

Review of: "Probabilistic Assessment of the Heavy Metal Pollution in Debrecen's Topsoil"

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Potential competing interests: No potential competing interests to declare.

The presented research paper is very interesting because it gives good statistical results based on large number of soils chemical analyses. In order to valuate the obtained results, authors must give more clarifications about some relevant points:

About study area and sampling method

The provided information about the study area are weak and must be completed by **allocation maps** of the study area and sampling points. More information about **climatic conditions**, **pedology** and **chemical background** of the studied soils are requested.

Analytical methods

In this section of the manuscript, the description of the analytical procedure is abbreviated. Many informations are well appreciated like,

- At what **value the soils were sieved**
- The **detection limits** of the analyzed chemical elements by XRF device.

Results and discussions

The obtained results and the used statistical approaches are based on chemical analyzes of soils. For a good explanation and interpretation of the chemical results, **mineralogical data** of the studied soils are needed. This make easier the understanding of statistical results like correlation matrix and PCA analysis of heavy metals.

The **organic matter** plays important role in the geochemistry of the soils and the behavior of chemical elements. It seems that this parameter was weakly represented in this work.

The obtained results must be placed in the framework of the research works done in the studied area or in Hungary in general.

The **carcinogenic and non-carcinogenic** risk assessment should be estimated.

