Response to Referee 2 on ESSD-2024-363

First and foremost, we would like to thank Referee 2 for their encouraging comments and thorough feedback. Below I have included a point by point response. I would invite the referee to also review the edited manuscript to verify that their queries were answered in a satisfactory manner.

Major Suggestions

1. Contextualization within existing damage datasets

While the authors provide a useful comparison of classification schemes in Table 5, I encourage them to elaborate further on how their dataset compares with other similar open-access post-disaster damage datasets (e.g., in the Japanese context, the dataset compiled by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) for the 2011 Great East Japan Earthquake). Key aspects to highlight might include the attributes provided, accessibility for users, the level of detail in hazard-specific classification, and the potential for reuse in modeling or planning. A broader contextualization would help readers better appreciate the potential of this new dataset and identify synergies with existing efforts.

The 2011 dataset achieved such levels of detail following several structured surveys of the affected areas across the 6 prefectures impacted. While in principle we agree that such information would be invaluable it is the prerogative of MLIT to conduct and release this information, which, at time of writing has not been made available to us. Because the dataset is based originally on GSI polygons, we are at best limited to the information embedded in the original footprint, with regard to the requested attributes.

In terms of contextualization, I have made several changes to the introduction and added a more concrete specification of why our dataset is relevant to the field and what contribution we hope to provide.

2. Multi-hazard characterization and enrichment of attributes

Given the multi-hazard nature of the Noto Peninsula event (earthquake, tsunami, landslides, fires), it would be highly valuable to incorporate hazard-specific indicators directly within the dataset. Although links to external hazard data are provided (p. 19), embedding this information at the building level (e.g., presence of tsunami inundation, fire impact, or landslide proximity) would significantly enhance usability, especially for non-Japanese users. For instance, the mentioned 2011 MLIT dataset includes information on water depth indicators and indication for the concurrent presence of other hazards. At minimum, a discussion on the feasibility of such integration and its relevance for downstream applications would enrich the paper.

Referee 1 also expressed interest in this item. Indeed we recognize that this a critical aspect of any furhter multi-hazard analysis would greatly benefit from this information. The requested attributes have been added to the database and an updated copy (and metadata) has been uploaded to zenodo (v2.5). Consequently, table 5 has been updated to reflect the additional attributes:

Attribute	Dtype	Description
GSI_fire	Bool	Whether building intersects GSI (2024) fire-impacted polygon
GSI_slope_failure	Bool	Whether building intersects GSI (2024) slope failure polygons
GSI_tsunami	Bool	Whether building intersects GSI (2024) tsunami inundation polygons
USGS_MMI	Float	Modified Mercalli Index inherited from the USGS (2024) layer

While the above was added for each building, without a forensic survey, it is difficult to make a value judgement on the single most likely hazard that contributed to the damage, with any degree of finality. We hope this addition achives a good level of compromise.

3. Discussion improvements

The discussion section could benefit from a more detailed reflection on the limitations and strengths of the dataset with respect to different user communities (e.g., researchers, emergency managers, machine learning practitioners). It may also be worth clarifying how the dataset could evolve in the future, for instance by incorporating additional damage explicative features, higher-resolution classifications, etc.

Well noted, the discussion section has been significantly altered following feedback from both reviewers, including an acknowledgement for further developments that build upon the dataset.

Minor revisions

Some minor reordering of figures and tables based on their first appearance in the text would improve readability.

Well noted. Figures have been reordered to appear in order

In the current PDF version of the manuscript, mathematical symbols and equations do not render correctly and are therefore not visible to the reader

There seems to be an issue with the post-processed version of the manuscript on the Copernicus side. On my side of the MS records, I can confirm that symbols are rendered in the version of the manuscript that was submitted, the issue appears to be only on the Copernicus preprint version. This does not seem to be a latex issue since at this stage we were asked for a precompiled version rather than the source files.

L27-29: This sentence seems grammatically incomplete, as it lacks a main verb.

Well noted. The sentence was indeed incomplete and has been amended.

L41: A full stop should be inserted after 'building damage'.

Well noted.

To improve the logical flow of the paragraph, it may be helpful to relocate L96-98 ('We provide [...] middle classes') immediately after L91 ('[...] Table 1').

Well noted, the text was rearranged as suggested.

L94-95: this sentence is not clear, please consider rewriting.

Well noted. The sentence itself and the following sentence were restructured to be clearer.

Figure 5: Increasing the line thickness of the building polygons would likely improve visual clarity.

Well noted. Line thickness was increased.

L153: A full stop should be inserted after 'original dataset.

Well noted.

L168: missing 'of' between 'environment' and 'both'

Well noted.

I would like to express again my appreciation for the time and attention that the referee dedicated to the manuscript. I hope I was able to answer in a satisfacotry manner through this direct response to comments and in text.