

ENVIRONMENTAL GEOCHEMICAL PROBLEMS IN HUNGARY

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The most important environmental–geochemical problems in Hungary is coming from the lack of certain elements rather than having too much from them. From the literature that is known that the bigger part of the country suffer from the lack of I, Se and Mo, and this results already some health consequences. The geochemical exploration of the Geological Institute of Hungary made clear, that the territory of the country is not uniform, but 4 regions can be divided. In the bigger part of the central (2.) region the Cu, Zn and other essential elements show lower concentration than the minimum necessary for plants. Searching the geological reasons, it was found, that the purpose of this is the lime accumulation, which is typical in this region. In the ice–age, when the precipitation was fewer than nowadays and the vegetation set the soil less, the wind blew the dust of carbonate rocks covered the main part of the Transdanubian Midmountain far away, and it was deposited mixed with loess and wind-blown sand. The crystalline limestone- and dolomite dust gradually dissolve in the unsaturated zone and it precipitates in the pores as amorphous carbonate. In the superficial loose sediments Ca, Mg, Sr (and Ba) accumulate among the cations, and CO₃ (SO₄ and PO₄ too) among the anions, all the other elements are crowded out, so the micro-nutrient supply of the soil became deficient. Other kind of problems occur in the eastern (4.) region which was separated because of the mining–heavy-industrial contamination of the area, so there are more non-ferrous metals, mainly Cd, and the concentration of that is significantly over the contamination limit value.

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