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Cover letter to V3

Dear Bethanna Jackson,

We wish to thank the GMDD team for the efforts taken in revising and processing our paper.

We also like to thank all scholars commenting on the manuscript either in the open discussion or as anonymous referees.

All remarks were considered and corrected in the present manuscript version.

Herby the actions that were taken about each commented remark:

1. Following David Wilson's comments:
  - a. No specific remarks were noted, nonetheless, some grammatical and structural corrections were made.
2. Following Ruishan Chen's comments:
  - a. The FDEM method was elaborated in the introduction
  - b. Explanation about the FDEM operation procedure was added to the methods section.
  - c. References to the aerial photography sources were added.
  - d. The upscaling potential was acknowledged in the conclusion section.
3. Following Douglas Karlen's comments:
  - a. As suggested the title and abstract were changed.
  - b. Across the paper structure and grammar issues were corrected.
4. Following Jawad Hassan's comments:
  - a. The threshold conductivity value was added to the abstract.
  - b. The Kibbutz (agriculture settlement) was added where required.
  - c. The soil textures were added.
  - d. The sampling method was elaborated in the methods section.
  - e. The term "normal irrigation" was changed to "an acceptable amount of irrigation" which was also been explained.
  - f. The term "takt" was changed into "irrigation cycle".
  - g. Some grammatical issues and figure numbers were corrected.
5. Following the comments of referee 1
  - a. The soils in several places are termed clactitic that is more accurate than the previous term chalky.
  - b. Although the measurements referred to are actual evaporation it indicates the evaporation potential and as suggested it was aligned as such.
  - c. The question of whether the sediments are travertine of tufa is not trivial. Additional consideration was taken and since these sediments are regularly bedded to fine laminated, consisting of both calcite and aragonite

mineralogy, they should be regarded as travertine rather than tufa (See Capezzuoli et al., 2014; Table 1).

- d. General chalk in different analysis than total Ca, which is mentioned one line earlier as Ca+Mg concentration.
  - e. All figures were revised as suggested.
6. Following the comments of referee 2
- a. Indeed dS/m are conductance units and not salinity concentration, which was corrected in the abstract and across the paper.
  - b. Typos as Arie and drop and also trees rows were corrected to their desired meaning and correct grammar.
  - c. Salting was changed to salinization.
  - d. The phrase "poor" was explained to be irrigation water with higher conductivity than 3 dS/m and wherever possible were replaced by "brackish water".
  - e. References were added to the CIA photo inventory and the survey of Israel orthophoto (Figure 1).
  - f. Dunam was changed to 1000m<sup>2</sup> (ISI unit)

Much obliged,

Kobi Anker