

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

Zhi-Yong Ji<sup>1</sup>

<sup>1</sup> Hebei University of Technology

Potential competing interests: No potential competing interests to declare.

Water is essential to sustain life, and a satisfactory (adequate, safe, and accessible) supply of drinking water should be available to all. In this paper, heavy metals such as Mn, Pb, Zn, Co, Cu and Ni, physicochemical parameters and bacteriological parameters were tested and assessed based on Water Quality Index (WQI) and other index to evaluate the quality of drinking water in Hawassa Zuria Woreda, Sidama Regional State, Ethiopia. The topic is very important. However, the manuscript does not warrant publication in this form.

## Title

The title reads "Assessment of Quality of drinking waterbased on the water quality index method in Hawassa Zuria Woreda, Sidama Regional State, Ethiopia". However, the quality parameters evaluated far beyond the scope of heavy metals and the necessity of including other parameters was not clearly stated. Therefore, the manuscript should focus on the topic of heavy metal or otherwise expand the scope of the title.

## Abstract

The abstract is a bit too long, especially for the "Results" sub-section, where only important findings could be reported point by point in brief. There lacks academic conclusions in the "Conclusion" sub-section, perhaps this part should be renamed as "Implication".

## Introduction

The introduction is also long-winded. The importance of drinking water quality assessment in this area was well expatiated. However, the specific background of doing this research, questions such as "Why did you choose these methods and this index?" "Why physicochemical parameters and bacteriological parameters were included?" were not explained. These might be questions that we are more concerned about. The related research in this specific area might be scarce, however, there should be plenty literature of other regions to refer to. Please rewrite to make it clear.

## Materials & Methods

In general, this section could be more concise with more references. Analytical procedures, assessment methods and statistical software could be organized hierarchically in sub-sections to make it more readable. Some explanations about

choosing these methods would be preferred in this section or in the introduction section as above mentioned. Some specific questions such as “Why only 15 samples not 23 samples were detected for heavy metals” need to be explained.

## **Results & Discussion**

Although these two sections were arranged separately in this manuscript, the content of these two sections were not well defined and to some extent are reduplicate.

For the “Results” section, the description of the analytical results of the parameters should be more concise as the specific levels could be found from the listed tables, describe more on the trends and patterns and more words could be given on the interpretation of the assessment and the statistical results as this is intended to be an assessment research. The results could also be arranged in sub-sessions hierarchically as above mentioned for the “Materials & Methods” section.

For the “Discussion” section, more discussion on the possible reasons of the trends and patterns, variations, the sources of the contamination and the control or treatment measures potentially needed would be recommended rather than the impacts of the contaminants which are well-known. There are also many descriptions on the levels of the parameters which are reduplicate with the “Results” section. Interestingly, as we can infer from the results, the heavy metal contamination of the drinking water in this area is not as serious as the bacteriological contamination. Is that why you include the bacteriological parameters in this study? Or the results were biased due to the research methods used? Some explanations would be recommended. It might also be a good topic to consider.

## **Conclusions**

This section is also long-winded as the other sections. Please rewrite to highlight the main findings and implications.

## **Language & Writings**

The English is OK. However, it is wordy and long-winded and carelessly written, full of mistakes. For examples, i believe that the metal “Cadmium” was miswritten as “Cobalt”. There are also other spelling mistakes, incomplete sentences, paragraphs and even missing space in the title. A complete revision of the writing is needed.