Interactive comment on "Processing and accuracy of topobathymetric LiDAR data in land-water transition zones" *by* M. S. Andersen et al.

Anonymous Referee #3

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The authors present a method for processing LiDAR data of a costal area, integrating land topography and shallow-water bathymetry. After the extensive and complete review of reviewer 1, I feel that much of what I say will sound repetitive. The paper feels much like a technical report. The authors claim to present a novel method but im my opinion fail to make clear in which ways their method is new, since pretty much all of the methodology is derived from other papers. Maybe they intent to say that the whole workflow is the novelty? As it is, the paper is more of an 'application paper' or a 'case study' than a scientific paper. The list of references is quite short, and much of the theoretical basis if from a textbook rather than papers.

Does the paper address relevant scientific questions within the scope of HESS? The issue of processing topobathy LiDAR is of interest, but the paper format is not really suited to HESS.

Does the paper present novel concepts, ideas, tools, or data? Like I said, much of the methods are from others, and the authors don't make clear what is new, what is their contribution.

Are substantial conclusions reached? Not really. The conclusions are consistent with what is presented, but the authors should explore more the data they have and both the limitations of the method and how their results can be considered better than with other methods.

Are the scientific methods and assumptions valid and clearly outlined? Yes

Are the results sufficient to support the interpretations and conclusions? The conclusions are basically a report of the accuracy/precision of the final product, not from a deeper discussion of the data/experiments/results.

Is the description of experiments and calculations sufficiently complete and precise to allow their reproduction by fellow scientists (traceability of results)? Well, any 'manual interpretation' (like filtering) is hard to reproduce.

Do the authors give proper credit to related work and clearly indicate their own new/original contribution? Not really. There should be more references from scientific papers and less from textbooks and 'grey literature' (meetings abstracts, thesis...).

Does the title clearly reflect the contents of the paper? It would be more clear if the authors used something like 'case study'.

Does the abstract provide a concise and complete summary? It doesn't state the objectives or methods, just a brief introduction and the results.

Is the overall presentation well structured and clear? I don't think so. The authors should re-structure the paper so it becomes clearer what is their contribution to the processing workflow.

Is the language fluent and precise? Yes, it's ok.

Are mathematical formulae, symbols, abbreviations, and units correctly defined and used? Yes. I'm not sure if they are all necessary (the formulae for refraction of laser beams, form instance: it's mentioned but not really used, since a proprietary software/algorithm is used for that step of the processing).

Should any parts of the paper (text, formulae, figures, tables) be clarified, reduced, combined, or eliminated? Some formulae could be eliminated, I guess.

Are the number and quality of references appropriate? Not really. See above.

Is the amount and quality of supplementary material appropriate? This paper doesn't have supplementary material.

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