Response to Associate Editor Comments

Manuscript ID: egusphere-2026-241
Title: Saturation effect of background temperature and aridity on vegetation phenological sensitivity to urban warming

Dear Dr. Vicca,

We sincerely appreciate your constructive comments and the positive evaluation of our manuscript. We have carefully addressed all suggestions raised in the associate editor report and conducted a full round of text and formatting revisions. All modifications are detailed point-by-point below, with specific locations referenced to the revised manuscript.

Note on change of corresponding author:

With the unanimous consent of all co-authors, the corresponding author has been updated to Lin Xingwen (Email: linxw@zjnu.edu.cn). Please see the separate request letter for details.

1. Q: Remove the Societal Impact Statement at the beginning of the manuscript. Biogeosciences does not include such statements.
R: We have deleted the “Societal Impact Statement” from the beginning of the manuscript, as it is not required by Biogeosciences.
Location of changes: Page 1, Lines 15-22.

2. Q: Although the English is generally clear and understandable, the manuscript would still benefit from language editing to improve readability.
R: We thank the editor for this suggestion. We have revised the language of the manuscript to improve clarity and readability, particularly in the Abstract, Introduction, Methods, Results, and Discussion. The revised sentences are marked in the manuscript.
Location of changes: Full manuscript, global language revision across all pages and lines.

3. Q: Please ensure that all figure captions are written in clear English. Some captions contain awkward phrasing (e.g. "insert figures presented the comparison...") and should be revised.
R: We have fully rewritten the caption of Figure 6 to fix the awkward and ungrammatical expression "insert figures presented the comparison", adopted standard academic wording for inset subplots, and unified vegetation terminology to match the main text. The revised caption is displayed in the manuscript.
Location of changes: Section 3.2 Phenology response to LST, Page 19, Lines 428 - 431 (Figure 6 caption).

4. Q: Please perform a final check to ensure that all equations, symbols, subscripts, references, and formatting are correct and consistent throughout the manuscript.

R: We thank the associate editor for this valuable reminder. We have performed a comprehensive final check across the entire manuscript to guarantee the correctness and consistency of all notation, references and formatting. Details of the work completed are listed below:

(1) Unit symbol unification: We have uniformly standardized the degree Celsius symbol as ℃ throughout the manuscript, covering all temperature-related expressions such as UHI intensity and thermal saturation thresholds, to eliminate inconsistent formatting of this unit.

Location of changes: Section 3.3 Quantify the LST determined phenological sensitivity, Page 19, Lines 439-442; Section 4.2 Background temperature related phenological response variance, Page 25, Line 548.

(2) Equation accuracy and subscript consistency: All mathematical equations and quantitative expressions in the manuscript have been carefully verified to ensure their logical and numerical correctness. We have also systematically checked all variable subscripts to confirm that their formatting is standardized, and that the notation and definition of all variables remain fully consistent from beginning to end.

Location of changes: Section 2.4 Urbanization effect on phenology, Page 11, Lines 277-278.

(3) Reference standardization: We have manually checked all in-text citations against the reference list to ensure that every cited work is included and correctly matched. The reference format has been revised throughout to comply with the Biogeosciences/Copernicus style guidelines: author names are listed with surname followed by initials, journal titles are abbreviated, and volume numbers, page ranges (or article numbers), DOIs, and publication years are provided in the correct order. All citations in the main text now correspond precisely to the entries in the reference list, and the punctuation and formatting have been unified accordingly.

Location of changes: Section References, Page 31, Lines 736-971.

(4) Funding statement update: The funding information in the manuscript has been checked against the actual grant documents and is consistent with the sources supporting this study: Jinhua scientific and technological projects (grant numbers 2026-3-108 and 2024-3-002) and the Open Research Project of Innovation Center of Yangtze River Delta, Zhejiang University (grant number 2025KFKY004). The author contributions have also been updated accordingly.

Location of changes: Section Funding, Page 31, Lines 732-735.

Request for change of corresponding author

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Title: Saturation effect of background temperature and aridity on vegetation phenological sensitivity to urban warming

Dear Associate Editor,

We would like to request a change of the corresponding author for our manuscript egusphere-2026-241 (Saturation effect of background temperature and aridity on vegetation phenology sensitivity to urban warming) from Zhang Zhenzhen to Lin Xingwen.

Upon internal discussion, all co-authors agreed that this change is necessary for the following reasons:

First, the original corresponding author, Zhang Zhenzhen, was primarily responsible for data curation and original draft preparation. As he will not be able to maintain the responsibilities of the corresponding author on a long-term basis, we propose Lin Xingwen as the new corresponding author to ensure effective and timely communication with the editorial office and responses to post-publication inquiries.

Second, Lin Xingwen (Email: linxw@zjnu.edu.cn) led the conceptualization and methodology of this study, provided supervision, and will be responsible for overseeing data sharing and responding to technical inquiries after publication. Designating him as the corresponding author will therefore facilitate efficient communication regarding the integrity of the work and its underlying datasets.

Third, this study was supported by the Jinhua scientific and technological projects (grant numbers 2026-3-108 and 2024-3-002) and the Open Research Project of Innovation Center of Yangtze River Delta, Zhejiang University (grant number 2025KFKY004). Lin Xingwen was responsible for funding acquisition. Aligning the corresponding author with the principal supervisor and funding holder ensures proper institutional accountability for the research outcomes.

All co-authors have been informed of and agree to this change. We have updated the author list, correspondence email, author contributions, and funding statement accordingly in the revised manuscript. Please let us know if any additional documentation (e.g., a signed consent form from all authors) is required.

Thank you for your understanding and consideration.

Sincerely,
Zhang Zhenzhen
On behalf of all co-authors