

## EVALUATION OF POTENTIALLY TOXIC ELEMENTS IN GANGETIC FISH: AN ENVIRONMENTAL AND HEALTH ASSESSMENT PERSPECTIVES

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*The present study investigates the contamination and bioaccumulation of potentially toxic elements (PTEs) like Cadmium (Cd), Chromium (Cr), Lead (Pb) and Arsenic (As) in surface of the water and economically important fish species along the lower riverine stretch and estuarine zones of the Ganga River, with a focus on their implications for human health. Bioconcentration factors (BCFs) of *Mystus bleekeri* showing the highest levels of Cd, Pb, and As accumulation. As emerged as the most critical contributor to non-carcinogenic and carcinogenic risks, with certain species exceeding acceptable carcinogenic risk (CR) thresholds. The overall estimated daily intake (EDI), total hazard quotient (THQ), hazard index (HI) and CR for combined PTEs exposure through fish consumption remained within permissible level, site-specific and species-specific analyses unveiled significant localized health risks.*

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