

Interactive comment on “Assessment of shallow landslide susceptibility using an artificial neural network in Enshi region, China” by Bin Zeng et al.

Anonymous Referee #1

Received and published: 12 June 2017

The manuscript has very limited contribution to the field since many papers have been published in the last two decades on the use of neural nets in landslide susceptibility mapping. Authors should explain how they choose the parameters (learning rate, momentum, initial weight range) and why? For example when you choose 10.000 iterations in training stage, the network is high likely to overfit the data that is extremely limited in size.

Another important problem is related to the sample size, which I believe is too limited, for the designed network (4-9-1). This network has totally 45 links. The number of training samples employed at the learning stage has a significant impact on the performance of any classifier. This issue is perhaps more important for neural networks than for conventional statistical classifiers since their performance is totally dependent

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upon the characteristics of the training data presented. Although the size of the training data is of considerable importance, the characteristics and the distributions of the data as well as the sampling strategy used are crucial. The quality and the quantity of the training samples are crucially important for a successful neural network application. Whilst too few training samples are not sufficient for neural networks to derive the characteristics of the classes, the use of too large a number of training samples may cause networks to overfit to the data, as well as requiring more time for learning.

On page 4 lines 54 and 61 the surname of the author (Pourghasemi) was written incorrectly. On page 6 line 87 "compare with... some different attempts" can be replaced as "compared with some attempts".

Conclusion section is too short and includes general information.

Provide more recent papers in reference list in the use of ANNs and its performance comparison to machine learning methods.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2017-176>, 2017.

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