Review of: "Exploring the Link Between Climate Change and Farming in Rural and Peri-Urban Communities in Sierra Leone"

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The research article offers valuable insights into how climate change is affecting agricultural practices and outcomes in Sierra Leone. It focuses on both crop cultivation and livestock farming, blending farmers' perspectives with climate data from weather stations to provide a detailed understanding of the current challenges.

The study thoroughly examines the impact of climatic factors such as temperature, rainfall, humidity, and wind on farming, with data spanning almost a decade (2014-2023). The research is structured around key questions, which are effectively addressed using both qualitative and quantitative methods, resulting in well-supported findings.

Strengths

- Relevant Topic: The research tackles a critical issue, highlighting the impact of global climate change on agriculture, which is a crucial livelihood activity in Sierra Leone's rural and peri-urban areas. The emphasis on farmer coping strategies is particularly useful, offering practical insights into how farmers mitigate these impacts.
- Mixed-Method Approach: The study’s integration of both qualitative (farmers' perceptions) and quantitative (climate data) approaches is commendable. This combination strengthens the credibility of the research and provides a comprehensive understanding of the issue.
- Comprehensive Analysis: The article explores a broad range of climatic factors—rainfall, temperature, humidity, and wind—and their effects on farming. By analyzing both crop yields and livestock production, it offers a well-rounded perspective on agricultural challenges.
- Coping Strategies: The analysis of adaptive strategies used by farmers is particularly insightful. The discussion is practical and offers helpful policy suggestions, emphasizing the need for technical training and support to build farmer resilience.

Areas for Improvement

- Methodology Details: While the study outlines the sampling and data collection process, it could benefit from more explanation regarding how the sample size was determined and why specific districts were selected. A clearer rationale would improve transparency.
- Climate Data Correlation: Although the article uses climate data to support farmers' perceptions, the analysis could be

strengthened by more explicit links between the climate data and farming outcomes. For instance, providing more detailed comparisons between rainfall patterns and crop yields would enhance the analysis.

- Geographical Variability: Sierra Leone's varied agro-ecological zones could have been explored more in-depth. It would be helpful to understand how different regions' conditions affect farmers' coping strategies, as some areas may be more susceptible or resilient to climate change than others.
- Potential Solutions: While the study highlights the challenges faced by farmers, it could expand the section on solutions. In addition to discussing farmer training and improved techniques, more detailed recommendations for policymakers, NGOs, and international organizations would be beneficial for supporting adaptation efforts.

Conclusion

This article offers a significant contribution to understanding the relationship between climate change and agriculture in Sierra Leone. The findings are highly relevant to ongoing discussions about food security and sustainable farming in the face of climate challenges. While the recommendations are brief, they underscore the need for greater institutional support for farmers. With a few improvements, particularly in methodological clarity and solution-oriented discussions, this research could serve as a key resource for those working on climate adaptation in agriculture.

In summary, this research is timely and informative, providing a solid foundation for future studies and policy development in Sierra Leone and beyond.