

Dear Editor,

we have taken into consideration the suggestions by the two reviewers; however, in our opinion Reviewer 3 seems to trivialize the data we collected and to deny any evidence of slope movements in the study area. Hereunder are our point-by-point replies:

Reviewer 2

The only mandatory technical change regards the current version of Figure 11. In particular:

- the values of the monthly cumulative rainfall must be reported by one of the two Y-axes;

REPLY: *we have added the values along the Y-axis.*

- I suggest to eliminate temperature data, that are not commented in the discussion section.

REPLY: *we would rather show these data, as they are briefly commented in the text, and show that temperature variations are not correlated with the extension measurements: thus, they are independent from each other.*

Reviewer 3

I have a strong impression that authors want to describe the situation at the study site worst than it is in the reality.

REPLY: *Our paper is essentially aimed at providing data, as this is one of the main goals of the Earth System Science Data journal. Our data are objective and show ruptures of the ground, scarps, slope movements detected by a GPS array, slip potential of the slope by numerical modelling, broken piezometers, old landslide deposits, etc, all suggesting the presence of slope instability. The proposal of rejection of the paper by reviewer 3 is based on few and short, debatable comments, that do not keep into account all the efforts we have made to improve the paper and all the objective data we have presented; it seems to us that this reviewer does not want, a priori, to let the presence of this landslide be known to the international scientific community.*

Even boundaries of the landslide shown in different figures are different - compare Fig. 3a and Fig. 12.

REPLY: *the head landslide scarps are well constrained and thus they are the same in all figures, whereas the lower segments of the side boundaries of the landslide are more uncertain, also because they are most under the lake; we have uniformed these boundaries in the figures and showed them as uncertain with a dashed line.*

Steep scarp above the Djvari-Mestia road considered as the main headscarp (Fig. 4) is the roadcut made during road construction.

REPLY: *this is a very strange comment: even on GoogleEarth it can be clearly seen that the head scarp is longer than the road, and thus the road only in part follows the scarp. The scarp prolongs outward from the road in the northern part, whereas the road cuts through the scarp in the southern part. Moreover, this head scarp is 40-60 m high, a height poorly compatible with the supposed cut of a small road, especially considering that this scarp height is present also outside of the road. Finally, the scarp has a horse-shoe shape, typical of landslide head scarps. We have added these comments to the new version of the paper.*

Author did not check the graph of the Reservoir level - sharp positive and negative peaks on 22.09.2018 and on 20.04.2019 when level changed for ca. 30 m in one day are not possible.

REPLY: *In the previous version of the paper, we preferred to show the graph as it has been recorded and provided the original data from the lake level data recording system. Clearly these are two instrumental errors. In the present, new version of the paper, we have eliminated these two errors from the graph.*

Measurement records of both trenches do not correlate either with each other or with reservoir level. Sharp subsidence measured in Trench 1 is unique and was not repeated in any way further.

REPLY: *these are the objective data, and they have been widely discussed in the paper, both in terms of differences between the two instruments and delay. The reviewer should know that there are several published papers showing delays between landslide movements and the events that triggered them. Sharp subsidence measured in Trench 1 is unique because it corresponds to the complete emptying of the lake that occurred only one time in the studied period.*

Besides authors do not explain what mechanism can transference any changes at the landslide base due to water level variations to the top of the landslide about 200 m above.

REPLY: *Also this is a very well-known phenomena, for example buttressing or unbuttressing of the landslide toe due to water level variations can propagate their effects through the entire unstable slope; moreover, water saturation can contribute to destabilizing the whole slope, etc. The Kohko landslide has the toe under the lake, whereas the part of the landslide out of the water is in any case mostly water saturated because of the presence of at least one shallow water table. The large variations in the lake level, in the order of tens of meters, affect the onshore slope because when the level increases, it produces an hydrostatic push that relieves the landslide toe and, at the same time, saturates the deposits of the slope. When the lake level decreases, the poor permeability of the slope sediments is such that they desaturate slowly. In this setting, there is a decrease of the hydrostatic push that relieves the landslide toe, but the slope sediments remain undrained for a certain amount of time, with the consequent downward slip of the slope toe that, in turn, drags the upper part of the unstable slope.*

Paper presents only measurements at the road that might be affected besides various natural reasons, even by heavy tracs passing along the road.

REPLY: *This is simply impossible: the two instruments are encapsulated in concrete boxes, and moreover between the instruments and the road asphalt there is a 50-cm-thick layer of reinforced concrete installed during the Soviet period. This clearly protects the extensometers from effects of trucks transit. Moreover, the extensometers recorded long periods of increase and decrease of extension movements, whereas trucks are always present. We have made mention to these two points in the new version of the paper.*