

Review of: "Thermal Remote Sensing: A tool to Determine Temporal Land Surface Temperature in Hawassa City, Ethiopia"

Shaobo Zhong

Potential competing interests: No potential competing interests to declare.

This paper talked about a classic topic: land surface temperature (LST) retrieval in remote sensing. LST is important in some fields and its retrieval is an ongoing issue in the study of remote sensing application. First, I appreciate the importance of LST for urban development and support authors' study on exploring issues pertain to urbanization using remote sensing retrieved LST. However, my main concerns are what the academic findings or application background are in this paper, which are not fully presented. As an academic paper, I suggest authors substantially extend and reorganize the Introduction section, and dwell on the paper's problems to be solved, objectives, innovation, and scientific value. Several detailed comments and recommendations are as follows.

- (1) The focus of the paper is not clear. If author is focused on the improvement of the currently existing algorithms of LST retrieval, the improved algorithm should be given in detail and justification should be elucidated in comparison with other algorithms. If authors want to explore the effect of urbanization on LST, further investigation with more data periods should be carried out such as the chronological evolution, the spatial changes, the correlation between LST and land cover, etc.
- (2) Two periods in same dates of different years are insufficient for concluding the global or local climate change due to environmental changes such as urbanization. I suggest authors analyze more data (for example, more than ten years, a period a year).
- (3) Some details should be given for audiences' convenience. For example, the usage and parameters' config of the QGIS extension for LST, the processing workflow of Landsat images, etc.
- (4) Many grammar problems exist in the current status of the paper, including punctuation, typos, etc.
- (5) The verification of the retrieved LST is lack of justification. Authors simply refers to the mismatch between spatial resolutions of different LST products, no further solutions are given or carried out.
- (6) Findings and conclusions are not of significant value in their current status. Authors should focus on their objectives and problems and echo them in the Conclusion section.