

**Title:** Trace metal load of two urban wetlands with varied catchment activities in Ghana

**Abstract:** This study compared Lead (Pb), Chromium (Cr), Copper (Cu), Zinc (Zn), Mercury (Hg), Arsenic (As) and Cadmium (Cd) concentrations in sediment, water, and biota at Vaughan Dam which receives limited sewage effluent discharge from residential areas, and Korle Lagoon which receives industrial effluents, electronic waste, garages-spill oil and a host of others in addition to residential sewage effluent discharge. Samples were analyzed with Atomic Absorption Spectrometer. The results showed that concentrations of trace metals were generally higher in the sediment, water, and plants from the Korle Lagoon but only Cu in the sediment of Korle Lagoon showed a significantly high concentration. The similarities in the rank orders of the metal concentrations together with the dominance of Zn and Pb in most compartments of the wetlands indicated major differences did not exist in the contaminant input to the two wetlands except electronic waste recycling and disposal that resulted in significantly high copper concentrations in the sediment of Korle Lagoon. No evidence of biomagnification was determined along the food chains of the Vaughan Dam and the Korle Lagoon for all the metals studied. The *Tilapia zilli* from Vaughan Dam, the only biota that is regularly consumed from the wetlands, had Cr, Cu, Pb, Cd, Hg, and As concentrations above FAO/WHO permissible limits and therefore pose a health risk to consumers.