Interactive comment on "Short Communication: Optimizing UAV-SfM based topographic change detection with survey co-alignment" *by* Tjalling de Haas et al.

Anonymous Referee #3

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While is gratifying that the workflow we discussed in Cook and Dietze, 2019 (and was proposed by Feurer and Vinatier, 2018) was shown to be effective even when GCPs are used, I found this paper very thin for a stand-alone paper, even a short communication – it feels like something carved out as a least publishable unit when it could be included in a paper that discusses the observed changes (I notice that the authors appear to have such a manuscript in review). While the additional testing of the method is nice, it's not clear that this manuscript adds much new knowledge or methodological development. This is perhaps best exemplified by the discussion, much of which (lines 176-187, 191-199, 204-208) restates points that were already made in Cook and Dietze.

The authors state one the key unanswered questions they address is "how well co-alignment does on a larger number of surveys" and that Cook and Dietze tested only two surveys. This is not the case; while most of the results in Cook and Dietze were from survey pairs, we also applied the method to a set of 4 surveys (shown in Fig. 6 in our paper) and note that including additional surveys could improve results in some cases. While 9 is greater than 4, it's not clear that this is enough of a difference to be noteworthy. This leaves the addition of accurate GCPs as the only new thing (note that Feurer and Vinatier also used GCPS, just not precise ones).

Overall, I am doubtful that this manuscript makes a significant scientific contribution, again best illustrated by the lack of original ideas in the discussion.