream (AR-1), midstream (AR-2) and upstream (AR-3) with different levels of disturbance. Results of measured physico-chemical parameters showed that there was no significant difference ($P > 0.05$) in temperature, total acidity and chloride values between the sampling stations. Although, Total solids, conductivity, DO, Sulphate, BOD and COD were significantly higher ($P < 0.05$) at Stn.AR-1 than at Stns. AR-2 and AR-3, all physico-chemical parameters measured were within the limits of the Lagos State Environmental Protection Agency (LASEPA) and the World Health Organization (WHO) regulatory standards except for high COD concentration in downstream station. Aquatic vegetation (macrophyte) diversity was relatively abundant at upstream and downstream stations, suggesting possible impact of human activities on macrophyte diversity at midstream station where highest level of disturbance occurred. Chironomid larvae were the most abundant invertebrate fauna found in all three sampling stations but more abundant at sampling station AR-2 which corresponds to point of effluent entry to river where human activities is most intense. There is evidence that anthropogenic activities impact on the water quality of Abesan River. Biotic indices such as Sorensenen' s Index of Similarity and Margalef Index show that Abesan River is lightly polluted. The implications of these results and the need to monitor the water quality of Abesan River are highlighted.

KEYWORDS

Bioindicators, Biotic Index, Anthropogenic Impact, River, Africa

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