Environmental Impact of Metallurgy on the Soils and the Air of Elbasani City, Albania

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Abstract: In this paper we present new data on the heavy metals (Fe, Cr, Ni, Co, Zn, Pb and Mn) content in the soils and the air (based on the attic dust samples) of Elbasani city. The soils natural background is calculated using the analysis of 40 soil samples far away from the industrial zone and in the depth 40 cm. The attic dust natural background is calculated from a sample situated 20 km from the industrial zone and 800m above, in the mountains. The soil samples were analysed by AAS and the dust samples by XRF. Mean Cr, Zn and Fe content in the soil samples is from 1.3 to 1.7 times of natural background. Mean Fe, Mn, Zn, Cr, Ni and Pb content in attic dust varies from 1.2 to 2.7 times of natural background. These high contents are due to the activity of the metallurgy mainly by dust emission. A second pollution source is evident (mainly for Fe and Ni) corresponding to the transporting and deposit of the iron-nickel ore from the mines.

Key words: soils, attic dust, heavy metals, environmental pollution, Elbasani

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