# Response to Reviewer 1 Comments

We thank you for providing us with the evaluation on our manuscript. With this reply we hope to provide adequate answers to the comments of the reviewers. This is done in a point-by-point fashion below. First the comment of the referee (RC) is given, after which our response (AC) is given in green font. We strongly appreciate the insight and feedback provided by both referees and are convinced these have helped in further improving the manuscript.

(1) General evaluation by referee

**RC:** General comments: In this study, an integrated weighted index model based on FR and AHP methods was proposed for earthquake-triggered landslide susceptibility mapping at the Zhangzha town of the Jiuzhaigou County where a Ms 7.0 earthquake struck on 8 August 2017. Slope, aspect, elevation, lithology, distance from faults, distance from rivers, LULC, NDVI and PGA as landslide controlling factors were adopted in the integrated weighted index model for generating the landslide susceptibility map with reclassification of seven levels of landslide susceptibility areas within a GIS environment. It demonstrated reliability and feasibility of the integrated weighted index model in landslide susceptibility mapping at regional scale.

**AC:** We appreciate the positive and in-depth evaluation of the manuscript's content by the referee both with regard to the thematic content and the methodologies applied.

(2) Specific comments by the referee

1. **RC:** Page 1 lines 19-23: The sentence, "Nine landslide controlling factors, namely slope, aspect, elevation, lithology, distance from faults, distance from rivers, land-use/cover, normalized difference vegetation index and peak ground acceleration, were considered with an integrated weighted index model for determination of the weighted index through analysing their relationships with occurrence frequency ratios of landslides with analytical hierarchy process approaches.", seems too complicated, should be revised.

**AC:** Thanks for your kind suggestion. We will modify the sentence as follows:

"Nine landslide controlling factors were considered including slope, aspect, elevation, lithology, distance from faults, distance from rivers, land-use/cover, normalized difference vegetation index and peak ground acceleration. The frequency ratio was

utilized to evaluate the contribution of each landslide controlling factor on landslide occurrence, and the analytical hierarchy process was used to analysis the relationship among landslide controlling factors."

2. **RC:** Page 1 line 30: The key words, "Frequency ratio", could be "The frequency ratio of landslide".

**AC:** Thanks for your comments. Like the AHP, Frequency ratio is an important method in the integrated weighted index model, therefore we choose it as the key word. "The frequency ratio of landslide" sounds like the results of frequency ratio, not a method. So, to some extent, we prefer to select "Frequency ratio" as the key word. Thanks again for your understanding.

3. **RC:** Other suggestions for grammar, etc. are highlighted on the MS.

**AC:** We are grateful for the detailed comments provided by the reviewer in an effort to improve our manuscript, and we will revise the manuscript carefully according to your suggestions.

Once again, thank you very much for your comments and suggestions. If you have any other question about this paper, please don't hesitate to let us know.

Yours sincerely,

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