

## REVIEWER'S REPORT

Manuscript No.: IJAR-55345

**Title:** Cartographie des zones à risque d'inondation et analyse de la vulnérabilité dans la commune d'Abobo, Côte d'Ivoire

### Recommendation:

Accept as it is .....

Accept after minor revision.....

**Accept after major revision .....**

Do not accept (*Reasons below*) .....

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

Reviewer Name: Dr. Hari Prashad Joshi

### Detailed Reviewer's Report

This manuscript presents a valuable and timely application of GIS and multi-criteria analysis for flood risk mapping in Abobo, Côte d'Ivoire. The study is well-motivated, the methodology is generally appropriate for the objective, and the production of hazard, vulnerability, and final risk maps provides a clear visual tool for urban planners. The use of remote sensing data and the Analytic Hierarchy Process (AHP) is commendable. However, the manuscript requires major revision to meet scholarly standards due to significant methodological omissions and a superficial discussion. The most critical flaw is the incomplete documentation of the Saaty AHP method. The paper states weights were assigned (e.g., 0.521 for rainfall intensity) but completely omits the foundational pairwise comparison matrix and the consistency ratio calculation. This absence undermines the scientific rigor and reproducibility of the analysis, which is essential for such a model-driven study. Furthermore, the data sources and processing for the population density map are inadequately described, being attributed only to "previous research" without citation or methodological detail.

The results are presented descriptively, but the discussion lacks depth. It primarily states agreement with prior studies without a critical analysis of why specific areas (e.g., Samaké, Agbékoi) emerged as high-risk zones, the potential implications of model uncertainties, or the relative influence of each weighted factor. The conclusion is also brief and does not translate the findings into concrete, actionable recommendations for stakeholders. To be suitable for publication, the authors must provide the full AHP pairwise comparison matrices and consistency validations, thoroughly document all data sources and preprocessing steps, and substantially strengthen the discussion to include a critical analysis of the results, model limitations, and practical policy implications. The graphical presentation of the maps within the PDF also requires review for clarity and proper labeling.