

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

Muhamamd Mubashar Ahmad Dogar

Potential competing interests: No potential competing interests to declare.

This is a review paper which heavily relies on the past relevant studies. However, the paper in present form is not recommended for publication. Following questions must be addressed/answered to make the paper in presentable form.

1. The introductory section should include all previous studies on the topic. It should contain a detailed review of past literature. Additionally, the last part of the introductory section should highlight the need for this review based on gaps in past reviews.
2. Please explain in more comprehensive way the criteria and methodology (i.e., Meta-analysis) used to select the recent and most relevant studies. I think, the studies included in the review (based on Meta-analysis) are very less, suggesting to further enhance the applicability of the proposed meta-analysis.
3. What is missing in previous literature related to Precipitation and Temperature Trends over the Lake Tana Basin, Ethiopia and what new features this review paper adds to our per-existing knowledge?
4. Please cite the following relevant research studies conducted on the Middle East and North Africa (MENA) region. The MENA region covers the Lake Tana Basin, Ethiopia, and is influenced by external and internal climatic factors in both winter and summer seasons. This region is strongly influenced by ENSO natural variability, especially during the summer monsoon season, which must be mentioned while discussing temperature and precipitation trends over this region. Studies that researched the roles of forced changes caused by anthropocentric and natural forcings (e.g., volcanism and dust aerosols) must also be included. Following studies could help and therefore need to be cited.

i. Dogar, M. M., & Sato, T. (2018). Analysis of climate trends and leading modes of climate variability for MENA region. *Journal of Geophysical Research: Atmospheres*, 123(23), 13-074.

ii. Dogar, M. M. A. (2020). Study of the regional climatic impacts of tropical explosive volcanism in the Middle East and North Africa region (Doctoral dissertation,).

iii. Dogar, M. M., & Sato, T. (2019). Regional climate response of Middle Eastern, African, and South Asian monsoon regions to explosive volcanism and ENSO forcing. *Journal of Geophysical Research: Atmospheres*, 124(14), 7580-7598.

iv. Dogar, M. M., Stenchikov, G., Osipov, S., Wyman, B., & Zhao, M. (2017). Sensitivity of the regional climate in the Middle East and North Africa to volcanic perturbations. *Journal of Geophysical Research: Atmospheres*, 122(15), 7922-7948.

v. Dogar, M. M., Kucharski, F., Sato, T., Mehmood, S., Ali, S., Gong, Z., ... & Arraut, J. (2019).

Towards understanding the global and regional climatic impacts of Modoki magnitude. *Global and planetary change*, 172, 223-241.