

## ***Interactive comment on “The Role of Unmanned Aerial Vehicles (UAVs) In Monitoring Rapidly Occuring Landslides” by Servet Yaprak et al.***

### **Anonymous Referee #1**

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This paper presents the use of a UAV for multi-temporal analysis of an active landslide. The degree of novelty is insufficient, and the paper seems to be a mere description of a well-known UAV application. Authors should emphasize the scientific novelty of their work to be considered for an important Journal as Natural Hazards and Earth System Sciences. In the following some suggestion to improve the work. A native English speaker should revise the language of the manuscript Line 26, the term subsidence for landslide activity is not correct. It is better to describe the change as vertical displacement. Line 33 sentence not clear Line38, this is not true. Authors seem to consider only shallow landslides. Why not rock falls. The considered bibliography in the introduction is very limited. Line 42-44: again, this is a simplified and not correct description of possible landslides triggers. From line 76: from the description of the presented work

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in the introduction, the paper seems to be focused on a simple exercise for the use of a UAV for a multi-temporal acquisition of images on an active landslide. Authors should emphasize the scientific novelty of presented manuscript. Chapter 2 the presented system is similar to many commercial systems. just to cite an example, phantom 4 has more or less the same performance and can be bought online. Table 3: it is not clear where these points are. Figure 5: not necessary Figure 7 not necessary Chapter 3.4 this is the simple description of the PIX4D procedure, that is typical of every structure from motion software. Figure 8: the aspect map is not necessary. The publication of this map should be motivated by authors. The use of aspect map for the identification of movement is quite critical. Authors should be very careful in the use of this approach for finding movements. Line 279: what is an “object point”? I suppose that authors used the same approach of Niethammer, et al, but they have to explain better. Figure from 10 to 13: horizontal displacement? Figure 14 is not clear, and not enough described in the text. Discussion: This paper presents a straightforward application of a multi-temporal analysis of an active landslide. Many papers described more complex approaches. To have an idea, Authors could consider the Special issue on RPAS and natural hazard published on NHES and in particular the review paper. The scientific novelty degree of the paper is very poor. Authors cited at line 215 that the acquisitions have been made after rainfalls and snow melting events, but then this data is not considered. A correlation between rainfall events and the landslide activity could be a possible interesting add value.

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