



Journal Name: [Asian Journal of Research in Biology](#)  
Manuscript Number: **Ms\_AJRIB\_12601**  
Title of the Manuscript: **IMPACTS OF LAKE ABAYA AND CHAMO ON THE AIR TEMPERATURE OF ARBA MINCH, SOUTHERN ETHIOPIA REGION, ETHIOPIA**  
Type of the Article

### General guideline:

**This journal believes that no manuscript should be rejected only based on 'lack of Novelty'**, provided the manuscript is sufficiently robust and technically sound. Too often a journal's decision to publish a paper is dominated by what the Editor/reviewer thinks is interesting and will gain greater readership - both of which are subjective judgments and lead to decisions which are frustrating and delay the publication. This journal will rigorously peer-review your submissions and publish all papers that are judged to be technically sound.

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### **PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	<b>Reviewer's comment</b>	<b>Author's Feedback</b> ( <i>Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here</i> )
<b>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.</b>	This manuscript is significant for the scientific community as well as for the policy makers, as it sheds light on the underexplored role of lakes in regional climate regulation (mesoscale), particularly in the regulation of air temperature and convective activity, specifically through their thermal inertia and energy exchange processes. By using WRF-Chemistry model simulations with and without lakes, the study provides a clear assessment of how Lake Abaya and Lake Chamo affect	



	<p>local temperatures in Arba Minch, contributing essential data on lake-atmosphere interactions that have often been oversimplified. The strong correlation results validate the model's accuracy, making this study a valuable reference for improving regional climate modeling. This study emphasizes how important it is to include water bodies in Urban Planning for mitigation the Urban Heat Island phenomena.</p>	
<p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>	<p>In order to catch readers' attention, the title might be made more appealing by include a minor key word. For example: <b>"Assessing the Impact of Lakes Abaya and Chamo on Regional Climate: Insights from WRF-Chemistry Simulations in Arba Minch, Ethiopia"</b></p>	
<p><b>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.</b></p>	<p>The abstract section is lacking the information of Diurnal temperature range (<b>Tmax-Tmin</b>) of (i) Observed (ii) Control (iii) No Lake (iv) Flat Topography for the study period. This information is very necessary to understand the influence of water bodies on regulating the Maximum Temperature (Tmax) and Minimum Temperature (Tmin). Moreover, Diurnal temperature range (Tmax-Tmin) is very significant for plant growth. So please highlight the diurnal temperature range in ascending or descending order for the following: (i) Observed (ii) Control (iii) No Lake (iv) Flat Topography</p>	
<p><b>Are subsections and structure of the manuscript appropriate?</b></p>	<p>The manuscript's structure is well-organized, with clear subsections that guide the reader through the study's context, methodology, results, and conclusions. However, the Background subtitle (written immediately below the Introduction) can be discarded. Further, the Methodology part can be enriched by including a Flow chart.</p>	



<p><b>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.</b></p>	<p>This manuscript demonstrates scientific robustness and technical soundness through its application of the WRF-Chemistry model to examine lake-atmosphere interactions, a well-regarded tool for high-resolution climate and weather simulations. The study's methodology, which includes comparing simulations with and without Lake Abaya and Lake Chamo, provides a clear basis for isolating the lakes' influence on local temperature dynamics, making the approach scientifically valid. Furthermore, by focusing on a specific period and systematically analyzing the lake's thermal effects, the study delivers precise and meaningful insights into lake-induced climate modulation, reinforcing its technical accuracy and reliability for future climate studies.</p> <p>However, if you incorporate the following revisions, this could further enhance the manuscript quality. They are:</p> <ol style="list-style-type: none"><li>1. Please add Percentage bias as one among the parameter for evaluating the model. You have used RMSE, Correlation coefficient, MAE and Index of agreement but not Percentage bias, which is one among the most used detection metrics for the WRF model.</li></ol>	
<p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b></p>	<p>Very few references have been cited by the author. More references should be added to the manuscript to strengthen it.</p>	
<p><u>Minor</u> REVISION comments</p> <p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>	<p>The language quality is good but ensure there is no repetition of the statements. Overall, a thorough proofreading would be beneficial to polish the manuscript further.</p>	
<p><b>Optional/General</b> comments</p>		



**J. K. Press**

**PART 2:**

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

Reviewer Details:

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