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.

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

The authors aimed to assess the environmental quality of Debrecen in terms of heavy metal pollution and to delineate a simulation procedure for spatial and statistical patterns of these metals in atmospherically deposited dust samples.

The manuscript is well-written, and the data analysis is very interesting. However, some minor revisions are necessary before considering the paper for acceptance:

1. Page 1, Line 1. The authors employ the term "heavy metals," but some researchers suggest replacing the controversial term "heavy metals" with "potentially toxic elements (PTEs)."
2. Page 3, Line 8. Figure 1 is not displayed.
3. Page 3, Line 15. The quantification of elements using XRF is not as precise as in fully quantitative methods. This is because XRF does not require the preparation of specific calibration curves for each element, which is common in more precise quantitative methods. Instead, XRF provides a semi-quantitative analysis, estimating element concentrations based on comparisons with known standards. To enhance accuracy, calibrations and comparisons with quantitative methods are employed. Could you provide clearer information on how you addressed this issue in your methodology?
4. Page 6, Table 1. It would be interesting to compare the findings with the limits recommended by international organizations.
5. Page 7, Figures 2, 3, and 4. The captions and scales of the figures are not legible. Would it be possible to correlate the most polluted areas with regional characteristics such as higher vehicle traffic or presence of industries?
6. Page 11, Table 4. I believe a figure displaying the scores would be easier to interpret than this table. I suggest this alteration.