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

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The study presented by the author is very interesting, because it features a case where we can see how (human-induced) changes within the environment have an impact on the increase in temperatures within its study area. The method and data used are relevant and have allowed the author to reach interesting conclusions!
However, the study suffers from more or less significant shortcomings that the author should correct in order to hoist the work carried out even higher.

About the form of the document:

- I encourage the author to have his text proofread by an English language specialist because many sentences lack verbs or simply punctuation
- The author should correct certain words (example: "algorithm" and not "algorism") and harmonize certain terms throughout the document (example: "land use/land cover" or "land use-land cover")
- I recommend that the author use a bibliographic reference manager (example: Mendeley, Zotero, Endnote, etc.) in order to avoid citation errors (Anandababu or Anandabablunu?) or duplicates in the list of bibliographic references (page 16, Nimish et al., 2018 is repeated)
- The author should correct the degree symbols (°C and not 0C) in sections 2.1 and 2.5
- Figure 1 (page 4) was not previously announced in the text
- In several parts of the text, the Normalized Difference Vegetation Index may be abbreviated as NDVI

About the content of the document:

- The introduction can be improved because the author, beyond the estimation of temperatures, does not give more information on the context and the usefulness of his study
- The author does not explain the rapid expansion of the city of Hawassa; this could be decisive (or not) for the future evolution of temperatures
- Section 2.2 (Data used). This section needs rewriting, as the author does not present all the data used during his study. In this section, the author mentions only the Landsat 8 data used; however, later in the text, the author mentions Landsat 7, Landsat 5 (?), MODIS data. In addition, the author mentions later in the text, a land use/land cover classification. All this additional data should be presented in section 2.2. Concerning all the satellite images used for the study, the author should indicate the dates of acquisition and the conditions of acquisition (cloud cover, etc.)

- Section 2.2. The author presents a table (table 1) which is not necessary (a bibliographical reference was sufficient)
- Figure 2. The author does not explain how the resampling is done from the combination of data of different spatial resolutions (Landsat 8 bands 10 & 11 vs. bands 4 & 5)
- Section 3. The author does not provide information on the land use/land cover classification (which should have been presented in section 2.2). What was the classification algorithm? How accurate is this classification?
- Section 3. The temperature statistics presented by the authors are rather minimalist; in addition to the minimum, the maximum and the average, it would have been more interesting to have a more detailed statistical study (distribution of data, medians, in particular)
- Figure 6. In order to show a clear evolution of temperatures, the author should have presented data from 2002 and 2019 as a priority. To allow the reader to appreciate the evolution of temperature profiles, the author could plot a graph with the annual average temperatures between 2002 and 2019.
- Section 3. The thermal bands of Landsat 8 have a spatial resolution of 100 m and not 30 m as indicated in the last paragraph of the section.