

## **WATER POLLUTION DUE TO HEAVY METALS IN KATEDAN INDUSTRIAL AREA, ANDHRA PRADESH: A CASE STUDY**

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Katedan Industrial Development Area is one of the thirteen industrial areas surrounding the Hyderabad City. About 150 industries, mainly steel and metal industries, are located in the industrial area, which is surrounded by beautiful scenery of hillocks and boulders. Fresh Water Nooramma Lake is situated adjacent to the industrial area.

The samples collected during one hydrological cycle were studied with the help of Graphite Furnace Atomic Absorption Spectrophotometer. Lead, which is normally absent in groundwater, was found upto 150 ng/ml. Chromium concentration was as high as 785 ng/ml in surface water and 500 ng/ml in groundwater. Cd, As, Mo, Cu and V were found to be within the permissible limits. Cobalt concentration was also as high as 240 ng/ml. High concentration of zinc 1000 to 3200 ng/ml were also observed in 2-3 samples. Nickel was present all over the study area in the range of 100 to 500 ng/ml. The surrounding rocks are predominantly granite and high concentrations of Ni, Cr and Co cannot be derived from these rocks.

The environmental geochemical studies reveal that the lake water of Nooramma Lake is highly polluted with Pb, Cr, Co, Ni and Zn due to the surrounding industries. Heavy metals have also migrated to the groundwater and have polluted the wells in some of the residential areas. Geochemical distribution maps of trace metals have been prepared for the study area.