Review Form2

Book Name:	**Research Advances in Environment, Geography and Earth Science**
Manuscript Number:	**Ms_BPR_2291**
Title of the Manuscript:	**Earthquake Threats in Ranau – From The Sources of Mensaban and Mesilou Fault**
Type of the Article	**Book Chapter**

PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback***(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimumof 3-4 sentences may be required for this part.	This manuscript holds considerable importance for the scientific community as it provides a comprehensive analysis of seismic hazards in Sabah, Malaysia, specifically in the seismically active Ranau region. By employing the Probabilistic Seismic Hazard Analysis (PSHA) method, the study offers critical insights into the potential risks associated with the Mensaban and Mesilou faults, highlighting the importance of preparedness and strategic infrastructure planning. I find this manuscript commendable for its meticulous approach to evaluating seismic hazards, which not only deepens our understanding of local seismicity but also serves as a valuable reference for land use planning and the construction of earthquake-resistant structures. However, the study could be further strengthened by integrating more recent data and utilizing advanced modeling techniques to enhance the accuracy of its predictions.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The title "Earthquake Threats in Ranau – From The Sources of Mensaban and Mesilou Fault" is somewhat fitting but lacks precision and does not fully capture the manuscript's focus on seismic hazard analysis. A more accurate and reflective title could be: "Seismic Hazard Assessment in Ranau: Analyzing Earthquake Risks from the Mensaban and Mesilou Faults" This revised title more clearly conveys the manuscript's emphasis on evaluating seismic hazards and specifically addresses the fault zones under investigation.	

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Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract of the article provides a solid overview but could be enhanced for clarity and completeness. Here are some suggestions for refining it: **Suggested Additions:** 1. **Objective Clarification**: Explicitly state the primary aim of the study, which is to evaluate seismic hazards in the Ranau region using Probabilistic Seismic Hazard Analysis (PSHA). 2. **Methodology Brief**: Include a brief outline of the key methodological steps, such as data collection, seismic source identification, and peak ground acceleration (PGA) analysis. 3. **Implications**: Add a sentence discussing the practical implications of the study, such as its relevance for infrastructure planning, disaster preparedness, and land use. **Suggested Deletions or Modifications:** 1. **Simplification of Technical Terms**: Simplify or clarify technical terms like "PGA estimate values" and "quarterly geostatistical analysis method" to ensure broader understanding. 2. **Redundant Information**: The detailed percentages related to hazard classes could be summarized more generally. Focus on the overall conclusion regarding the distribution of seismic risk. **Revised Abstract Suggestion:** "Sabah, Malaysia, is subject to frequent seismic activity, with moderate earthquakes occurring approximately every 20 years. This study aims to assess seismic hazards in the Ranau region, focusing on the Mensaban and Mesilou faults using Probabilistic Seismic Hazard Analysis (PSHA). We analyzed data from 1900 to 2020 to estimate peak ground acceleration (PGA) values for both 10% and 2% probabilities of exceedance, categorizing the region into various earthquake hazard classes. The results indicate significant variations in seismic risk across the study area, offering essential insights for improving disaster preparedness, land use planning, and the development of earthquake-resistant infrastructure." This revised abstract is more concise and effectively communicates the study's objectives, methodology, and implications, making it accessible to a broader audience.	
Are subsections and structure of the manuscript appropriate?	The subsections and structure of the manuscript are generally appropriate for a scientific study on seismic hazard analysis. The organization allows for a logical progression of ideas and effectively presents the research. Here's an evaluation: **Evaluation:** 1. **Appropriateness**: The manuscript's structure is well-suited for a technical paper. It systematically addresses the research question, methodology, and results, ensuring a coherent presentation of the study. 2. **Logical Flow**: The manuscript maintains a logical flow, guiding the reader from the broader context and background to specific findings and their implications. Each section builds on the preceding one, which helps in understanding the study's development. 3. **Comprehensive Coverage**: The manuscript effectively covers all critical aspects, including data collection, hazard analysis, and practical implications. This thorough approach ensures that all relevant information is presented. **Potential Improvements:** 1. **Consistency in Subsection Depth**: Ensure that all major sections, such as "Materials and Methods," are equally detailed. This balance helps maintain consistency and clarity throughout the manuscript. 2. **Summary of Key Points**: Adding brief summaries or key points at the end of major sections, especially in "Results and Discussion," could help reinforce the main findings and enhance reader comprehension. Overall, the manuscript's structure and subsections are well-organized and facilitate a clear and comprehensive presentation of the research.	

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Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimumof 3-4 sentences may be required for this part.	This manuscript is both scientifically robust and technically sound, primarily due to its rigorous application of the Probabilistic Seismic Hazard Analysis (PSHA) method. PSHA is a well-established and reliable approach for seismic hazard assessment. The study's use of a comprehensive earthquake catalog, covering over a century (1900-2020), ensures that the analysis is based on extensive historical data, which significantly enhances the accuracy of seismic hazard predictions. The manuscript meticulously addresses critical variables such as peak ground acceleration (PGA) and fault activity, which are essential for evaluating seismic risks. Additionally, the methodical treatment of data, including the declustering of seismic events and the application of advanced statistical models, underscores the scientific validity of the study's conclusions.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	The references cited in the manuscript are both sufficient and up to date. They cover a range of relevant and recent studies that support the methodologies and findings presented.	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language and English quality of the article are generally suitable for scholarly communication, though there are areas that could be refined to improve clarity and readability. The manuscript effectively employs technical terminology relevant to seismic hazard analysis, which is appropriate for a scientific audience. However, some sentences are complex and could be simplified to enhance understanding, particularly for readers who may not be specialists in the field. **Areas for Improvement:** 1. **Sentence Structure**: Some sentences are lengthy and contain multiple ideas, which can make them challenging to follow. Breaking these into shorter, more focused sentences could enhance clarity. 2. **Technical Jargon**: While the use of technical terms is necessary, the manuscript could benefit from brief explanations or simplifications of some terms to increase accessibility for a broader audience. 3. **Consistency**: Maintaining consistent use of terms and phrases throughout the manuscript would improve coherence and readability. Overall, while the language is appropriate for a scholarly article, refining aspects of sentence structure, jargon usage, and consistency would significantly enhance its effectiveness for academic communication.	
Optional/Generalcomments	**Relevance and Contribution:** The manuscript addresses a crucial topic in seismic hazard analysis, focusing on the Ranau region in Sabah, which is characterized by active fault lines. The study's findings hold significant relevance for local urban planning, infrastructure development, and disaster management, providing valuable insights that contribute meaningfully to the field. **Comprehensive Methodology:** The application of the Probabilistic Seismic Hazard Analysis (PSHA) method is both appropriate and well-executed, showcasing a thorough understanding of the complexities involved in assessing seismic risk. This rigorous approach underscores the robustness of the research methodology. **Clarity and Organization:** While the manuscript is generally well-organized, some sections could benefit from improved transitions and summaries. Enhancing these elements would help guide readers more effectively through the complex analysis and improve overall comprehension. **Practical Implications:** The manuscript successfully connects scientific analysis with practical applications by exploring how the findings can inform land use planning and infrastructure development. This practical approach adds considerable value, making the research relevant for policymakers and engineers involved in disaster preparedness and urban planning.	

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PART 2:

	Reviewer's comment	**Author's comment***(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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