# Review of "Finite-hillslope analysis of landslides triggered by excess pore water pressure: the roles of atmospheric pressure and rainfall infiltration during typhoons"

## Summary:

I have read the response to reviewers and revised manuscript, and I am satisfied with the changes that have been made. While the model remains the same as that presented in the original manuscript, my primary conceptual concerns have been met with improvements to the text that describe the model behavior and express its limitations. The paper makes a compelling case that there are circumstances in which atmospheric pressure fluctuations could drive landslides during typhoons, and more generally that finite-hillslope analysis is a useful tool for understanding the mechanisms that generate landslides from excess pore pressure. I think it is a worthy and interesting contribution, however I will recommend a few editorial changes below.

## Line by line:

### *Title:*

I'm honored that you have used the title I suggested, thank you.

### *Abstract:*

Line 13: "over" -> "on"

### *Introduction:*

Line 31-32: What is "topographic site effect"?
Line 46: "Indeed" may be unnecessary. Check this and other locations as well.

### *Method:*

Line 162: "strong pore pressure" might be clearer as "significant pore pressure response"

### *Results – Synthetic:*

Line 260: "If" -> "While"

### *Results – Application:*

Line 306: In many cases you have fully saturated hillslopes under diffusivities that seem within the reasonable range. It might be helpful to mention here or in discussion that reductions in recharge due to interception, evapotranspiration, or deep percolation could play important roles in the water balance and consequently could affect antecedent water table conditions (Herwitz 1985, Jasechko et al. 2014, Tromp-van Meerveld et al. 2007).

### *Discussion:*

Between sections 5.4-5.7, I would suggest reviewing the organization and structure to be more concise and place related ideas together. For example, 5.7 supports the ideas presented in 5.5 so perhaps 5.5 could include 5.7 as evidence.

Lines 364-465: Check end of sentence: "… as for the finite hillslope model."
Lines 368-369: This would be a useful piece of information to have in the figure description too.
Line 491: "Phenomenon" -> "phenomena"
Figure 8: caption "repartition" -> "distribution"

## Works Cited:


Herwitz, S. R. (1985). Interception storage capacities of tropical rainforest canopy trees. *Journal of Hydrology*, *77*(1), 237–252. https://doi.org/10.1016/0022-1694(85)90209-4

Jasechko, S., Birks, S. J., Gleeson, T., Wada, Y., Fawcett, P. J., Sharp, Z. D., et al. (2014). The pronounced seasonality of global groundwater recharge. *Water Resources Research*, *50*(11), 8845–8867. https://doi.org/10.1002/2014WR015809

Tromp-van Meerveld, H. J., Peters, N. E., & McDonnell, J. J. (2007). Effect of bedrock permeability on subsurface stormflow and the water balance of a trenched hillslope at the Panola Mountain Research Watershed, Georgia, USA. *Hydrological Processes*, *21*(6), 750–769. https://doi.org/10.1002/hyp.6265