

General comments:

Dear authors, the paper is very interesting, and it is appreciated that in general is well-structured and written. I enjoy reading it! However, there is still room for improvement in the language and some typos. Please be careful in how the type of drought and its impacts is written through the text. Since sometimes these concepts are mixed up.

The methodology applied is well explained. Even though the results and discussion chapter should include more balanced discussions with other authors, concepts and related/similar work. Please add it.

More specific comments and technical questions and clarifications are given in the lines below:

Specific comments:

P1, L14- 16. Please rewrite the sentence; it is hard to read.

P1, L20. Change or delete the word drought after the groundwater recharge

P2, L28-29 and L32. Add references

P2, 41. Please specify for which type(s) of drought(s) the author made the assessment

P3, 53. Add reference, for the readers would be interesting to know more about the 2018 drought and its implications.

P3, L69-73 It should be stated here that also meteorological indicators are part of the assessment

P5, L102. Please introduce the acronym GroWaDRISK and the other acronyms.

P7, L137. Why are you using SPI 1 if you are only focusing in long term meteorological drought? Please clarify.

P10, L172. Why did you choose an “initial value of hydraulic conductivity of 7 m/d for the Brussels sand formation” despite the wide range? Please also clarify on the text.

P11, L202. Specific yield needs to be introduced as the other parameters before.

P11, L211. Specify the year period you used.

P12, L221. The sentence is missing.

P13, L230. Is missing the discussion with other authors about the differences when using SPI-1 or 12 for drought assessments.

P16, L297. In the chapter Groundwater drought. Why did you exclude minor drought events in each of the subchapter analysis? How do you select the threshold to ignore those minor drought events for each subchapter?

P19, L331-332. Please, reconsider changing this sentence to “drought events on groundwater recharge were more severe than groundwater discharge”. As you are talking about drought impacts on groundwater discharge and recharge.

P20, L341. Why are you showing results here until 2010, if your assessment was performed until 2011?

P23, L402-408. This paragraph fits better on the discussion.

Technical corrections:

P9, L168. Hilltops is miswritten, please correct accordingly

P10, L181. I suggest adding a comma after “enters or exits the study area” to make it easier to read.

P11, L214. Correct the typo “deferent”

P13, L237. A preposition is missing

P16, L281. “Figure 8” is in italic

P16, L288. Missing point before “There is”

P16, L290. Typo in the sentence “resulting is a fast response”