

## ***Interactive comment on “GRAINet: Mapping grain size distributions in river beds from UAV images with convolutional neural networks” by Nico Lang et al.***

### **Anonymous Referee #1**

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#### General comments

The manuscript ‘GRAINet: Mapping grain size distributions in river beds from UAV images with convolutional neural networks’ meets the aspects, given on the HESS website at: [https://www.hydrology-and-earth-system-sciences.net/peer\\_review/review\\_criteria.html](https://www.hydrology-and-earth-system-sciences.net/peer_review/review_criteria.html)

#### Specific comments

Section 3.1: what was the spatial resolution of produced orthophotos? One would assume that it was 0.25 m, but later in Section 4.1 you wrote that you resampled the image tiles (extracted from orthophotos) to uniform GSD of 0.25 m. Why this prepro-

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cessing step was necessary since PhotoScan enables user to set the specific spatial resolution when producing orthophotos?

#### Technical corrections

The numbering of Appendixes starts with ‘B’. It would be more natural, to start the numbering by ‘A’. Include the numbering of Appendixes when referring to them in the text (e.g. line 109: ‘... in the Appendix B...’)

Consider unifying the expressions labelling and labeling, labelled and labelled (sometimes you use single ‘L’ sometimes double ‘L’); ‘bedload’ and ‘bed load’; ‘analyse’ and ‘analyze’ (and variations).

line 20: consider replacing ‘As a consequence’ by ‘Consequently’ line 84: consider replacing ‘photographs’ by ‘images’ line 171: insert ‘,’ after For simplicity line 421: replace ‘form’ by ‘from’

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2020-196>, 2020.