

## ABSTRACT

Due to rapid industrialization and urbanization large quantities of pollutants are being added to the environment causing environmental degradation.. One such pollutant released by industries are heavy metals. In Sri Lanka large number of industries discharge their effluents directly or indirectly to Kelani river. Therefore this study was carried out to investigate the accumulation of heavy metals in the biota of Kelani river.

Sediments, plants and fish were subjected to analysis. The metals analysed were Ca, Mg, Fe, Cu, Pb, Cr and Cd. Sediments were analysed for the total ion content by acid digestion method and exchangeable content by ammonium acetate method. Plants were collected from the bank of the river and from the river itself. The ion content in different parts of the plants (leaves, shoots and roots) were analysed. In the case of fish the ion content was analysed for different organs (liver, kidney, muscles, gills and gonads). Analysis was done for all the samples using Varian AA-275 Atomic absorption spectrophotometer.

Accumulation of the heavy metals analysed were seen in both plants and fish. With respect to each metal neither species specificity nor site specificity was evident with both plants and fish.

No point sources were identified with respect to the heavy metal pollution. However it can be concluded that the Kelani river is polluted from heavy metals as accumulation of hazardous and non-essential heavy metals such as Cd, Cr and Pb were found in the biota. Some of the fish species collected from certain stations showed Pb and Cu levels in muscles exceeding the levels suitable for human consumption. Further *Ipomoea aquatica* from one station recorded Cu levels exceeding the level suitable for human consumption.