Review of: "Precipitation and Temperature Trends over the Lake Tana Basin, Ethiopia"

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Potential competing interests: No potential competing interests to declare.

The authors of manuscript titled: “Precipitation and Temperature Trends over the Lake Tana Basin, Ethiopia” have carried out a rather innovative investigation in order to obtain the essential idea of all articles which have dealt with the lake Tana Basin.

The proposed article is composed of different parts: Introduction, Study area, Methodology, Results, Discussion and Conclusion.

Introduction presents at first, the context of climate in Ethiopia and his variability and extreme events which induce several issues in all socio-economics fabrics of Ethiopia and especially Lake Tana Basin. In a second time, authors announced the aim of the article which is to investigates the recent state of research findings in the trends and variabilities of precipitation and temperature extremes over the highly sensitive Lake Tana basin, with the change of global warming in both historical decades and future projections circumstances.

Study area is well presented with a clear map which localize Lake Tana Basin in Ethiopia where we can see the density of meteorological stations in the basin. Also, Lake Tana characteristics are well descripted. It is important to notice that authors presents climate environment of Lake Tana Basin.

Methodology is short but axed on the representative schematic representation of systematic review process subdivided in three steps: Data search, Data cleaning and Review full text.

Concerning Historical Precipitation and Temperature Extremes, all papers used for this paper are agreed that temperature are increasing. But about rainfall, there is no a consensus in the different studies: if at annual scale there is a decrease of rainfall, at seasonal scale there is no clear tendance.

About Projected Precipitation and Temperature Extremes, all projections indicate an increasing of temperature. But, projections show disagreements between model outputs concerning rainfall.

In the discussion, the authors explained disagreements of model outputs (about rainfall) because there are no agreements in using different test, and there are no significant trends in rainfall.

Finally, in the conclusion, authors estimate studies suggested that the temperature changes are more increasing pronounced than precipitation changes in the Lake Tana basin. And, this context will have a significant impact on sensitive areas such as water resources, health, and agriculture in the area.

The authors have made a great effort to explain the aim and the method in this paper. And the method of this paper is innovative and useful to have a global view (results) of several article about a climate variable on a specific area. The paper submitted can be published.