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

Serges Raoul Kouamou Njifen[1]

1 Université de Yaoundé I

Potential competing interests: No potential competing interests to declare.

# Geois

The authors applied the approach based on the Analytical Hierarchy process to map groundwater potential zones in the Okeigbo region of southeastern Nigeria using direct and indirect geophysical techniques in a GIS environment. This paper uses geoelectrical data to do groundwater prediction analysis from a combination of different groundwater conditioning factors. The authors listed several groundwater conditioning factors in the method section and just used six (6) factors to do the multi-criteria decision analysis with the AHP method. I do not understand what was the importance of highlighting the conditioning factors such as the drainage network, the slope and certain hydrodynamic characteristics of the aquifers without however taking them into account in the process of modeling the groundwater potential zones. In introduction section, the authors have not been successful in establishing the need for the AHP method in the study.

The abstract must be redone while respecting the following steps: contextualise the study, the objective of the work, present the method used, expose the main results and the interest of the study.

The introduction is very long and not very concise. It should be reduced and more focused on the literature review and the antecedents that led to the main objective of the study.

The methodology is very poorly described and the applied AHP approach is commonly used and not new. The method section is very dense and lacks coherence.

The results presented are inconsistent with the main objective of the study. The results section lacks organization. Too many figures in this study, which we sometimes seek a link with the problem and the objective of the study.

Overall, in my opinion since not all groundwater conditioning factors mentioned in the manuscript were fully considered in the assessment, the resulting potential map is not predictive. Significant modifications are required. I suggest to reject this article in this form, and invite the authors to resubmit their work if the remarks can be significantly improved.