

Interactive comment on “GIS-based Real-time Framework of Debris Flow Hazard Assessment for Expressways in Korea” by C. K. Chung et al.

Anonymous Referee #3

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Most previous papers about GIS-based landslide assessments have been dealt generally with circular slope failures considering slope, rainfall, saturation, vegetation. This paper is about debris flow hazard assessment in a simple way. Even though the framework suggested in this paper is well constructed and operated, the adopted method to assess the hazard level is somewhat unreasonable. Therefore it is required to be revised to be published. Basically the assessment method cannot seem to consider various influence factors shown in Table 1, especially vegetation properties and geological properties. In addition, Hazard Classes as shown in Table 3 and Figure 11 are determined only based on rainfall reoccurrence period or accumulated rainfall not considering the susceptibility value and the vulnerability value. That is, the hazard value does not include hydrological properties, vegetation properties and geological properties, which are important influence factors on debris flows. Due to these lacks of

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considerations in the adopted assessment method, the framework seems to result in poor assessment for the hazard as the authors also agreed in their paper.

I also found some typos like the first anonymous referee#1. Typos are at; 20th line in page 3, 7th line in page 5, 2nd line in page 6, 17th line in page 6, 24th line in page 6, 1st line in page 7, 29th line in page 8, 20th line in page 10 (not occurred in Class E in Fig. 11) and in figure 2 : necessary to add the process to consider rainfalls. in table 2 : the unit of discharge section area of waterway box Figure 11 is not figure but table.

[Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2016-2, 2016.](#)

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