Natural Hazards and Earth System Sciences

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Discussions

Interactive comment on "Application of FLaIR model for early warning system in Chibo Pashyor, Kalimpong, India for rainfall-induced landslides" *by* Abhirup Dikshit and Neelima Satyam

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The authors appreciate the comments and suggestions for the improvement of the paper provided by anonymous referee. The detailed answers to specific comments follow below.

1. I confirm that the manuscript should be published as a technical note, and not as an original paper, because it is an application of a well-known model.

The author accept that a well-known model is applied but disagree about the manuscript to be considered as a technical paper. An accepted model (FLaIR) in this

case applied to a different region (Darjeeling Himalayas) should not be considered as a technical paper as its analysis has a significant value in scientific community. Moreover, such analysis helps in affirming the capability of model and provides a new dimension for landslide early warning system for areas lacking such system. This attempt would encourage further research for Indian Himalayan scenario which the authors believe to be very important for research community.

2. Section 5.3 is not so clear. The goal should be to demonstrate that FLaIR performance is better than ID performance, in terms of CA, MA, FA, but this aspect is not clearly discussed in the text (and it is not so evident from the related figure);

Thank you for the careful reading and constructive comment. Figure 13 represents Cumulative rainfall and landslide occurrences during monsoon period from 2010 to 2016. Regarding FLaIR performance it has been mentioned on Page 16 between lines 365-375 which estimates the values of total Missed Alarms (MA) and total Correct Alarms (CA) and eventually give the hit rate which represents the prediction probability of the model. However, for any other suggestions or queries, the authors would be very happy to answer it.

3. Authors have to describe the adopted method for estimation of FLaIR parameters. On the contrary, a reader is not able to understand why omega, beta1 and beta2 assume values equal to 0.5, 0.45 and 0.06, respectively;

Thank you for the careful reading and constructive comment. We have revised the text accordingly. The revised text has been marked in red.

4. References part has to be formatted in a good way.

Comment accepted and modified accordingly.

Please also note the supplement to this comment:
https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-295/nhess-2017-295-

AC1-supplement.pdf