Responses to comments raised by Reviewer 2

Comments	Responses
The title of the manuscript is partially pertinent to the topic, and the authors don't cite the landslide size probability that is evaluated in the work to assess the landslide hazard.	Thanks for the comment, we modified the title of the manuscript as "Integrating spatial, temporal, and size probabilities for the annual landslide hazard maps in Shihmen watershed, Taiwan."
The abstract results ambiguous and generic when the authors describe the process of evaluation of effective intrinsic and extrinsic factors and the authors don't mention the study area.	We are sorry for our inaccuracy expression, those sentences were revised. Additionally, we added the basic information about study area in the abstract.
In the introduction the authors, after a long description of the background about the landslide hazard topic, present their work too shortly, without highlighting the news of their experiment.	Thanks for the comment, we added our work and news in that paragraph.
The manuscript is not well organized; in my opinion the study area should be presented at first and the available data both intrinsic and extrinsic factors should be described precisely, and the landslide inventory that the authors managed must be illustrated more accurately. The methodology section should be postponed after the presentation of the study area and data and including the procedure for screening the variables. The methodology should be comprising the description the subdivision of the study area in slope units the authors should clarify which software GIS they've used to perform this subdivision.	Following the comment, the sections were re-organized well. Additionally, the GIS-based hydrologic analysis and modeling tool, Arc Hydro (David, 2002), was used to divide the watershed into slope units.
The Conclusions are generic and the author don't present any new findings, the authors present the possible future works without a previously discussion about a connection between the landslide distribution and sediment transport.	Thanks for the comment, we modified some sentences and added our news in that paragraph.
The new finding regards the evaluation of the landslide spatial probability that is derived by using relationships between the landslide ratio and the susceptibility index. The lack consists in a scarcity of reference regards the meaning of the landslide ratio and in the absence of the relationship equation.	Following the comment, the meaning of the landslide ratio was added in Section 3.1. while the relationship equation used in this study was added in fig. 7.
The introduction of the landslide ratio in the evaluation of the spatial probability must be explained clearly, the authors have to do reference and must indicate the relationship equation used to calculate the landslide spatial probability.	Following the comment, the meaning of the landslide ratio was added in Section 3.1. while the relationship equation used in this study was added in fig. 7.
The evaluation of the temporal probability using the Poisson model is a standardized methodology, but it is not clear which temporal interval the Multi-temporal inventory covers and how the authors perform the calculation of the mean occurrence probability or the mean recurrence interval. The validation of	Thanks for the comment, the multi-year landslide inventory in Shihmen watershed was added in Table 1. The inventory covers the temporal interval of 15 years from 1996 to 2009. After summing the landslide count in each slope unit from 1996 to 2009, the mean recurrence interval of each slope unit was

temporal probability is not clear; the author must describe how they calculate the mean recurrence interval for the rainfall events used to validate the one-year probability. Do they have event landslide inventory map?	calculated.
In the section 3.3, the selection of extrinsic triggering factors is based on a geostatistic analysis; the authors should present a figure showing the geographical distribution of the rain gauge stations and an histogram and cumulative graph that can illustrate the meteorological event.	Following the comment, the geographical distribution of the rain gauge stations was shown in Fig. 4. Additionally, the temporal pattern of rainfall during Typhoon Aere was added as shown in Fig. 2.
In the section 3.4 the sentence "the higher the value, with the lower ratio of landslide with large areas" needs an explanation or a reference.	Thanks for the comment, we modified the sentence as "The higher the β value, the steeper the power-law tail, thus the lower the ratio of landslides with large areas."
Figure1 – The picture showing the location of the study area should be enlarged. Figure 3 – figure 4 should be represented in one figure. Figure 7 – the picture showing the relationship between the landslide ratio and the landslide susceptibility index should be enlarged. In the legend of the map it is represented the landslide ratio or the landslide spatial probability? All the figures representing the study area should have a frame with the coordinate system. The figure captions are very poor written.	Figure1 – The picture showing the location of the study area was enlarged. Figure 3 and figure 4 were represented in one new figure (as shown in fig. 4). Figure 7 – The picture showing the relationship was enlarged while the legend of the map was modified as "landslide spatial probability." All the figures representing the study area were re-drawn to have a frame with the coordinate system; some of the figure captions were also modified.