

Response to Reviewers

We appreciate your insightful and helpful remarks. After carefully reviewing every feedback and suggestion, we made the necessary revisions to the manuscript. We reply sentence by sentence below, showing our thorough answers to each comment. Please see our answers given in bold style.

We have made an effort to address any concerns expressed while preserving the manuscript's clarity and scientific integrity. We would be pleased to respond as soon as possible to any further remarks or requests for clarification.

Regards,

Reviewer #3

In this study, the authors developed a tool for the creation of inventories, which are of great importance in earth sciences and disaster studies in case from Turkey. On the other hand, they quickly created the locations of the created inventories and made them ready for use. This topic has a very important issue in disaster mitigation and modelling like machine learning techniques, especially for countries that do not have local data and have a very small piece in global data. I have read the article several times and I can say that its structure is well constructed and well written. However, I can say that there are a few minor points. I, therefore, recommend that the article be accepted after the following minor points have been dealt with.

Response: We thank the reviewer for valuable feedback. We have divided the reviewer's comments into relevant parts to better answer the raised points.

Major Comments:

- 1) Here I would recommend that you give more emphasis to the generalization of the results of the study for use worldwide, especially in economically underdeveloped countries.

Response: We thank to comments of the reviewer and found it a reasonable point to highlight. Within the scope of this study, we first of all focused on the Türkiye case area to develop this automated approach for geohazard inventory development from the newsletters by integrating highly used, long-standing newsletters. It is because of the higher susceptibility of Türkiye to geohazards and available data sources. The generalization of the results of this study to global scale is also a valuable task for further studies by integrating large language models to eliminate the language barrier, which is a potential limitation hindering the generalization of this method. Therefore, we highlighted this point in the last sentence of the conclusion: *"Hence, further research is required to expand the spatial scale to generalize this study worldwide and across multiple languages by integrating advanced large language models. Please see the lines between 178 and 181"*

Minor Comments:

1) Figure 1 Raw News should be replaced with Unrefined News to be consistent with Table 2.

Response: Thanks for this suggestion. We made this change.

2) It would be better if you consider changing “Natural Hazard Inventory” to “Geohazard Inventory” since you use the “geohazard” in the manuscript.

Response: We agree with the reviewer and have replaced it with Geohazard Inventory.

3) The reason why NMF has been chosen might be added to the modeling section.

Response: We have added the reason to the manuscript. *Please see the lines between 193 and 195*

4) Open Street Map should be emphasized in the Geolocator section since you use the Nominatim tool.

Response: We have added the Open Street Map to the Geolocator section. *Please see the line 234.*

5) It's up to the authors but consider replacing “online gazettes” with “newspaper” since you use mostly “newspaper” to to keep your manuscript consistent.

Response: We have replaced the online gazettes with the newspaper.

6) To demonstrate how the coherence score is regarded as an uncertainty indication, consider including a supporting sentence.

Response: A supportive sentence has been added. *Please see the lines between 311 and 313.*

7) Consider changing the “research” with literature in this sentence “On the one hand, to enhance the reliability of our study, we incorporated a ground truth evaluation step, a manual verification method utilized in related research (Madruga de Brito et al., 2025; Stein et al., 2024)”

Response: Change is done.

8) An explanation might be added to Figure 3 caption to clarify why the years vary in the X-axes of the plots.

Response: The clarification of the X-axes has been made in the caption.

9) “Yangın” (fire) and “orman” (forest) are the two most commonly (3.28% and 2.59%, respectively) used terms about wildfires.” The details within the parenthesis should be added to the end of the sentence.

Response: The sentence has been updated. *“The most widely used phrases for wildfires are "yangın" (fire) and "orman" (forest), accounting for 3.28% and 2.59%, respectively.”*

10) Can you better explain with a supportive sentence how you distinguished the urban fires?

Response: The authors thank the reviewer for highlighting this point. We have explained this topic in the manuscript with an explanation of the selected keyword pairs. The bigram combinations in the selected news are the most important criteria to identify urban fires. For example, “orman yangını” which translates to wildfire, were the most important keyword pairs that we only took the news in our inventory. This procedure has been detailed in the Results and Discussion section. *Please see the lines between 257 and 265.*