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TOXIC METAL CONTAMINATION OF INLAND FISH (*Etroplus suratensis*) IN MAHAKANADARAWA RESERVOIR: A STUDY IN A CKDu PREVALENT AREA, SRI LANKA

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Fish is a great source of protein, polyunsaturated fatty acids (PUFA), lipo-soluble vitamins, and essential minerals. Meanwhile, people who live in the dry zone of Sri Lanka consume inland fish species collected from irrigation reservoirs. Toxic metals tend to accumulate in fish; thus, it is important to investigate the safety of the consumption of inland fish. This study evaluated the toxic metal contamination status of the edible fish (*Etroplus suratensis*) in the Mahakanadarawa tank and assessed the risk of fish consumption. Mihintale Divisional Secretariat Division was identified as a major CKDu-prone area in the Anuradhapura District. Mahakanadarawa tank is a major fishing source in the area. Fifteen *E. suratensis* samples were collected from the Mahakanadarawa tank in April 2022. The fish muscle parts, gut, and gills were removed, stored in sterile polyethene bags, and kept at 4°C during transport. The concentration of metal elements, including Mn, Co, As, Cd, Cr, Pb, Cu, Zn, Al, Fe, and Ni, was determined in an acid-digested sample using inductively coupled plasma mass spectrometry. The average contents of the nephrotoxic heavy metals/metalloids such as As, Cd, Pb, and Cr in the gut tissues of *E. suratensis* had reported elevated values compared to other tissue parts (gills and muscle). The average Pb content in the tissues of the gills, muscles, and gut of *E. suratensis* exceeded the permissible limits given by WHO/FAO. Average Cd contents did not exceed the permissible level in all analyzed tissue types, while average Zn and Cu levels have also complied with the WHO/FAO standard limits. The edible part of the fish consisted of an average of As = 0.01($\pm$0.01) mg/kg, Cr = 0.22 ($\pm$0.03) mg/kg, Mn = 1.19 ($\pm$ 0.36) mg/kg, and Al = 180.8 ($\pm$137.0) mg/kg. Even small amounts of toxic metals are reported in edible tissues of the *E. suratensis*; long-term consumption of fish may generate a negative health effect on consumers. Further risk assessment of toxic metals in *E. suratensis* in different reservoirs, including reference areas (CKDu-non-endemic areas), needs to be investigated in future studies.

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