

REVIEWER'S REPORT

Manuscript No.: IJAR-56718

Title: TENDANCE D'EVOLUTION ET MODE D'OCCURRENCE DES PLUIES EXTREMES DANS LE DOMAINE CLIMATIQUE SUD-SOUDANIEN A L'OUEST DU BURKINA FASO,

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance		✓		

Reviewer's ID: JPR-130

Detailed Reviewer's Report

1. Overall Evaluation

This paper studies the trend and occurrence of extreme rainfall events in the south-Sudanian climatic region of western Burkina Faso. The topic is very important and relevant, especially in the context of climate change, flooding, and agricultural planning. The study uses long-term rainfall data (1980–2019) and applies appropriate statistical methods such as trend analysis, Mann-Kendall test, Pettitt test, and Gumbel distribution. The results provide useful insights into rainfall intensity, frequency, and seasonal patterns. Overall, the paper is scientifically useful and well-structured, but it has language issues, some methodological clarity problems, and limited critical discussion. With improvements, it can become a strong research article.

2. Strengths of the Paper

- **Highly Relevant Topic** - The study addresses climate change and extreme rainfall, which are major global and regional concerns.
- **Use of Long-Term Data** - The study uses 40–50 years of rainfall data, which improves reliability and validity.
- **Appropriate Methodology** - Use of statistical tools like Mann-Kendall, Pettitt test, and Gumbel model is suitable for this type of study.
- **Clear Objectives** - The objectives are well defined and aligned with the analysis.

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- **Detailed Analysis** - The paper examines intensity, frequency, duration, and probability of rainfall, giving a complete picture.
- **Practical Importance** - The findings are useful for agriculture, flood management, and policy planning.

3. Areas for Improvement

- **Language and Grammar Issues** - The paper contains several grammatical errors, long sentences, and unclear expressions. It needs professional language editing.
- **Clarity in Methodology** - Some parts of the methodology (e.g., indices explanation, formulas) are too technical and not clearly explained for general readers.
- **Repetition of Content** - Similar explanations are repeated in results and discussion sections, which should be reduced.
- **Limited Critical Discussion** - The discussion mainly compares results with other studies but lacks deeper interpretation and reasoning.
- **Figures and Tables Explanation** - Figures are presented, but explanations are sometimes lengthy or not very clear. They should be more concise and focused.
- **Formatting Issues** - Minor issues such as spacing, numbering, and inconsistent formatting should be corrected.
- **Conclusion Can Be Stronger** - The conclusion summarizes findings but should highlight clear contributions and recommendations more strongly.