# Review of: "Floodplain soils contamination assessment using the sequential extraction method of heavy metals from past mining activities"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

I am very grateful that you offer me the opportunity to revise our manuscript recently submitted to scientific reports. Here we would like to submit our revision entitled, “Floodplain soils contamination assessment using the sequential extraction method of heavy metals from past mining activities” (by Radoslava Kanianska, JozefVarga, Nikola Benková, Miriam Kizeková and Ľubica Jančová). This study interesting but major revisions is necessary as follow:

1. Paragraphs 2, the fourth sentence:‘Soil contamination is mainly located near waste landfills and industrial activities that spread heavy metals (HMs) and other potentially toxic elements.’Potentially toxic elements is just one kind of soil pollutant;
2. The distance of sample sites from the Štiavnica River should be described more clearly. Two CS were 1 km and 100 m and the RS was 400m from the Štiavnica River. Did the CS points in mine tailing pile? RS was 400m away from river, the floodplain is much lower than 400m from river? How about other sites?
3. To guarantee data quality, were reference materials used? Did there any repeat analysis?
4. The standard code of finish threshold value and Canadian soil quality guidelines in table 3 should be articulate clearly.
5. Soil contamination by heavy metals part,´We recorded 4 HMs (Cd, Cu, Pb, Zn) whose total content in most localities significantly exceeded all limit values’. Since there is no statistically significant, significantly should be modified to much higher than
6. The results of fraction distribution of HMs were from topsoil(0-10 cm) or 20-30cm?
7. ‘Soil properties were selectively correlated with the HM fractions. The most numerous significant correlations with chemical properties occurred in the case of Mo (15), while the least occurred in the case of Pb (4). The most numerous significant correlations with physical properties occurred in the case of Cu (20) while the least occurred in the case of Zn (3).’ I’m not sure what’s meaning about the numbers after elements
8. It’s much better to replace the results of differences of HM fractions in the soils ecosystem types and the soil depths into ‘Heavy metals fractionation’ part.
9. The conclusion ‘The high content of HMs in different fractions in floodplain soils along the entire Štiavnica River watercourse proved to be a consequence of past mining activities’ in discussion part should be discussed clearly, for example: the mining point should be indicated in sampling map; since the pollution of CS was caused by mining activity, what’s the different between AS and CS? How did agriculture activity impact the soil pollution?.....