



HEAVY METAL POLLUTION IN URBAN SOILS OF SOPRON

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Our aim was to identify the main feedback effects between the town and its environment. In the course of our investigation we have analysed the heavy metal contents of urban soil in Sopron town in Hungary.

We collected 208 samples on 104 points from 0 to 10 and from 10 to 20 cm depth in a standard network and also at industrial territories. We have been represented our results in a GIS system. We analysed the soils with Lakanen-Erviö method and we measured 24 elements but we have been focused on Co, Cd, Cu, Pb and Zn. Using the data we observed the relationship between these elements in both layers.

In the downtown the acidity of soils were alkaline by the greatest number of point, therefore the pollution of these soils is not leach in deeper layers yet. The lead was very high (> 100 mg Pb/kg) in both layers on the whole area of the town. Urban soils with high copper content (among 611 mg and 1221 mg Cu/kg) have been collected from garden and viticulture areas by us. Cadmium contents were the highest (6.14 mg Cd/kg) in traffic zones, where these values could be more than 3 mg Cd/kg according to the literature. The cobalt and zinc results were under the limits. According to our measurements we founded the highest average values in the soils of parks. This could be contamination of the lead from traffic, which bind in the soil of urban green spaces.

Now we could continue our examinations with the investigations of these polluted green areas, which can effect to human health.