

# ABSTRACT

A study was conducted along the stretch of Hudiara Drain to assess the pollution load on ecosystem of the area by estimating heavy metal accumulation (As, Cr, Cd, Cu, Fe, Ni and Zn) in water, its sediments and the two aquatic animal species *Lissemys punctata* (mud turtle) and *Trionyx gengeticus*. Physicochemical characteristics of water including Dissolved Oxygen (DO), Electrical Conductivity (EC), pH, Temperature and Total Dissolved Solids (TDS) were also measured.

The heavy metal concentrations in water, sediments and animal tissues show significant variations. When compared to permissible standards issued by WHO (1998) and NEQS (2000), significantly high concentrations of heavy metals (As, Cr, Cd, Cu, Fe, Ni and Zn) are found in water, sediments and animal tissues.

In conclusion, Hudiara Drain is highly polluted by the addition of untreated industrial effluents and city sewage and heavy metals tend to accumulate significantly in animals living in Hudiara Drain. This situation poses a threat to the entire ecosystem including human population which can receive these pollutants directly by drinking water or indirectly through food chain.

The consequences may be widespread as the drain dumps its polluted water in River Ravi on which many lands of the Punjab are irrigated.