

A Study of Soil Heavy Metal Pollution in the Manganese Mining in Drama, Greece

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Abstract : The release of heavy metals into the environment has increased over the last years. In this study, 25 soil samples (0-15 cm) from the fields near the mining area in Drama region were selected. The samples were analyzed in the laboratory for their physicochemical properties and for seven "pseudo-total" heavy metals content, namely Pb, Zn, Cd, Cr, Cu, Ni, and Mn. The total metal concentrations (Pb, Zn, Cd, Cr, Cu, Ni and Mn) in digests were determined by using the atomic absorption spectrophotometer. According to the results, the mean concentration of the listed heavy metals in 25 soil samples are Cd 1.1 mg/kg, Cr 15 mg/kg, Cu 21.7 mg/kg, Ni 30.1 mg/kg, Pd 50.8 mg/kg, Zn 99.5 mg/kg and Mn 815.3 mg/kg. The results show that the heavy metals remain in the soil even if the mining closed many years ago.

Keywords : Greece, heavy metals, mining, pollution

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