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Earth Surface Dynamics Discussions

Interactive comment on "Topographical changes caused by moderate and small floods in a gravelly ephemeral river – 2D morphodynamic simulation approach" *by* Eliisa Lotsari et al.

R. Hodge (Editor)

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Apologies for the confusion around the timing of the discussion period closing. All three reviewers agree that this paper contains some novel and interesting material that is potentially suitable for publication. However, they also all express reservations about aspects of the paper, which suggest that substantial revisions are necessary.

The reviewers are agreed that the novelty of the paper is in the modelling of a small ephemeral channel. However, the current focus of the paper is mainly on the model calibration. The reviewers felt that there had already been fairly extensive work on calibrating Delft3D and similar models, and that this part of the paper could make

more reference to previous material and be reduced in length. Rather than covering all aspects of model calibration, you could use this section of the paper to explain any aspects of this particular channel and/or ephemeral rivers in general that mean that a standard calibration approach is not applicable. Make it clearer what you have done that is different to standard calibration approaches. Be careful about the use of the phrase 'sensitivity analysis'; the work that you present is not strictly a sensitivity analysis. In line with the reviewers' comments, you want to think about how you might develop the parts of this paper that present the model application. There are some interesting ideas about the magnitude and timing of morphological changes during different sized events that could be explored further.

All reviewers also provide useful comments on other aspects of the paper that should be taken into consideration. I look forward to receiving the revised version of this paper.

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