

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.

Title

- Where is Debrecen? Please state the study area concisely.

Abstract

- The research objectives should be briefly described in the abstract.
- Abbreviations should be introduced prior to the first mention.
- Analytical procedures should be briefly described in the abstract as well.
- Sentences 7 and 8: The description is confusing. The abstract should be concise and clear. Please re-write.

Keywords

- XRF: Abbreviations should be introduced prior to the first mention.

Introduction

- Paragraph 1: What is "<\p>" at the end of the paragraph?
- Paragraph 2: Incorrect format for a few citations.
- In Keywords, GIS is the most important keyword listed in the manuscript. Therefore, a description of GIS should be included.

Materials & Methods

- Where is Fig. 1?
- Since the authors used soil augers and shovels to collect soil samples, how did the authors avoid contamination by those materials since they are made of metal products?
- Analytical procedure: How do the authors validate the concentration of metals obtained from the samples? Is 48 hours enough for all samples to be air dried? What about the soil texture? Doesn't the soil texture play an important role in the drying process?
- Citation: Muller (1969) is too outdated to be used. Some other citations as well.
- Inconsistency in citations format.
- Authors should use the insert function for all formulas/equations.

- Citation on Hungarian legislation should be properly cited and addressed.
- Authors should justify the reason for selecting all the indices.
- Statistical analysis: Should briefly describe each analysis properly.

Results & Discussion

- Table 1: Is the pollution limit value referring to any standard? Describe the standard in brief. Metals concentration in measured samples refers to total concentration; how can authors justify the comparison with the pollution limit value (per organic and inorganic compounds)?
- Page 6: “The mean value concentration of Cu, Cd, Mo exceeded the permissible limits of the Debrecen region by 2.3, 0.9, and 0.4...” – Which permissible limits did the authors refer to?
- How do coefficients of variation portray human impact on metals concentration? Further clarification is needed.
- Instead of using ‘vertical & horizontal distribution,’ it is much proper to use spatial distribution only, since I could not understand the difference between vertical and horizontal distribution, since there is a lack of discussion.
- In general, this manuscript has lots of interesting data BUT lacks proper discussion. Most of the discussions are more toward describing instead of discussing.

List of References

Too many mistakes in the formatting. Major revision is needed.