

Nat. Hazards Earth Syst. Sci. Discuss., author comment AC2
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Reply on RC2

Chang Chang et al.

Author comment on "Model Comparisons for Predicting Grassland Fire Occurrence Probability in Inner Mongolia Autonomous Region, China" by Chang Chang et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2022-72-AC2>, 2022

First, thanks for your suggestion and question. We are very pleased to reply your comments, and response them respectively.

Comment 1:

Figure 4 is not clear enough, the resolution needs to be further adjusted. Other figures in this paper also have similar problems.

Response:

We are very sorry to make trouble for you. We provide the pictures in manuscript with higher resolution in the supplement, hoping they can be clear enough.

Comment 2:

In Table 4, it may be biased to only use MAE as the error evaluation criterion. In model accuracy evaluation, MAE (mean absolute error) and RMSE (root mean squared error) are both common indicators, but MAE can only reflect the average error value in a general form. RMSE is the default metric of many models and is more sensitive to outliers, it may be better to add RMSE as the index of model accuracy evaluation.

Response:

Thanks for your valuable advice, we had calculated the RMSE values of the 3 models. We will add RMSE value in the Table 4 in the revised manuscript.

Comment 3:

This study is reasonable to explain most of the mechanism of fire occurrence driving in the grassland area, but the explanation of this part is confusing: "We believed this was due to the fact that grasslands of Inner Mongolia were mainly distributed on the flat plateau lacking of steep slopes, resulting in a negative correlation between grassland fire occurrences and Slope"(Line 411-413). Can you explain it further? Or do you have more sufficient data to support this idea.

Response:

We are very sorry to make confusion for you. In our opinion, the grasslands of Inner Mongolia were mainly distributed on the flat plateau, thus the more grassland fires occurred on the flat plateau where the terrain was flat and lacks steep slopes. Therefore, we can deduce that grassland fires prefer to occur on the flat ground where there is limited slope. Then, we get the result that a negative correlation is between grassland fire occurrences and Slope.

Please also note the supplement to this comment:

<https://nhess.copernicus.org/preprints/nhess-2022-72/nhess-2022-72-AC2-supplement.zip>