Review for NHESS-2019-181

Major comments:

1. What is the novelty of this manuscript? The authors adopted a rather old and standard methodology and applied a sensitivity analysis of a few factors deemed to be important in the study area. The authors arrived at a few spatial maps of vulnerability for the Kerman-Baghin aquifer in Iran. I think this is the only contribution if their maps are correct and they might be useful for stakeholders or researchers interested in this region. However, the authors claim that they can not share the data. Thus, what is the point to publish this paper? If the authors have other objective, they should highlight their contribution. In the current version, this is certainly not the case.

2. The manuscript is difficult to follow in general with many small grammatic errors. I could not recommend publishing the work as it really requires extra efforts from the readers to guess what is saying. In many places, the authors repeat themselves many times with various statements having a similar meaning. In general, the information content/intensity is low.

3. The authors have calculated two vulnerability indices. However, the did not point out why they did so. Are these two parameters telling different information? What is the difference between them? The authors should do the work of analyses rather than throw them to the reader.

Minor comments:

I list a few grammatic errors while I read through the manuscript. These are not exhaustive. The authors should proof-read the manuscript more carefully.

LINE 1, for "assessing" groundwater vulnerability

LINE 13, 23, indexes -> indices.

LINE 16, how can you rank, weight and integrate sensitive parameters based on a GIS? Isn't the ranking based on the DRASTIC indices.

LINE 21, reveals.

LINE 25-26, how is this conclusion made? How do you know vulnerability maps is useful in controling actual human activities just based on a sensitivity analysis?

LINE 26, protection and sustainable usage of groundwater?

LINE 27, sensitivity analysis

LINE 54, firstly -> first

LINE 60, lastly -> last

LINE 66 and 67, remove these blank lines.

LINE 105, why the water level drop could increase contamination potential?

LINE 110, "The Kerman province"

LINE 155, this is not an equation.

LINE 341, sensitivities?