

# Review of: "Spatial Analysis of Soil Fertility Using Geostatistical Techniques And Artificial Neural Networks"

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**Potential competing interests:** No potential competing interests to declare.

The manuscript has a very interesting title. The authors have tried to correspond to this anticipation in a very good way. Based on a study of 10 variables measured at a case study site, soil property maps were produced by geostatistical analysis and interpolation using ordinary kriging, and artificial intelligence techniques based on an artificial neural network classification system were applied to generate soil fertility classes using the Fuzzy Kohonen Clustering Network (FKCN) algorithm.

However, the practical involvements of this work are very limited and mostly confined to the study area. This should be included in the discussion, particularly by comparing the maps and their statistics with other literature.

In the materials and methods section, the authors should explain why they use the ordinary geostatistical method of kriging for spatial analysis of soil fertility.

Authors should provide more details on how the validation of the predictive ability of soil fertility classes was conducted, as it has not been described in depth. Authors should present normality test results and box plot graphs. These results could be included in supplementary material to provide more added credibility to the results. In addition, authors should explain the criteria used to implement the canonical multivariate analysis.

In Tables 1-5. substitute the dot for the decimal point.

figure 5 and 7 and 8. replace meters to metros in the scale.

figure 6. substitute classes for clases.

I believe the manuscript needs to be revised in these parts, I consider these as minor revisions. I encourage the authors to take action because they are not serious problems and can be solved with effort.

