

**ANALYSIS AND ASSESMENT OF HEAVY METAL POLLUTION
IN WATER AND SEDIMENTS OF THE DIYAWANNA OYA,
COLOMBO CAPITAL, SRI LANKA**

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Diyawanna Oya is located in the greater Colombo area comprises of large number of open drainage canals, smaller tributary canals and low lying marshes functioning as natural water retention areas. Heavy metal pollution of the waterway has been a serious concern due to various anthropogenic inputs. Therefore, this report provides an insight in to the current heavy metal pollution status of water and sediments of the canal

Twenty sampling sites of the canal were identified and samples of water and sediments were collected. Samples were analyzed for Cr, Cu, Pb, Zn and Fe on Atomic absorption Spectroscopy (AAS), at the Department of Geology, University of Peradeniya. The results of the study show that the heavy metal concentrations in water and sediments were highly variable along the canal. The abundance of the selected metals in sediments varied in the order of Fe > Zn > Pb > Cu > Cr. The average Zn, Cu, Pb, Cr and Fe concentration are 516, 210, 95, 249 and 18315 ppm respectively. Heavy metal concentrations of water samples was found in the order of Fe > Zn > Cu > Cr > Pb. The average values of Zn, Cu, Pb, Cr and Fe are 2, 3, 0.5, 0.1 and 2 ppm respectively. Present study revealed that higher concentrations of heavy metals are present near the gully drainage. Fe and Zn are the dominant heavy metals in both sediments and water. However Cu concentration also shows relatively higher levels in sediments. Pollution condition of Sri Lanka is moderate by comparing with other industrialized cities of the world.

Key words: heavy metals, pollution, sediment, waters