

Interactive comment on “Statistical Characteristics of Mudflows in the Piedmont Areas of Uzbekistan and the Role of Synoptic Processes for their Formation” by Gavkhar Mamadjanova et al.

Anonymous Referee #1

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This is a study of the relationship between atmospheric factors, based on the classification of weather types, and the mudflows. The study is performed with the historical registers of mudflows, and the pressure data from ERA-Interim reanalysis for the classification of weather types and the air flow patterns already known. The relationship between the two variables is studied using the frequency of the mudflows for each of the weather types. In addition, a statistical model (Antecedent Daily Rainfall Model) to evaluate the probability of daily rainfall resulting into mudflow.

This study meets the required standards of the journal, since it addresses relevant

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questions, it uses a high-quality database, it applies adequate statistical methods, provides a correct interpretation of the results properly supported with bibliographic references and it has a correct structure of contents and writing style.

However, the number of figures and tables seems to be unnecessarily large, with images of low quality.

There are some minor details that need to be corrected: - Authors must indicate the meaning of the acronyms used in the manuscript (e.g., page 3 AOGCM and RCM) - A uniform way to reference figures must be used (Fig or Figure) - Figure 1 has very low quality. It would also be advisable to provide coordinates or/and additional localization map. This map is difficult to interpret. Authors should explain that it represents the political-administrative division of the country together with the 5 locations of study. - Figure 3 should indicate the average monthly temperature. - Authors should consider the possibility of reducing the number of figures and tables (e.g., figure 4 and table 1 can be removed). - Figure 7 should indicate for latitude/longitude the symbol of degrees and North and East. - In the caption for Figure 9 the reference to subfigures a and c is missing. - It is difficult to interpret graphs 8 and 9 with numbers of SWT, and then its link to table A1 (annex). I advise the authors to use abbreviations that allow to easily remember the synoptic weather types instead of numbers. - Figure 10 has errors in it. The grey backgrounds in 10a and 10b don't indicate anything, so they should be removed. Moreover, it's advisable to show the area of study with a grey background. In fig. 10c the measurement unit (m) should be indicated for the orography. - Authors should include in the text references to figures 10b, A1 and to table A2. - Figure 14 has a misleading description. It is not entirely clear what graphs represent.

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