

Review Form 3

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_125781
Title of the Manuscript:	Assessment of socioeconomic vulnerability in a few selected villages in Gosaba Block of Sundarban, India by Artificial Neural Network
Type of the Article	Original Research Article

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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)
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript provides important insights into the socio-economic vulnerability of rural communities in the Sundarbans region, which is part of a unique ecosystem under extreme environmental stress. Here the concept of using Artificial Neural Network (ANN) for vulnerability assessment is very innovative, opening a new horizon in the application of machine learning techniques in social and environmental research. The research findings highlight the need for targeted interventions, particularly in high-risk areas, which are crucial for disaster management and climate change adaptation policy formulation.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title reflects the content well but could be shortened for clarity and impact. Suggested alternative: "Artificial Neural Network-Based Assessment of Socioeconomic Vulnerability in Selected Sundarban Villages"</p>	
<p>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.</p>	<p>The abstract adequately captures the main content, but the role of artificial neural network (ANN) models in socio-economic vulnerability assessment needs to be explained more clearly. In this case, I would suggest clearly mentioning three main elements: exposure, sensitivity and adaptability. In addition, a more detailed discussion on the specific contribution and applicability of ANNs in vulnerability forecasting should be included, which will clarify how this model can be helpful in reducing uncertainty and providing accurate forecasts in the socio-economic context.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The structure of the manuscript follows a proper and logical flow. The methodology, results and discussion are clearly presented, and the inclusion of Artificial Neural Networks (ANN) for data analysis is well justified. However, reproducibility could be improved if more detailed information regarding the ANN model parameters and training process was provided within the methodology section.</p>	
<p>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 minimum of 3-4 sentences may be required for this part.</p>	<p>The manuscript is scientifically and technically strong. Combining socio-economic and environmental data for vulnerability assessment is considered strength, and the use of artificial neural network (ANN) methods is helpful in increasing the accuracy of the analysis. Combining Principal Components Analysis (PCA) with ANN for vulnerability index is an innovative approach. However, more detailed elucidation and validation processes of the ANN architecture would increase the technical rigor of the manuscript.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :</p>	<p>The highly relevant research work underway on climate vulnerability using machine learning techniques is substantial and recent. Additional references are not required, but I recommend that you cross-check and look into the matter more deeply. This will ensure the quality and relevance of the research. Thanks for your attention.</p>	
<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The language is generally clear, but there are some minor grammatical errors. For example, the sentence "Villages with moderate adaptive capacity may become less vulnerable than moderate if adequate interventions are implemented" should be more clearly stated: "Villages with moderate adaptive capacity may become less vulnerable with adequate interventions." A competent proofreading is recommended for such minor issues.</p>	
<p>Optional/General comments</p>		

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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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