

Dear Prof. Jason Cohen
Editor
Atmospheric Chemistry and Physics

Authors sincerely acknowledge the comments provided by the Editor. The justifications in response to editor's comment is included here.

EC: 1. *The first is that a reviewer recommended some changes to how you present an overview of the workflow, and the second is related to the map in Figure 1.One reviewer has raised a concern regarding the depiction of international boundaries in the provided map. As an international journal, we maintain a policy of neutrality on territorial disputes.....*

Please revise as follows:

- 1. Option A (Preferred): Replace the current map with one sourced directly from a standard, publicly available basemap (e.g., Natural Earth, OpenStreetMap, or UN Cartographic Section basemaps). Ensure that the exact source is cited.*
- 2. Option B: If there is a specific, defensible scholarly reason for using the current boundary depiction (e.g., it is integral to the analysis of a specific dataset that uses those boundaries), then you must add a disclaimer note to the figure caption. This note should say something along the lines of: "The boundaries shown on this map are for illustrative purposes based on the source data [cite the source]. They do not imply endorsement of acceptance by the journal or publisher of any particular political or legal status of the territories depicted."*

AC 1: The authors greatly appreciate the Editor's concern regarding the depiction of disputed international boundaries. As per national guidelines and instructions from authors' institute (*Banaras Hindu University*), authors are bound to use maps officially approved by the Government of India for all research publications. Authors have used the India map from *Survey of India*' archive which is the official repository of maps in India.

For transparency, a Publisher's Note is included in Fig. 1: "The international boundaries shown on this map are for illustrative purposes based on the '*Survey of India*' archive. They do not imply endorsement of acceptance by the journal or publisher of any particular political or legal status of the territories depicted."

EC: 2. *Another reviewer suggestion which I support is to add a summary figure to help the community to summarize and follow what was done, what was quantified, and the pathways you used to accomplish this.*

AC: 2. Authors have now included a summary figure (Fig. S8, supplementary file) that illustrates the overall workflow of the study, highlighting the key methodological steps, quantified variables, and analytical pathways employed to achieve the study objectives. This figure provides a concise overview of the entire research framework and is intended to facilitate reader comprehension of the study design and outcomes.

Thank you very much for the opportunity to improve our submission.

Kind regards

Tirthankar Banerjee

Author
