

## Physico-Chemical and Heavy Metals Analysis of Contaminated Ndawuse River in North Central of Nigeria

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**Abstract :** The study assessed quality of surface water across Ndawuse River Phase 1, District of the Federal Capital Territory (FCT), Abuja, Nigeria based on physico-chemical variables that are linked to agrochemical and eutrophication, as well as heavy metals concentrations. In total, sixteen surface water samples were obtained from five locations along the river. The results were compared with the standard limits set by both World Health Organization and Federal Environmental Protection Agency for drinking water. The results obtained indicated that BOD<sub>5</sub>, turbidity, 0.014-3.511 mg Fe/L and 0.078-0.14 mg Cr/L were all above the standard limits. The results further showed that the quality of surface water is being significantly affected by human activities around the Ndawuse River which could pose an adverse health risk to several communities that rely on these receiving water bodies primarily as their source of water. Therefore, there is a need for strict enforcement of environmental laws considering the physico-chemical analysis.

**Keywords :** Abuja, heavy metals, human exposure risk, Ndawuse River, Nigeria, surface water

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