

Review Form 3

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_129710
Title of the Manuscript:	Exploring River's Flood Dynamics: Integrating HEC-RAS 1-D Modelling and Geospatial Techniques for the Karjan River in Gujarat's Narmada Basin
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript is significant for the scientific community as it demonstrates the integration of advanced hydrodynamic modeling techniques with geospatial tools to address flood dynamics, a pressing issue in disaster management. By focusing on the Karjan River in Gujarat, the study provides valuable insights into flood-prone areas and offers actionable data for mitigation strategies. The research not only highlights the capabilities of HEC-RAS v6.0 but also underscores the importance of high-resolution DEMs in improving the accuracy of flood modeling. These findings contribute to the development of effective flood forecasting systems and disaster preparedness, benefiting both researchers and policymakers.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title is suitable as it clearly reflects the study's focus on flood dynamics, HEC-RAS modeling, and geospatial techniques. It effectively captures the essence of the research and its geographical context.	
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 is comprehensive and provides a clear overview of the research objectives, methodology, and findings. However, it could be improved by including specific quantitative results, such as model accuracy or a summary of key findings like the extent of flood-prone areas. Additionally, refining some repetitive phrases and providing a brief mention of the study's significance for disaster management would enhance its impact.	
Is the manuscript scientifically, correct? Please write here.	The manuscript appears to be scientifically correct, with a robust methodology utilizing HEC-RAS v6.0 and high-resolution DEM data for flood modeling. The integration of geospatial techniques and hydrodynamic modeling aligns with established scientific practices, and the results are validated against historical data. However, a more detailed explanation of calibration and validation processes, as well as addressing the discrepancies in simulated and observed data, would strengthen its scientific rigor.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are sufficient and include a good mix of recent and relevant sources, particularly in hydrodynamic modeling and geospatial techniques. They effectively support the study's methodology and findings, demonstrating a thorough review of the literature. Adding a few more recent studies, especially post-2020, could further enhance the manuscript's relevance and scientific depth.	
Is the language/English quality of the article suitable for scholarly communications?	The language and English quality of the article are suitable for scholarly communication, with clear and concise explanations of the methodology and findings. Minor improvements in sentence structure and grammar in certain sections could enhance readability and flow. Overall, the manuscript meets the standards expected for academic writing.	
<u>Optional/General</u> comments	The manuscript addresses a relevant and critical topic in flood management, showcasing the effective integration of HEC-RAS modeling and geospatial techniques. The methodology is robust, and the findings are valuable for disaster mitigation in flood-prone areas. Minor refinements in the abstract, language clarity, and additional recent references could further strengthen the manuscript. Overall, it is a commendable contribution to the field of hydrodynamic modeling and flood risk assessment.	

PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
<u>Are there ethical issues in this manuscript?</u>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Bright Ojo
Department, University & Country	University of Arkansas, USA