## Cover Letter

Dear Editor,

I am writing to appeal the decision regarding our manuscript titled *"River Cooling Effects in a Mountainous City: A Study Across Normal and Extreme Summer Weather conditions"* (Submission number: SCSI-D-24-04919). My coauthors and I would like to express our sincere gratitude for the time you have invested in considering our manuscript.

We received your response and understood that the received referee feedbacks were not at a calibre to be able to make an informed editor decision. However, we believe that our manuscript is highly suitable for publication in *Sustainable Cities and Society* for the following reasons:

1. There are sufficient innovative points in this research:

(1) Complex topography can significantly impact urban climate in many cities. Including topographical factors could provide a more comprehensive understanding of the influences of blue spaces on thermal environment. However, previous studies on water cooling have focused on factors such as land cover and 3D building characteristics, with insufficient consideration of topography. In this study, we quantified the roles of topographical variables in affecting river cooling effects in a mountainous city and found that these roles exceeded the influences of other factors such as land cover and 3D building characteristics. These results enhance our understanding in this area.

1. Previous studies on the cooling effects of urban water bodies typically treated summer as a integral period, without distinguishing between normal and extreme summer conditions. As the cooling effects are more important during heatwaves than on normal summer days for understanding heat mitigation, our research have made this distinction. According to our findings, river cooling effects were significantly intensified during extreme heat compared to normal summer days. The relative importance of patch density increased, while the role of river width decreased during extreme heat. These results highlight the importance of differentiating between normal and extreme summer conditions.

Additionally, compared to other types of water bodies (e.g., lakes, ponds...), the effects of rivers in influencing the surrounding thermal environment were comparatively less understood. Unlike most studies that rely on traditional linear regression, our research employed machine learning technique, which allows for the consideration of non-linear effects of environmental variables on river cooling.

1. Our manuscript aligns well with the journal's scope.

*Sustainable Cities and Society* focuses on designing, understanding, and promoting environmentally sustainable and socially resilient cities. It frequently publishes papers on urban heat mitigation, including the cooling effects of water bodies and vegetation. Our manuscript examined the cooling effects of rivers, a specific type of water cooling, aligning well with the journal’s scope.

Therefore, we propose to resubmit this manuscript and hope you reconsider reviewing our manuscript by inviting more potential reviewers. To further enhance the quality of the review process, we also recommend the following reviewers, who have extensive experience in relevant research areas.

1. Yong Xu

* Position: Associate Professor
* Institution: Guangzhou University
* Email: [xu1129@gzhu.edu.cn](mailto:xu1129@gzhu.edu.cn)
* Introduction: Yong Xu specializes in remote sensing applications, focusing on urban thermal comfort and local climate zones. He has published over 100 papers, with a total citation of nearly 3,000 times.

1. Wenze Yue

* Position: Professor
* Institution: Zhejiang University
* Email: wzyue@zju.edu.cn
* Introduction: Wenze Yue specializes in urban land use and urban climate research. Many of his papers utilize remote sensing data to analyze urban thermal environment. He has published more than 200 papers with the citation of nearly 10,000 times (from Google Scholar).

1. Ronald C. Estoque

* Institution: Center for Biodiversity and Climate Change, Forestry and Forest Products Research Institute, Tsukuba, Japan
* Email: estoquerc21@affrc.go.jp
* Introduction: Ronald C. Estoque's research areas include land cover and land use, as well as GIS and remote sensing. He has also published many papers on urban heat islands. Particularly, the paper titled *"Effects of Landscape Composition and Pattern on Land Surface Temperature: An Urban Heat Island Study in the Megacities of Southeast Asia"* has been cited approximately 700 times.

1. Dongrui Han

* Position: Assistant Researcher
* Institution: Shandong Academy of Agricultural Sciences
* Email: handr.17b@igsnrr.ac.cn
* Introduction: Dongrui Han focuses on the relationship between urban thermal environment and land cover. He has published many papers as the first author on top journals such as *Sustainable Cities and Society* and *Building and Environment*. In last 3 years, he has published more than 10 papers in relevant fields. His paper “*How do 2D/3D urban landscapes impact diurnal land surface temperature: Insights from block scale and machine learning algorithms”* published on *Sustainable Cities and Society* has been cited 24 times within one year of publication.

1. Yuji Murayama

* Position: Professor
* Institution: University of Tsukuba
* Email: mura@geoenv.tsukuba.ac.jp
* Introduction: Yuji Murayama is an expert of Human Geography, Geospatial Analysis and Spatial Modeling. He has published more than 150 papers with more than 5000 citations in relevant fields.

1. Salman Qureshi

* Institution: Humboldt University of Berlin
* Email: salman.qureshi@geo.hu-berlin.de
* Introduction: Salman Qureshi focuses on urban and landscape ecology, as well as urban surface temperature analysis. His publications have been cited over 3,000 times.

I hope you can consider the above scholars in the next review process. I would greatly appreciate it if they or other potential reviewers could provide more constructive feedbacks.

Best Regards,

Rongfei Zhang