

Review of: "MCDA - Groundwater prediction analysis for Sustainable Development using GIS Supported AHP in Okeigbo, Southwestern Nigeria"

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Potential competing interests: No potential competing interests to declare.

The manuscript entitled: "MCDA - Groundwater prediction analysis for Sustainable Development using GIS Supported AHP in Okeigbo, Southwestern Nigeria" is significant and presents interesting results as well as an integrated methodology. However, some aspects are necessary to address to ensure a high quality.

General comments:

It is not clear in the manuscript the main point of the methodology applied. In your title the MCDA (AHP) and GIS are the tools used for groundwater prediction. However, across the text, the VES apparently were more discussed. Please verify this and make the corresponding changes.

I suggest to move the description of the AHP method to the "material and method" section.

In section "Hydrogeological Parameters Modeling and Groundwater Potential Mapping", the figure 10b doesn't match with the groundwater potential map. In addition, consider to show this map apart, since it is one of your final products.

Please check that the numeration of all figures match with the sentences in the whole manuscript.

In conclusions section, what are the implications of the work for the sustainable management of groundwater in the study area?

Specific comments

Please in abstract give the description of the acronym GWPIV, since it is the first time that you mentioned it.

In line 4 of introduction section, please remove the word "water" in sentence: "The assessment of groundwater water sources across..." since I understand you are referring to groundwater resources

In introduction, you mentioned some techniques for groundwater investigation (eg., Geophysical methods, hydrogeological measurements, remote sensing techniques, etc.), but you didn't mention the MCDA such as AHP as one. Please add a brief background of this information, since it's one technique employed in your study.

I suggest to rewrite the final sentence of introduction: "The method utilized integrated survey methods so as to develop a

prediction model of high validity and reliability for proper management of the resource.”. In order to involve the full methodologies employed (e.g., AHP coupled with GIS supported and survey methods).