

ABSTRACT

The current study was conducted to evaluate the concentrations of toxic heavy metals, such as cadmium (Cd) and chromium (Cr) in water of river Ravi from 3 sites, viz.: Balloki headworks (site, 1), Shahdera Bridge (site, 2) and Lahore Siphon (site, 3). Additionally, Manawan fish pond of Fisheries Research and Training Institute (MFRTI), Lahore was selected. Also, Thela fish (*Catla catla*) was studied for bioaccumulation of Cd (II) and Cr (II) in various organs, such as muscles, liver and gills. Water were more polluted with Cd (II) and Cr (VI) as compare to water samples of MFRTI. Concentrations of Cd (II) varied non-significantly in fish organs whereas Cr (II) varied significantly (≤ 0.05). Significantly higher concentrations of Cd (II) and Cr (II) were observed in liver, muscle and gills as compare to control samples. In liver of fish samples, bioconcentration factors of Cd (II) were calculated as 10.7, 3.6 and 6.4 at site 1, 2, and 3 respectively and Cr (VI) as 1.4, 1.0, and 1.4 respectively; in muscles, values for Cd (II) were 8.8, 7.6 and 9.0 and for Cr (VI) it was 1.1, 0.8, and 1.1 respectively; and in gills, values for Cd (II) were 10.8, 7.6, 9.0 and for Cr (VI) it was 1.1, 0.8, and 1.0 respectively. Elevated concentrations of studied toxic metal ions in water as well as in *Catla catla* hence impose a threat to subsequent food chain as well as local ecology.