World Academy of Science, Engineering and Technology
International Journal of Environmental and Ecological Engineering
Vol:15, No:09, 2021

Hydrochemical Contamination Profiling and Spatial-Temporal Mapping with the Support of Multivariate and Cluster Statistical Analysis

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Abstract : The aim of this work was to test a methodology able to generate spatial-temporal maps that can synthesize simultaneously the trends of distinct hydrochemical indicators in an old radium-uranium tailings dam deposit. Multidimensionality reduction derived from principal component analysis and subsequent data aggregation derived from clustering analysis allow to identify distinct hydrochemical behavioural profiles and to generate synthetic evolutionary hydrochemical maps.

Keywords : Contamination plume migration, K-means of PCA scores, groundwater and mine water monitoring, spatial-temporal hydrochemical trends
Conference Title : ICGMIM 2021 : International Conference on Groundwater Monitoring and Integrated Modelling
Conference Location : London, United Kingdom
Conference Dates : September 23-24, 2021