

Interactive comment on “Multiple remote sensing assessment of the catastrophic collapse in Langtang Valley induced by the 2015 Gorkha Earthquake” by Hiroto Nagai et al.

Anonymous Referee #2

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In this manuscript, the authors describe the use of different remote sensing approaches for the identification of the effects of the 2015 Gorka Earthquake. In my opinion, the topic is very interesting and suitable for this journal, but the manuscript could be considered ready for the publication only after major revisions. In the following some suggestions for the authors: Page 1 line 30: in the abstract the authors describe an avalanche and they introduce that the paper will be focused on it. After, in the introduction, they introduce the presence of avalanche, but also landslides and other gravitational processes. For the reader is not very easy to understand which what happened in this area and then to follow the authors in the description of their work. I suggest to rewrite the introduction and to describe better the effects of the earthquake. Starting from

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the avalanche it is important to define if it is an ice avalanche from glaciers or rock avalanche or another more complex phenomenon. a good definition of the effects of the earthquake is fundamental to give to lectors the possibility to evaluate the effectiveness of the approach proposed by the authors. Page 2 from line 7: the introduction describe what the authors want to describe in the manuscript, I'm not sure that the authors really satisfy this objectives. For this reason, I strongly suggest the authors to check the text and control that they describe all this topics. Page 2 chapter 2.1: the description of the study area is very short and poor. I suggest that the authors consider the possibility to improve both the geological and geomorphological aspect of the study area Page 4 chapter 3: this is the most important part of the paper, but it is also very hard to understand. Since it was not presented in the introduction a good description of what occurred in this area, now it is very critical for readers to understand what the authors have found. I suggest to rewrite this part of the article and to start the description from the evidence of the gravitational phenomena that caused the disaster and then to describe the effect in the lower part of the slope. One of the main limitation of this paper is that authors concentrate their description on the technical description of satellite images and results, but they did not pay too much attention to the description of the occurred events. I know that a correct reconstruction of the sequence of events is very hard, but I also think that if you want to present a methodology that use multiple remote sensing systems to describe the catastrophic collapse in Langtang Valley, at the end is mandatory have a description of the collapse and the sequence of events reconstructed by authors.

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