

## ***Interactive comment on “Understanding shallow landslides in Campos do Jordão Municipality – Brazil: disentangle the anthropic effects from natural causes in the disaster of 2000” by Rodolfo Moreira Mendes et al.***

**Anonymous Referee #1**

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There is no doubt that the study has great importance associated to the monitoring systems of urban risk areas. In particular related to the use of precipitation data only. The combination of experimental laboratory data, field monitoring, geological aspects and the use and occupation of risk areas, brings to the study a set of information that deserves to be divulged. However, some aspects of the study and the text should be evaluated. The following are some comments aimed at improving and clarifying some points of the work. Line 30 - A reference on the given information of the percentage of the population that lives in urban area in Brazil would be important. Line 39 - The

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reference to the removal of forests would not be removal of vegetation? Considering that it is already a deforested area. Line 66 – Typo: “Given the lack of detailed data” FROM.... Line 68 - The reference to numerical analysis is very broad. The numerical study was done with the flow analysis, but the stability analysis was done by equilibrium limit, which is not a numerical method. Line 93 – Figure 2 needs to be described in the text. Line 130 – Typo: Instead of lecture you mean reading? Line 132 to line 137 – This paragraph is repeated. Line 141 – Instead of Figure 3 it is Figure 4. The figure needs to be described in the text. Line 141 - The phrase seems truncated. The samples were not taken for stability analysis but for the determination of parameters that are used in the analyzes. Line 143 - The correct spelling is saprolite (saprolith seems to be Greek). This occurs along the text. Line 153 - The sentence is confusing and the order of the essay processes must be rewritten. For example: it is not the application of load that is made with a speed of 0.033mm / min, but the phase of shearing. Line 180 - The references to figures 3 and 4 are not clear. Where are the boundary conditions? Line 195 – It seems to be Figure 5 and not Figure 4. Line 195 – Why to use a “sandy loam” if the classification used is not from agronomy? Line 209 – Typo: “....soils representative of other Brazil....”?? Line 211 – Instead of Figure 5 it should be Figure 6. Line 213 - Why not use field capacity? Line 224 – The term humidity is used as water content. This does not seem correct. Line 224 – Will the article be published in color? Otherwise references to colors should be retracted from the text and another reference system should be used. Line 240 - It was not clear to me how the variation of moisture content led to the observation that soil parameters vary. Line 280 - For FS less than 1 ruptures should occur. Line 348 - Although it is reasonable, the analyzes do not seem to show that the condition of previous moisture content affects the analysis. It seems to me only an opinion. Line 361 – The term “factor of slope safety” should be factor of safety of the slope or slope safety factor. Table 2 – Why not use m/s for hydraulic conductivity? Figure 2 - I suggest that the photos be separated to avoid the impression of continuity between them. Figure 6 - Are the points indicated as small symbols experimental? If there are experimental points should be included along with

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the adjustment made.

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