

## Review of: "Assessment of Quality of drinking waterbased on the water quality index method in Hawassa Zuria Woreda, Sidama Regional State, Ethiopia"

## Amar Oukil1

1 Sultan Qaboos University

Potential competing interests: No potential competing interests to declare.

I read the manuscript with a lot of interest. Though the paper's general structure is adequate, there are a few aspects that might need to be addressed to improve its quality.

- 1. Most of the references are old, mainly those related to water quality assessment. Here, the authors are strongly advised to update the literature review by considering studies that are related to similar contexts (arid regions), such as Algeria (see, e.g., Soltani et al. 2021; Oukil et al. 2021, Oukil et al. 2022)
- 2. The authors adopted the water quality index (WQI) of Brown et al. (1972), which is basically obsolete compared with the recent techniques. A update on the advancement in the field can be found in the above mentioned references.
- 3. The question that can be raised is: to which extent can the results of the latter WQI be reliable? Here, considering more than one metric (index) would be a good way to better assess this aspect.
- 4. The discussion section is too long and might probably be better split into sub-sections.

## References:

- Oukil, A., Soltani, A.A., Zeroual, S., Boutaghane, H., Abdalla, O., Bermad, A., Hasbaia, M., Boulassel, M.R. (2022). A
  DEA Cross-efficiency inclusive methodology for assessing water quality: a Composite Water Quality Index. *Journal of Hydrology*, 612, Part A, 128123
- Oukil, A., Soltani, A.A., Boutaghane, H., Abdalla, O., Bermad, A., Hasbaia, & M., Boulassel, M.R. (2021). A Surrogate Water Quality Index to assess groundwater using a unified DEA-OWA framework. *Environmental Science and Pollution Research*, 28, 56658–56685.
- 3. Soltani, A.A. Oukil, A. Boutaghane, H. Bermad, & A. Boulassel, M.R. (2021). A new methodology for assessing water quality, based on Data Envelopment Analysis: Application to Algerian dams. *Ecological Indicators*, 121, 106952.