Interactive comment on "Weight analysis of dam break risk consequences influencing factors" *by* Zongkun Li et al.

Zongkun Li et al.

21872168@qq.com

Received and published: 31 October 2018

1. Entropy weight method, as one of the objective weight analysis methods, has advantages over subjective evaluation method in avoiding the influence of experts' subjective opinions and dealing with multi-index problems. For example, the application of analytic hierarchy process (AHP) is limited by consistency testing, which usually deals with no more than 9 indicators. Ordinary relation analysis does not require consistency test, but it relies too much on the subjective judgment of experts, the relative importance of indicators will double the impact on the final results. Of course, entropy weight method also has its drawbacks, that is, there are more requirements for the evaluation of sample size, this paper is using the cloud model for simulation of expert scoring conversion, so as to meet the requirements of entropy weight method on the amount of data, and to

improve the rationality and scientific of the calculation results. 2. According to table 4, the weight distribution and its trend of change are not entirely consistent. Some index weights increase (such as Lv1, H3, E2), some decrease (such as H1, H4, Ecv3), and some change little (such as E1, Sv1, Ecv1), which is the result of information entropy in the new model. Traditionally, when dealing with multi-index, one of the common problems is that the weight distribution is too average. Because of that, the new method is improved and the effect is obvious, and the range is increased by 104%.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2018-265, 2018.