

Review Form 3

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_125786
Title of the Manuscript:	Effects of climate change and greenhouse gases emission relevance to environmental stress on horticultural crops
Type of the Article	

PART 1: Review Comments

<u>Compulsory</u> REVISION 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>
<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 is important for the scientific community because it provides a comprehensive review of the impact of climate change and greenhouse gas emissions on horticultural crops, which are critical for global food security. By focusing on both physiological and technological aspects, it bridges the gap between theory and practice, offering actionable strategies like climate-smart horticulture and technological innovations to mitigate these impacts. The inclusion of region-specific approaches and simulation models further enhances its relevance, making it a valuable resource for researchers, policymakers, and agricultural stakeholders. I appreciate the manuscript for its thorough analysis and its emphasis on practical solutions, though it could benefit from more detailed empirical validation and consideration of socioeconomic implications.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title is clear and specific, accurately reflecting the study's focus on climate change, greenhouse gas emissions, and their impact on horticultural crops. It encapsulates the core issue of environmental stress and its relevance to crop performance, setting proper expectations for the reader.</p> <p>Alternative title: The impact of climate change and the emission of greenhouse gases on the environmental stress experienced by horticultural crops.</p>	

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<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 of the article is comprehensive in that it provides a clear summary of the core focus, highlighting the impact of climate change and greenhouse gas emissions on horticultural crops, along with a mention of stress factors like high temperatures, drought, and CO2 emissions. It also briefly mentions the role of greenhouse technologies and new crop varieties in mitigating these effects (Ms_IJECC_125786).</p> <p>Suggestions for Improvement:</p> <ol style="list-style-type: none"> Clarity on Research Gaps and Novelty: The abstract would benefit from a clearer articulation of the research gaps the paper addresses. While it outlines the key topics, it does not explicitly state what existing knowledge gaps the review is filling. Adding a sentence on the novel contributions of this study would strengthen its relevance. Highlight Specific Outcomes or Conclusions: While the abstract provides a good overview of the issues discussed, it would be useful to include specific outcomes or insights derived from the review. For example, mentioning particular technologies or strategies that were found to be most effective in addressing climate stress would make the abstract more informative. Shorten Descriptive Parts: Some descriptive parts, such as the list of climate change factors (e.g., GHGs, ozone depletion, deforestation), could be condensed to make room for more analytical insights or specific conclusions. This would ensure a balance between summarizing key topics and emphasizing the manuscript's impact. <p>In summary, the abstract does a good job of summarizing the content but could be enhanced by clarifying the manuscript's novelty and adding specific findings or conclusions.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>Yes, the subsections and structure of the manuscript appear to be appropriate for a scientific review. The manuscript follows a logical progression, with each section addressing a critical aspect of the topic:</p> <ol style="list-style-type: none"> Introduction: Provides a clear background on climate change and its relevance to horticultural crops, setting the stage for the discussion (Ms_IJECC_125786). Impact of Greenhouse Gases on Horticultural Crops: Breaks down the specific effects of CO₂, CH₄, NO₂, and SO₂ on crop physiology and productivity, which is essential for understanding the challenges (Ms_IJECC_125786). Climate-Smart Horticulture and Technological Solutions: Discusses strategies and innovations to mitigate the impacts of climate change, such as greenhouse technologies and simulation models. This section appropriately transitions from problem identification to potential solutions (Ms_IJECC_125786). Simulation Models for Impact Assessment: This subsection focuses on tools for predicting and managing climate change effects, which adds a practical and analytical dimension to the manuscript (Ms_IJECC_125786). Conclusion: Summarizes the findings and suggests directions for future research and implementation (Ms_IJECC_125786). <p>Suggestions for Improvement:</p> <ul style="list-style-type: none"> More Distinct Subsections: Some sections, such as the impacts of individual greenhouse gases, could benefit from clearer subheadings or bullet points to improve readability and organization. Additional Subsection on Socioeconomic Impacts: Adding a specific subsection that deals with the socioeconomic implications of climate-smart horticulture and technological adoption could further enhance the manuscript's depth. 	
<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>This manuscript appears scientifically robust and technically sound because it draws from a broad range of credible sources, including authoritative reports like those from the IPCC and peer-reviewed studies on the impact of greenhouse gases and climate change on horticultural crops. The paper systematically addresses the physiological effects of specific gases (CO₂, CH₄, NO₂, and SO₂) on crops, supporting its analysis with established scientific principles on plant responses to environmental stressors (Ms_IJECC_125786). Additionally, the manuscript's emphasis on simulation models for impact assessment and climate-smart horticultural strategies demonstrates a methodical and forward-thinking approach to mitigating climate change's effects. By focusing on evidence-based solutions and region-specific interventions, the manuscript provides a well-grounded and practical perspective that is valuable for both researchers and practitioners.</p>	

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<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p> <p>=</p>	<p>The references in the manuscript are generally sufficient and relevant, drawing from a wide array of credible and authoritative sources, such as IPCC reports, peer-reviewed journals, and studies related to climate change, greenhouse gases, and their effects on horticulture. However, while many of the references are relevant, some could be considered slightly dated, with several references going back to the early 2000s or before (Ms_IJECC_125786). Although these older references remain valuable, the manuscript could benefit from the inclusion of more recent studies to reflect the latest advancements and findings in climate change research and horticultural technologies.</p> <p>Suggestions for Additional References:</p> <ol style="list-style-type: none"> 1. Recent advancements in climate-smart agriculture: Incorporating more recent studies from the last 5 years, particularly those focusing on cutting-edge technologies (e.g., IoT in agriculture, AI for climate predictions) or new crop varieties designed to be resilient to climate change, would enhance the manuscript's timeliness. 2. Sustainable agricultural practices: Recent literature on sustainability practices in agriculture, including case studies on successfully implemented climate-smart interventions in various regions, could add practical insights and further validate the suggested strategies. 	
<p><u>Minor</u> REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>I have improved the quality of Grammarly and attached proof of the improvements.</p>	
<p><u>Optional/General</u> comments</p>	<p>The conclusion should answer the research objectives by looking at the research results of the effects of thermal stress on the behavioral physiology of <i>Lissemys punctata</i>. It can be added to the conclusion with the presence of a future scope (research gap) for further research.</p>	

PART 2:

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

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