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Interactive Comment

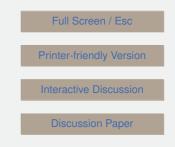
Interactive comment on "Brief Communication: On direct impact probability of landslides on vehicles" by P. Nicolet et al.

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This brief communication gives an overview on methods used for calculating the spatiotemporal probability of a vehicle being in the path of a landslide, an avalanche, a rock fall or a debris flow. The authors also describe âĂć the approach neglecting the vehicle dimension used in Switzerland for calculating the risk when a vehicle crosses a hazard zone, âĂć the approaches taking into account the dimensions of the event as well as of the vehicles and âĂć methods considering an impact on the side and front of a vehicle. Two examples of risk calculation using the different methods are given. However, according to my opinion, there are some ambiguities which I propose to clarify. Thus I recommend publication after major revisions.





general: The approaches described assess the problem in a spatio-temporal context taking into account only geometric values and time. Thus "center of mass" should be replaced by "geometric center". p. 7312, line 26: delete "that" p. 7314, line 11 to 13: LH / vv is denoted as temporal probability. However, LH / vv is the time a vehicle needs to cross a hazard zone. LH / vv x fv is âĂć either a temporal probability, since it is the time a number of vehicles need to cross the hazard zone per time unit âĂć or a number of endangered (from a temporal point of view) vehicles. p. 7316, line 4: If "WE (is) largely superior to (please replace by: extremely larger than) LV" (line 13), PS = WE / LH is the spatial probability if the width of the event is assumed to be full of vehicles (worst case scenario?). Compare formula (2) spatial probability = LV / LH and formula (4). p. 7315, line 27 to p. 7316, line 8: PST* is not a spatio-temporal probability. It is, however, âĂć either a temporal probability, since it is the time a number of vehicles need to cross the hazard zone per time unit aAć or a number of endangered (from a temporal point of view) vehicles. p. 7316, line 11 to 20: This paragraph is hardly understandable. Please rephrase. p. 7317, line 23: hicker's = hiker's? p. 7321, line 20: rock fall debris I would appreciate the revised paper to be published.

Please also note the supplement to this comment: http://www.nat-hazards-earth-syst-sci-discuss.net/3/C3221/2016/nhessd-3-C3221-2016-supplement.pdf

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 7311, 2015.

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