

**Review Form 1.7**

Journal Name:	<b>International Journal of Environment and Climate Change</b>
Manuscript Number:	<b>Ms_IJECC_119157</b>
Title of the Manuscript:	<b>REMOTE SENSING APPROACH TO ASSESS THE IMPACT OF HEAT WAVE ON WHEAT CROP HEALTH IN LUDHIANA DISTRICT</b>
Type of the Article	<b>Original Research article</b>

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**ART 1: Review Comments**

	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)
<p><b>Compulsory</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li>3. <b>Is the abstract of the article comprehensive?</b></li> <li>4. <b>Are subsections and structure of the manuscript appropriate?</b></li> <li>5. <b>Do you think the manuscript is scientifically correct?</b></li> <li>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> <li>1. <b>Yes, the manuscript is important for the scientific community as it provides valuable insights into the impact of heat waves on wheat crop health using remote sensing technologies. This study offers a comprehensive analysis of crop stress and damage assessment, which is crucial for developing adaptive strategies in the context of climate change. The methodology and findings can significantly aid in precision agriculture and policymaking for crop management.</b></li> <li>2. <b>The title of the article is suitable as it reflects the focus of the study on assessing the impact of heat waves on wheat crop health using remote sensing in Ludhiana district. However, a slightly refined title could be: "Assessing the Impact of Heat Waves on Wheat Crop Health in Ludhiana District Using Remote Sensing Technologies"</b></li> <li>3. <b>Yes, the abstract of the article is comprehensive. It succinctly outlines the study's objectives, methodology, and key findings. The abstract mentions the datasets used (Sentinel-2 and MODIS), the indices calculated (NDVI, TCI, Temperature Stress Index), and the comparison of APY data to evaluate the impact of the heat wave on wheat crop health. This provides a clear overview of the study's scope and significance.</b></li> <li>4. <b>Yes, the subsections and structure of the manuscript are appropriate. The manuscript is well-organized, with distinct sections for the abstract, introduction, materials and methods, results and discussion, and a conclusion. Each section is clearly defined and logically ordered, making it easy for readers to follow the study's progression from background information to methodology, and then to the results and their interpretation. This structure ensures that all necessary information is presented in a coherent and accessible manner.</b></li> <li>5. <b>Yes, the manuscript appears to be scientifically correct. It employs established remote sensing techniques and indices to assess the impact of heat waves on wheat crop health, and the methodology is well-supported by relevant literature.</b></li> <li>6. <b>The references in the manuscript are sufficient and include both recent and foundational studies relevant to the topic. However, to ensure comprehensive coverage, the inclusion of a few more recent studies on the impact of climate change on crop health and advancements in remote sensing technologies could further strengthen the manuscript.</b></li> </ol>	
<p><b>Minor</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></li> </ol>	<p>1 Yes, the language and English quality of the article are suitable for scholarly communications. The manuscript is well-written, clear, and concise, with proper use of technical terms and academic language appropriate for the scientific community.</p>	
<p><b>Optional/General</b> comments</p>	<p><b>General Comments:</b></p> <ol style="list-style-type: none"> <li>1. <b>Clarity and Focus:</b> <ul style="list-style-type: none"> <li>○ The manuscript is clear and well-focused on the specific issue of assessing the impact of heat waves on wheat crop health in Ludhiana district using remote sensing techniques.</li> </ul> </li> <li>2. <b>Methodology:</b> <ul style="list-style-type: none"> <li>○ The methodology is robust and well-detailed, with appropriate use of Sentinel-2 and MODIS datasets. The use of NDVI, TCI, and Temperature Stress Index is appropriate and scientifically sound.</li> </ul> </li> <li>3. <b>Results and Discussion:</b> <ul style="list-style-type: none"> <li>○ The results are clearly presented and discussed in the context of existing literature.</li> </ul> </li> </ol>	

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	<p>The use of APY data to analyze market dynamics is a valuable addition.</p> <p>4. <b>References:</b></p> <ul style="list-style-type: none"> <li>○ The references are sufficient and relevant, though adding a few more recent studies on related topics could enhance the manuscript.</li> </ul> <p>5. <b>Language and Presentation:</b></p> <ul style="list-style-type: none"> <li>○ The language is suitable for scholarly communication. However, a thorough proofreading could help eliminate minor grammatical errors and improve readability.</li> </ul> <p>6. <b>Figures and Tables:</b></p> <ul style="list-style-type: none"> <li>○ Ensure that all figures and tables are well-labeled and referenced in the text. High-quality visuals can significantly enhance the manuscript's impact.</li> </ul> <p>7. <b>Contribution to the Field:</b></p> <ul style="list-style-type: none"> <li>○ This study makes a significant contribution to the field of agricultural monitoring and climate impact assessment. The findings have practical implications for precision agriculture and climate resilience strategies.</li> </ul> <p>8. <b>Suggestions for Improvement:</b></p> <ul style="list-style-type: none"> <li>○ Consider adding more recent references on climate change and crop health.</li> <li>○ Provide a brief explanation of the potential implications of your findings for local farmers and policymakers.</li> <li>○ Ensure all acronyms are defined when first used to enhance clarity for readers unfamiliar with the terms.</li> </ul> <p>Overall, the manuscript is a valuable addition to the literature on remote sensing and climate impact on agriculture.</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>	

**Reviewer Details:**

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