We thank the reviewer for his/her thoughtful, valuable and detailed comments and suggestions that have helped us improve the paper quality. Our detailed responses (Blue) to the reviewer's questions and comments (*Italic*) are listed below.

Anonymous Referee #2

Thanks to the authors for their positive reply. I suggest to accept once the authors clarified the following questions:

We thank the reviewer for the detailed suggestions. We have gone through all the comments and revised the manuscript accordingly.

1. Thanks for providing the data and code assess to reviewers. Sorry for the confusion about open data and code request. I didn't mean the source data used for the study, but the data generated by this project (the result data). I would strongly encourage the authors and editors to have a conversation to see if open source is possible at some degree.

Follow the suggestions of the reviewer and editor, we added data related to the results at Lines 525-526: "**Data related to the results can be obtained from https://zenodo.org/record/7997467**.".

2. There may be some misunderstanding here:

"Line 210-212: Please consider including the Mann-Kendall (M-K) statistical test and Sen's slope results if applicable. This suggestion applies to the rest of the analysis.

We thank the reviewer for the comment. The Mann-Kendall (M-K) statistical test and Sen's slope method are important tools for geosciences spatial analysis, which are mainly used to identify and judge the trend changes and differences under the spatial distribution of research objects. It is not very suitable to only consider the relatively clear trend change analysis of fires at a time scale, such as shown in Fig. 1 and Fig. 4. Therefore, we have not conducted repeated analysis of this part for the time being, but thank the reviewer for the suggestion."

In the paper the authors mentioned that "the trend analysis was carried out for the climate data at the global scale using the Mann-Kendall (M-K) statistical test, with Sen's slope method" (Revised version line 170-174). I didn't suggest using the two methods but intended to ask the authors to report results if applicable. Please let me know if I misunderstood anything there.

Sorry for the confusion. We have stored the results of the M-K test and Sen's slope in the public link mentioned above.