

Interactive comment on “Geomechanical modelling of sinkhole development using Distinct Elements: Model verification for a single void space and application to the Dead Sea area” by Djamil Al-Halbouni et al.

Anonymous Referee #1

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The manuscript "Geomechanical modelling of sinkhole development using Distinct Elements: Model verification for a single void space and application to the Dead Sea area" by Djamil Al-Halbouni et al. is an interesting contribution dedicated to modelling of sinkholes, with real case studies from the Dead Sea area, one of the region more famous for this type of hazard. The article is well structured, and written, but at some sites it would need, in my opinion, some more details to better explain the procedure followed to the readers. More indications in this sense are provided in the accompanying file. As concerns terminology, I strongly recommend to use the

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term "piping" rather than "subrosion". This latter may be misleading, and is not always used correctly in the scientific literature. My suggestion is to use piping throughout the article. There are several points in the article where the text shows some errors. These must be adjusted (they have been highlighted in the accompanying file, too). Overall, I believe the manuscript is worth to be accepted, subject to minor revisions, which details are indicated in the file.

Please also note the supplement to this comment:

<https://www.solid-earth-discuss.net/se-2018-62/se-2018-62-RC1-supplement.pdf>

Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2018-62>, 2018.

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