

Dear revisor and editor

We thank you very much for your suggestions about our article. We appreciate your punctual attention to detail which is necessary for improving the overall quality of this work. In the following rows, we report the answers to questions and doubts highlighted in the previous revision lap.

First of all, the language is poor: the text must be checked by a proofreading tool or by a native language speaker. Several grammatical errors are present (e.g., in row 72 please use "aspects" in place of "aspect"). Moreover, in some parts of the text the authors did not use proper technical terms. As an example, NSE and RMSE are error metrics, or error statistics, not hydrological indexes (please see rows 11-22). I suggest to carefully check the text again.

thank you for addressing most of the referee's comments. I had the manuscript revised by a new referee due to the unavailability of the previous one.

After reading the report, I see that we agree on the general evaluation. The manuscript is scientifically ready, but still requires work from the presentation point of view.

As highlighted by the referee, there are several inaccuracies and grammatical errors that should be addressed before publication. For instance, in line 75, "paramount" is misused. But there are many instances in the manuscript. While we don't require the level of a writer, we must ensure a correct terminology and a clear reasoning.

This issue was highlighted by the referees since the first submission, and was repeatedly brought up in the following revisions. In order to avoid further delays and rounds of revision, I strongly advise to go carefully over the entire text in order to remove mistakes and inaccuracies.

I will revise the next submission myself, therefore I recommend minor revisions.

The text has been carefully checked with an automatic proofreader tool, correcting all the English mistakes and typos we made in the previous version. Inappropriate terms have been corrected and modified following your suggestion (e.g. hydrological indexes -> hydrological error metrics). Some parts were rephrased in order to reduce the length of the sentences and to make the message clearer.

The document does not follow the journal guidelines and has been poorly prepared. More specifically a) several fonts were used in the document.

The fonts considered in the text have been reduced to 3, following the NHESS indications: Times New Roman for the main body, Cambria Math for formulae and symbols, Arial for figures. All the figures have been redrawn to make them more compact, uniform and clear.

b) symbols are not in italics (not sure if it is a problem induced by the export in pdf format, but I see a font that it is not italics).

DONE: now symbols are in italics.

c) figures and tables are mixed, and several tables are included in the figures (please treat the tables as tables and do not include them in the figures).

d) Figure 12 contains a table overlapped with a figure that does not allow to review the content of the table (again, this problem was probably introduced when the authors exported the pdf file but, in my opinion, the authors should have paid more attention during the submission).

DONE: now the legends are more readable and tables are separated from graphs. Only in Figure n 10 we have kept a table inside since it contains the coefficient of the slope-D50 curves explained in the text (in our opinion they should be together to enhance clarity)

e) References were not properly inserted in the text. Please see row 139. In this case, please use "was evaluated through the theory proposed by Takahashi (2009)" in place of "was evaluated through the theory proposed by (Takahashi, 2009)". The same applies to rows 71-72. This sentence should be rewritten as "The slope stability or debris flow analysis is computed inside dedicated models such as Iverson (2000), Scheidl and Rickenmann (2011), Harp et al. (2006), Milledge et al. (2014), ... and many more cases."

DONE: the references have been checked and adjusted following your suggestion both in the main text and within the captions.

Minor comments

Row 62. "Several hydrological models" sounds better (and more formal) than "Lots of hydrological models". -> FIXED

Rows 73-74. The sentence "several models can be applied to a few cases" sounds strange. -> FIXED

Rows 107-108. Please check this sentence. -> REWRITTEN

Description of figure 2. Is it correct to insert "new" before "model CRHyME"? With this modification, it seems that a previous version of the model was already available, and in this paper you describe a new one, with the landslide module as a novelty. I suppose this is not your case. -> FIXED

Row 211. HydroSHEDS is a DEM, not a DTM. Please correct. ->FIXED in the whole text

Row 282. Please check this sentence. -> FIXED

Row 324. "Hydrogeological", not "hydrogeology". -> FIXED

Row 331. For Ks, please type s as subscript. -> FIXED

Row 460. Please check this sentence, sounds strange. -> FIXED

Figure 7a. Caldone is underlined in red in the legend. Please remove the underline. -> FIXED

Figure 8a. Legend and several texts are overlapped in the upper left corner. Please correct. -> FIXED

Row 871. I suppose that the reference G. et al., 2021 is wrong. The same reference is also reported in the description of figure 13. -> FIXED and modified in the bibliography

Row 962. Please use "Prealps" and not "pre-alps". -> FIXED and modified also in Figures

Rows. 1274-1275. Please rewrite. -> FIXED

All those minor comments have been fixed following your suggestions.

As a general, last comment, I suggest to keep both the old and the new figure in the track change manuscript when submitting the revised paper. Comparing different figures in different files is time consuming.

We have kept all modifications in revising mode.

Dear authors,
Kind regards,
Francesco Marra
Guest Editor