Comment on nhess-2022-86
Anonymous Referee #2

Referee comment on "Water shortage: Assessment and Analysis on a Regional Scale" by
Yuri Marques Macedo et al., Nat. Hazards Earth Syst. Sci. Discuss.,
https://doi.org/10.5194/nhess-2022-86-RC2, 2022

Review for 'Water shortage: Assessment and Analysis on a Regional Scale'.

The paper is dealing with the analysis of the risk of urban water shortage in a Brasilian
state (153 cities). The analysis is based on the evaluation of the index of water shortage
risk (IRDH). Solutions are proposed to mitigate the risk.

The text of the paper needs some revision and to be rephrased in several points before it
can be published. Namely some of the sentences are too long and not very
comprehensible.

Major comments:

- The largest part of the study area has semiarid climate, where dry period was observed
  recently. What about the hydrological conditions and water depth at the area? In
  section 2, please explain in detail.
- The article displays more generalized concept of studying water stress. What are the
  major sources of water supply, since the author is expected to be discussing municipal
  water supply. Please elaborate clearly, the sources.
- 45: ‘naturalizing’? explain what it is in a few words.
- Table 2: V5) Type of capture. It is vague, what do you mean by it? How can the
  aquifer, water storage and supply be used as an indicator for water stress? Why is it
  important to study water shortages?
- V8) Materials used..: It is good to include the complete water system materials.
Minor comments:

- Remove citations from abstract and explain in words the methodological assumptions. Also, give at least insight of what those 19 variables are.
- Abstract: Line 14-17: – Rephrase by dividing it into 2 or 3 sentences.
- 45: re-write first sentence of this paragraph. If you are citing an article, you don’t need to mention their name in the text.
- Section 3.1: L. 185, 195: write the equation numbers in front of the equation and in text also.
- 230: ‘... can be viewed on Table 2.’.. It should be ‘.. can be viewed in Table 2.’
- 715: V5) Type of capture. What are you trying to tell? Please write in an elaborate way.
- 210: Why are the indicators so important for water shortage in urban systems? Add a paragraph to explain.
- Authors are not clear about the difference between weather and climate.
- 185: ‘After establishing the weight of each variable and indicator in the sample.....’

Explain the method or criterium used for assigning weights to each variable and indicator.