**ABSTRACT**

Water pollution is a serious problem of concern due to the potential health impacts of bioaccumulation in the food chain. Based on this fact, a field study is conducted in the areas of three major polluting industries viz. dyeing, tannery and plating located at Coimbatore, Tirupur and Erode pertaining to ground water table contamination due to heavy metals from industrial discharges. The outcome of the field study formed a baseline to investigate the accumulation of toxic metal ions: Cd, Cu, Zn, Pb, Fe, Co, Cr, Mn and Ni in the effluent, fodder and milk samples. A marked extremity of pollution is recorded against lead and chromium concentrations in comparison to WHO permissible limits for effluents, diminishing reflecting in the inherent increase of 7 and 5 fold times for fodder/ milk samples. Also, reclamation studies are performed using naturally occurring eco-friendly materials to minimize the extent of pollution in all the chosen samples. The analysis and assessment of the results conclude that thus the materials possess excellent metal chelating ability and serve as better choice in the heavy metal bioaccumulation by treating the effluents even before being discharged into the soil environment.