

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

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Potential competing interests: No potential competing interests to declare.

## **I have the following issues with the study entitled “Thermal Remote Sensing: A tool to Determine Temporal Land Surface Temperature in Hawassa City, Ethiopia”**

\* I suggest considering the paper after a minor revision

### **Comments:**

The abstract is written well. Just you need to add some measures of quantitative assessment. Please re-write the abstract including some measures of validations. The same applies to the conclusions.

You should define LST at the start of abstract and I suggest using capital letters before each word

(This investigation was conducted for the estimation of the temporal Land Surface Temperature LST value)

Introduction: Some phrases need to be cited. Please use some more references.

Land surface temperature is the surface temperature of the earth that is directly in contact with the measuring instrument (measured in Kelvin). As defined by Anandababu et al. (2008) land surface temperature is the surface temperature of the earth's crust where the heat and radiation from the sun are absorbed, reflected, and refracted. Land surface temperature varies with a transition in the environment and other human behaviors, so forecasting precisely is difficult. Add reference. As well as some other phrases in the introduction and in study area.

2.5 Validation: No validation results have been discussed. What is the acquired accuracy? This should be presented by percentage.

\* It would be good if the author can add the validation process in the Figure 2. Analytical flow diagram

*All maps and charts are well presented*

There are several grammar and mistyping error throughout the manuscript for example;

and a standard deviation of 11.25 in the year of March 22<sup>nd</sup> 2002. It seems that preposition use may be incorrect here.

SurfaceTemperature      Surface Temperature. Correct it. Its seem as misspelled.

and the monthly average mean temperature of the area varies..... The plural verb **mean** does not appear to agree with the singular subject **the monthly average**. Consider changing to means

In order to estimate the land surface temperature from the Landsat-8 thermal infrared band data, (add the) DN of sensors are (change to is) converted to spectral radiance using the following equation (Barsi et al. 2014; USGS 2013; Jeevalakshmi et al. 2016; Ren et al. 2015; Julia 2014; Wang et al. 2015).

While, (remove ,) values between 0.2 and 0.5 are considered as mixture of soil.... add a before mixture

and the value of 0.973 is assigned. Change the to a

precision within 10K range (Weng et al. 2004). Add the before 10K

there is a decrease in agricultural land, forested area, and an increase in. It seems that **area** may not agree in number with other words in this phrase. Use **areas** instead of.

**Figure 3.** *Land use-landcover* land cover

Equation 5 PV or Pv use one of them in definition as used in the equation.

Please note and check some abbreviations used in the manuscript

Best regards,

Huda J. Jumaah