



The Potential Ecological Risk Assessment of Heavy Metals in an Urban Shallow Lake

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Urban lakes sediments unfortunately have received a large amount of wastewater containing various contaminants such as heavy metals (HMs). Heavy metals in urban lake sediments mainly originate from industrial discharge, heating sources, traffic emissions and waste from municipal activities. The human health and the whole ecosystems are threatened with potential harmful effects of following metal pollutants As, Cd, Cr, Cu, Hg, Ni, Pb and Zn, due to their persistence, non-degradability, inherent toxicity, and bioaccumulation¹. Therefore, the analysis of lake sediments is a useful and important approach to characterize environmental pollution in aquatic ecosystems. Due to the diverse environmental conditions and sources of HMs, different pollution indices are used to assess the anthropogenic impact of PTEs in sediment samples^{2,3}. In this study, ecological risk assessment of the urban shallow lake sediments in Central Serbia by HMs was analyzed by calculating single and multi-pollution indices and using multivariate techniques to reveal the associated adverse effects of the investigated contaminants.

Keywords: risk indices; anthropogenic pollution; sediment quality; multivariate analysis; positive matrix factorization.

References

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