

STUDIES ON LEAD, CADMIUM AND COBALT POLLUTION IN ENNORE CREEK

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Abstract

A study was carried out in Ennore creek, Chennai to evaluate the pollution load of lead, cadmium and cobalt in water, sediment and fishes. Two sampling stations were chosen in the creek to study the water and sediment samples. Heavy metal concentration varied among the sampling locations. Metals in water were recorded as 7.8 and 8.2 µg (Cd), 10.8 and 10.2 µg (Co), 44.0 and 38.4 µg (Pb) and the sediment samples showing the values of 0.081 and 0.048 ppm for cadmium, 0.239 and 0.100 ppm for cobalt and 3.256 and 1.751 ppm for lead in two different stations respectively. Among the biological samples the metal concentration is high in mullet tissue (*Mugil cephalus*) and the values were observed to be lead - 0.241µg, cobalt - 0.101µg and cadmium - 0.010µg. Metal concentrations in ovary of mullet are 0.014µg (Cd), 0.009 µg (Co), and 0.152 µg (Pb) and in white shrimp (*Penaeus indicus*) 0.013 µg (Cd), 0.12 µg (Co) and 0.093 µg (Pb). The details of heavy metal accumulation are discussed in the article.

Keywords: Ennore creek, Sediments, Fishes, *Penaeus indicus*, *Mugil cephalus*, Heavy metals.