

General comments:

In my opinion the paper provides innovative methodology to model debris flow susceptibility. Overall, the paper is good shape with concise language and descriptions. However, I found it sometimes very hard to read and understand the figures. There is a lot of information on the figures with small fonts, I suggest increasing the size of the fonts in the figures for better readability. Additionally, I wonder if some subplots could be removed in order to focus more specifically on key aspects of the figures.

Furthermore, I found the method and result section about extreme precipitation difficult to understand. Specifically, I did not understand how the computed severity relates to the Standardized Precipitation Index (SPI) of Table 1? And how is heavy precipitation (used in Fig 8) defined? Can you better explain these sections?

Specific comments:

- Table 1 is not referenced in the text.
- Sometimes spaces are missing in the text. On following lines, I found missing spaces. But please carefully check the entire manuscript for further missed or double spaces.
 - Lines: 41, 103, 182, 185, 217, 229, 456
- Line 159: I suggest writing $1.6 \times 10^4 \text{ N/m}^3$ as 16,000 N/m³
- Figure 5 misses the index f-1
- Figure 8 misses a description of subfigures b, e, h in the caption
- Line 299 state the year of the date (2024)
- The sentence of lines 333-335 misses a references
- The sentences about climate of lines 354 – 358 also need references.