

Spatial Distribution of Heavy Metals in Khark Island-Iran Using Geographic Information System

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Abstract : The concentrations of Cd, Pb, and Ni were determined from 40 soil samples collected in surface soils of Khark Island. Geostatistic methods and GIS were used to identify heavy metal sources and their spatial pattern. Principal component analysis coupled with correlation between heavy metals showed that level of mentioned heavy metal was lower than the standard level. Then the data obtained from the soil analyzing were studied for the purposes of normal distribution. The best way of interior finding for cadmium and nickel was ordinary kriging and the best way of interpolation of lead was inverse distance weighted. The result of this study help us to understand heavy metals distribution and make decision for remediation of soil pollution.

Keywords : geostatistics, ordinary kriging, heavy metals, GIS, Khark

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