

The state and seasonal variability in some physico-chemical parameters of the New Calabar River, Nigeria

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Abstract – Some physico-chemical parameters of the New Calabar River were studied for 12 months from March 1996 to February 1997. Six sampling stations were established along the main river channel from source to mouth. Seasonal variations were significant with dry season values higher than wet ones with respect to surface water temperature, conductivity, transparency, biochemical oxygen demand, total dissolved solids, total hardness, and total alkalinity. No substantial seasonal variation was observed for pH, and dissolved oxygen. The longitudinal variation at the six sampling stations indicated that water temperature, pH, conductivity, dissolved oxygen, total dissolved solids, total hardness, and total alkalinity increased steadily downstream. Biochemical oxygen demand was highest at the middle stations.

Key words: seasonality, physico-chemical parameters, New Calabar River, tidal rivers.