RESEARCH PAPER:

Trace metals distribution in soil of Singarva lake, Ahmedabad, Gujarat

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SUMMARY

Ahmedabad is unique in the whole of India in matter of environmental neatness and flourishing conditions and it is superior to other cites in the excellence of its monuments. Ahmedabad Urban Development Authority (AUDA) proposes to undertake work for revival, development of catchments areas and beautification of few lakes and under the present project .of this Singarva lake is considered as one of the most important irrigation and drinking water resources. During drought period the water level decreased and the concentrations of the most Addition to some trace metals (Fe^+, Mn^+, Zn^+, Pb^+,Cr^+,Ni^+,Hg^+). The results values of the estimated through lake during monthly analysis of the January-2009 to December -2009. Soil gets polluted due to dumping of waste. Solid waste is garbage, refuse, sludge and other discarded materials (Including solids, liquids and contained gases) resulting from industrial, commercial mining and agricultural operations, and from community operations. The soil samples were taken from Singarva Lake of Ahmedabad to assess the soil quality.

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Key Words :
Trace, AUDA , Soil, Singarva lake

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Singarva lake, circuitous man-made bansins, has been formed by the fracture and extract rocks. The lake, inland closed basins, receive their water from the ground and seepage waters. It occupies the area between Latitudes E. 72°.68949 ‘ and N. 23°.02320’ the lake surface areas 5675.0 m^3. The lake bansins , man-made are located in the Ahmedabad-Godhra National Highway No-8 and Nr, Kathwada GIDC Area in Ahmedabad.

Soil is derived from the Latin word “Solum” which means earthly material in which plant growth takes place. Soil is a natural body consisting of layers (soil horizons) of mineral constituents of variable thicknesses, which differ from the parent materials in their morphological, physical, chemical, and mineralogical characteristics. It is composed of particles of broken rock that have been altered by chemical and environmental processes that include weathering and erosion. Soil is essential for survival of the living world, especially for human population. Soil is a dynamic medium made up of minerals, organic matter, water, air and living creatures including bacteria and earthworms. It was formed and is forever changing due to physical factors; the parent material, time, the climate, the organisms present(Upadhyaya *et al.*, 2010).

The contamination of soil, sediment resource and biota by heavy metals is one of the major concern especially in many industrialized countries because of their toxicity persistence and bioaccumulation (Iken *et al.*, 2003).

The aim of the present study is to determine the spatial and temporal distribution of addition to (Fe^+, Mn^+, Zn^+, Pb^+,Cr^+,Ni^+,Hg^+) in soil and sediment of Singarva lake during January-2009 to December-2009 of drought period to assess the environmental status of the soil-sediment of Singarva Lake, Ahmedabad.

EXPERIMENTAL METHODOLOGY

The present study was done during drought period (January 2009 to December