Topical editor's comments reply

We thank the Editor for the positive assessment of our manuscript and for the constructive feedback. We have provided answers to your questions as listed below.

P3L19/20: I agree with referee 1 that the search keywords should be listed explicitly. So if the keywords were the three that you mention in the text, please remove the "like" in the sentence, if there were more keywords, please name them.

RE: We have now explicitly listed the keywords (P3L19/20)

P5L6: As referee 1 suggested, please specify how many smaller studies you included (not "seversal"). It helps to put the numbers of measurements for these regions into perspective.

RE: We have now provided the number of publications (P5L6/7).

P5L10: "Completeness assessment": you mention in your response to referee 2 that you use "completeless assessment" instead of "quality assignment" and why you do that. But I do not see any description of a completeness assessment in section 2.2. What exactly does it entail and where does it enter the database? As for the position accuracy: It would be good to have a clear indication which dataset was subject to which method to determine the position accuracy, at least somewhere in the metadata. Which had to be guessed from Google Maps, which was provided in the study…? Did I simply not find this so far or isn't it listed yet?

RE: Thank you for pointing this out; the previous formulation with 'completeness assessment' is not used in the paper or in the database. We rephrased the paragraph to highlight the role of spatial accuracy and how it was determined. The specific approach we applied for each study to define the accuracy class (i.e. based on location name or map) is not listed in the data files.

P6L13: Number of outliers. Please follow referee 1's comment and state the explicit number of removed outliers.

RE: We removed the outliers from the SWIG database and now we mentioned the numbers in the text (P6L13).

P9 Table 4: I agree with referee 2 that the field methods in Table 4 are not very well structured. If you already refer to the classification in Rahmati et al. 2018, why don't you also stick to the structure they have in their Table 7?

RE: We cannot stick completely to the structure from Rahmati et al. 2018 because we use measured data with methods that were not listed in Rahmati et al. But in the metadata we provide the references from where Rahmati et al. took the data and provide the same method name as in Rahmati et al.

P11L1-L3: These two sentences are unclear. Please be specific what test you did (ANOVA with which post-hoc test?) and why. This also refers to P13L1.

RE: Thank you for noticing this. In the revised text we made it clear that we used ANOVA with post-hoc Turkey's HSD (Honestly Significance Difference) test (see P9L3-8 and P12L13-14).

Other remarks:
1) Supplement:
- As you refer to the supplement tables explicitly within the text, I suggest you attach both supplements simply as Appendix A and B to the main manuscript, so that they can be found more easily.

RE: Thank you for this suggestion. We have now moved the tables and figures in the Appendix.

- Also, the supplement file containing the tables lacks description of the tests that are the basis for the significance values (probably the ANOVA with which post-hoc test?). Please add this information to the captions. Also maybe rethink the wording as you are probably testing if there are "(significant) differences in Ksat between the texture classes" and probably not the "significance between texture classes".

RE: We state it explicitly in the Appendix (ANOVA with post-hoc Turkey's test).

2) Zenodo: "sol_ksat.pnts_metadata.csv": Please make sure the Ksat method names are the same as the ones in the list in Table 4. This makes it much easier to follow which methods have been used throughout both the database and the manuscript.

RE: We agree. Ksat method names are the same as the ones in the list in Table4.

3) Please also check again for typos. I stumbled upon a few but will not go through the whole manuscript to point them out.

RE: We double-checked and have removed the typos.