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**ASSESSMENT OF THE RELATIONSHIP OF
HEAVY METAL CONCENTRATION OF FISHES
AND THEIR WATERS IN
MUTHURAJAWELA WILDLIFE SANCTUARY.**

by

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ABSTRACT

Wetlands are highly productive areas in the world. Various hydrological, biological and biochemical functions and its associated values are shown by wetland ecosystems. Muthurajawela wetland, which has been listed as one of the 12-priority wetlands of Sri Lanka (Scot & Pools, 1989), is the large saline coastal peat bog of Sri Lanka, located on the west coast between Negombo lagoon and Kelani River. Recognizing biological significance of Muthurajawela, Department of Wildlife Conservation declared the northern section of the marsh (1777ha) as a sanctuary in July 1996, under Fauna and Flora Protection Ordinance. At present this wetland is being rapidly degraded by activities related to the population growth and mushrooming of industries around Muthurajawela area. This has caused to reduce the water quality of Muthurajawela, which affects severely to the fauna and flora of this valuable ecosystem. In this research project, chromium and copper contents of fish and their waters, were measured during 4 months period using Atomic Absorption Spectrophotometry method. According to experimental results, the average chromium and copper amounts in the waters of the Muthurajawela wetland during the period of study, were $19.8\mu\text{g l}^{-1}$ and $28.0\mu\text{g l}^{-1}$. These levels are below the national and internationally recommended drinking and irrigation water standards. Average values for chromium and copper in fish bodies obtained by the research were 0.436 and 1.801 μg per 1g of wet weight. Copper amounts in fish bodies shows little high when comparing with available data. This study shows that chromium and copper pollution in waters of this wetland was low and not in a threatening level to affect fauna and flora, during the period of study.

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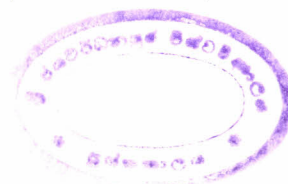
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