Review of: "Groundwater Potential Zone Assessment Using Remote Sensing, Geographical Information System (GIS), and Analytical Hierarchy Process (AHP) Techniques in Fogera Woreda, South Gondar Zone, Ethiopia"

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Potential competing interests: No potential competing interests to declare.

Groundwater Potential Zone Assessment Using Remote Sensing, Geographical Information System (GIS), and Analytical Hierarchy Process (AHP) Techniques in Fogera Woreda, South Gondar Zone, Ethiopia- **Need revision**

Abstract

In the abstract methodology explanation, the sentence "Through the utilization of the analytical hierarchy process (AHP), remote sensing, and geographic information system (GIS), the study identified groundwater potential zones" should specify how these methods were used together. It might be clearer to state that AHP was used to assign weights to the thematic layers, which were then analyzed using GIS.

The percentages given for the groundwater potential zones should be presented in a more detailed and precise manner. This could include a breakdown of what constitutes "moderate," "poor," etc., or a brief explanation of the criteria used to classify these zones.

Introduction

The mention of using GIS and remote sensing is repeated multiple times.

The introduction should clarify how the study will be conducted using AHP and GIS, including a brief mention of the thematic layers or criteria used.

Pls go through the following references in the introduction as well as in the discussion session: https://doi.org/10.1016/j.geogeo.2022.100093; https://doi.org/10.1016/j.gsd.2020.100466; https://doi.org/10.1016/j.gsd.2019.03.005; https://doi.org/10.1007/s12665-017-6749-8;

Study Area and Method

Sentences should be rephrased for better readability and flow. For example, mentioning the rainfall pattern should be connected more clearly to the agricultural practices.

The explanation about rainfall and rechargeability should be more scientifically accurate and concise.

Methods

Improve sentence structure and grammatical accuracy for clarity.

Some steps in the methodology are not fully detailed.

Results and Discussion

Correction: Improve clarity in describing soil textures and their influence.

Clarify the slope intervals and their impact on groundwater recharge.

Clarify the definition and calculation of lineament density.

Improve clarity and consistency in describing rainfall data and zones.

Clarify the influence of river proximity on groundwater potential and correct the classification.

Conclusion

The conclusion would benefit from greater clarity and should encompass the key findings of the study for improvement.