

Interactive comment on “Toxic Levels of Some Heavy Metals in Drinking Network Surface Water of Damietta Governorate, Egypt” by M. S. M. EL-Bady

Anonymous Referee #1

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The author address the problem of heavy metals contamination in the Drinking Network and Surface Water of Damietta Governorate, Egypt. The article is very shallow and doesn't contain enough data and information for any urban setting. The article has a lot of flaws starting from the title, intro, methodologies and the result & discussion. No physicochemical analysis of water samples, no risk analysis, and the trace element reported are not sufficient to be published in this journal. Background information such as the urban hydrogeological characteristics of the city, geology and potential land uses that may release contaminants to the groundwater are not included. Therefore, the manuscript has to be rejected because of the flaws and information gaps. Detailed remarks: Among the things to be highlighted, there is the fact that the manuscript is

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missing a section dedicated to the hydrogeology of the study area. The hydrogeochemistry is a powerful tool, but the author needed to put it in the geological and structural context in order to formulate realistic conclusions. The objective of the manuscript is not clear. The metal analysis protocol with suitable references is missing whereas the MS is based on the metal contamination only. The quality control is missing. I miss several plots to better understand the ionic relationship and also an explanation more focused on the hydrogeology of the area. The physico-chemical properties of water directly affects the metal distribution and speciation therefore, it should be included. The methodologies presented by the author is not sufficient for the health risk assessment of heavy metals though the major focus of this study is the human health risk due to heavy metals in Damietta Governorate. The PI index provides a basic understanding only for any contaminant therefore, it is not sufficient for any kind of health risk assessment. The Target hazard quotient (THQ) and HRI should be used for the health risk assessment for the selected metals, instead. The results section is missing the comprehensive analysis and discussion. The interpretation is not valid due to the missed information and needed to be reformulated using hydrogeological data.

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