Interactive comment on "Landslide susceptibility mapping using fuzzy logic and multi-criteria evaluation techniques in the city of Quito, Ecuador" *by* Daniela Salcedo et al.

Anonymous Referee #1

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The paper "Landslide susceptibility mapping using fuzzy logic and multi-criteria evaluation techniques in the city of Quito", Ecuador of Salcedo and co-authors is focused on the use of fuzzy logic technique considering several parameters (morphology, geology, rainfall, vegetation cover, faults, infrastructure. . .) to produce a landslide susceptibility map of an area of the city of Quito, along the Simon Bolivar highway which is historically affected by slope instability phenomena. The paper has major weaknesses concerning the scientific novelty issue, especially in the field of landslide susceptibility mapping and it is not well organized. In the paper a reader would expect to read: 1) an introduction where the state of the art about the argument is described; 2) a detailed description of the study area and its phenomena; 3) an accurate description of

the adopted methodology; 4) a discussion of the obtained results; 5) final remarks. I think the manuscript contains some of these parts but not well organized. Most of the "Results and discussion" section should be moved into "materials and methods" section. For example the vegetation, precipitation, lithology and other maps should be presented in the "materials and methods" section and not in the "Results and discussion" section where you have to describe the weighting of these maps and discus them. The standard of English language needs improvement. As a non-native speaker, I did not make corrections and I did not involve in correcting grammar and style. There are a lot of toponyms in the paper that should be reported in Figure 1 (for example at lines 118-120 and 148-154). Check the numbering of the equations, something went wrong. Expand all the acronyms (IGM, MDT, AEI, AED). Please check table 2 (column 1), some words have problems. Add northern arrows to the maps. I am afraid to say that there are significant deficiencies in this paper as it now stands so my recommendation is: Rejection. Minor points: Line 60: replace "The susceptibility maps of landslides" with " The landslide susceptibility maps". Line 134: "El Commercio 2012" is not in the reference list Line 142: delete "of land" Line 162: "Alcadia de Quito, 2017" in the text is the same of "Agenzia publica de noticias Quito" in the reference list? Line 173: replace "(REF)" with a reference Line 200: "Transport Research Laboratory, 1997" is not in the reference list Lines 239-246 should be moved in to "Materials and methods" Line 24: report the resolution of the DTM Line 247: You show a lot of maps but I think it is necessary to show also this landslide inventory map. Figure 9 (Lithology map) is very difficult to read since you used a brown color bar for more than 30 lithologies. Why you do not consider also the slope orientation (aspect map), you have a DTM. Line 307: Saaty, 1980 and Eastman 2012 are not in the reference list