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 use of multi-criteria decision analysis and the analytical hierarchy process with GIS to anticipate hydrogeologic significance is praiseworthy. This method provides a thorough understanding of aquifers and their relationships to geologic units, improving the accuracy of groundwater potential evaluation.
- Weighting and pairwise comparison of six hydrogeologic characteristics provide a systematic and objective technique for assessing groundwater potential. This process ensures that each parameter is correctly taken into account, resulting in dependable and robust predictions.
- The identification of groundwater potential zones is useful for water resource planning and management. The identification of low, moderate, and high potential zones enables focused interventions and the long-term use of groundwater resources in the studied area.
- The discovery that quartz schist and quartzite areas have higher prolificacy emphasises the significance of geologic units in groundwater supply. This data can be used to direct future exploration operations and prioritise regions for groundwater extraction.
- The characterization of the drainage basin, flow connectivity, and flow direction reveals important information about the movement and distribution of water in the research area. This knowledge helps to understand hydrological dynamics and can help with the implementation of appropriate water management methods.

Overall, this work demonstrates a rigorous methodology, thorough analysis, and useful findings that contribute to a better understanding of the region's groundwater potential and hydrogeologic significance. The findings have implications for water resource planning, groundwater management, and long-term development.