

Assessment of the Soils Pollution Level of the Open Mine and Tailing Dump of Surrounding Territories of Akhtala Ore Processing Combine by Heavy Metals

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Abstract : For assessment of the soils pollution level of the open mine and tailing dump of surrounding territories of Akhtala ore processing combine by heavy metals in 2013 collected soil samples and analyzed for different heavy metals, such as Cu, Zn, Pb, Ni and Cd. The main soil type in the study sites was the mountain cambisol. To classify soil pollution level contamination indices like Contamination factors (Cf), Degree of contamination (Cd), Pollution load index (PLI) and Geoaccumulation index (I-geo) are calculated. The distribution pattern of trace metals in the soil profile according to I geo, Cf and Cd values shows that the soil is very polluted. And also the PLI values for the 19 sites were >1 , which indicates deterioration of site quality.

Keywords : soils pollution, heavy metal, geoaccumulation index, pollution load index, contamination factor

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