

This paper introduces a prototype dashboard designed to support pathways analysis in multi-risk Disaster Risk Management (DRM). Prior to selecting visualization types, a literature review was conducted, with particular attention given to terminology. Additional details are provided in Annex A. The paper thoroughly explains the design process, methodology, and approach to selecting visual representations. Figure 1 and Table 1 help illustrate this approach, while Annex B provides further information on the chart type trials conducted in this study. The prototype dashboard was evaluated through a survey completed by over 50 participants. The survey questions are available in Annex C. Section 3 presents the survey results and assesses the performance of each visualization type. Lessons learned, key insights, and study limitations are discussed in Section 4, “Discussion.”

We would like to thank the Reviewers for their interest in our work and for carefully reading our manuscript; we greatly appreciate their insightful comments, which contribute to increasing the manuscript's robustness and improving its quality. In the following, we provide a point-by-point reply to the general and specific comments raised. Changes to the text are highlighted.

## Overall Comments

line 404 states that “this study offers a starting point to discuss and improve the toolset for policy analysis in the context of multi-risk DRM,” while line 432 transitions directly to the conclusion: “The prototype dashboard addresses a gap in DRM decision support tools by enabling multi-criteria and multi-risk analysis through interactive, user-centred design.” This reviewer believes that this point could be further expanded or discussed in greater depth.

We thank the reviewer for spotting this error. In the revised version, we clarify in the conclusion that the dashboard serves as a starting point by adjusting the sentences starting in line 432 as follows:

“This study contributes to the Decision-Making Under Deep Uncertainty community by offering empirical evidence on the effectiveness of specific visualisations in analyzing pathways. The prototype dashboard presents a first attempt at addressing the gap in DRM decision support tools regarding multi-criteria and multi-risk analysis through interactive, user-centred design. However, improving the objective and subjective fit of the dashboard by addressing survey feedback is an important next step.” (change R1-M1)

When printed, some figures—particularly those containing multiple sub-figures or screenshots—have text that appears too small and difficult to read. A revision of these figures is recommended.

We thank the reviewer for this valuable feedback. We’ve revised the figures by increasing the font size of labels, legends, and annotations. (change R1-M2)

The URL of the dashboard is provided as [www.pathways-analysis-dashboard.net](http://www.pathways-analysis-dashboard.net) (line 130). However, the URL leads to the survey version of the dashboard rather than a freely explorable version.

It would also be helpful to introduce the URL earlier in the paper or highlight it more clearly.

We thank the reviewer for this good suggestion. We updated the dashboard so that it still includes the survey environment it was used in, but now allows viewers to navigate freely between the pages without the requirement to fill in the survey. We’ve added the link at multiple locations.

- In line 3: “This study introduces a visual analytics dashboard prototype (<https://www.pathways-analysis-dashboard.net/>) designed to support pathways analysis for multi-risk Disaster Risk Management (DRM).” (change R1-M3)
- In Line 50: “In this study, our aim was to design and evaluate a visual analytics dashboard (<https://www.pathways-analysis-dashboard.net/>) tailored for analysing pathways in multi-risk settings.” (change R1-M3)
- In line 126: “When developing the interactive dashboard (<https://www.pathways-analysis-dashboard.net/>) and integrating fit-for-purpose visualisations, we focused on two components:” (change R1-M3)

## Minor comments

**Line 96:** “The bold terms in Table 1 used for the description of the analysis operations are based on Brehmer and Munzner (2013) (definitions in Table A).” However, apart from the first column/row, there do not appear to be any bold terms in Table 1. Do you mean italicized terms instead?

Thanks for spotting this. In the text, we should have referred to the italicized terms indeed. We corrected the text accordingly: “The *italicized* terms in Table \ref{tab01} used for the description of the analysis operations are based on \cite{Brehmer.2013} (definitions in Table \ref{A:step2}).” (change R1-m1)

**Line 129:** Consider adding footnotes to provide context on Dash and Plotly for readers unfamiliar with these tools.

We added footnotes for Dash and Plotly similar to the Pathways Generator:

- Plotly: <https://plotly.com/>
- Dash: <https://dash.plotly.com/> (change R1-m2)

**Line 244:** The word “Question” is capitalized for B6 but appears lowercase for B3. Consider maintaining consistency.

We decided to use the lower-case version consistently and corrected it throughout the manuscript. Overall, we checked spelling and grammar for consistency. (change R1-m3)

**Line 363:** One of the references appears to be missing.

We corrected this error. No additional reference was supposed to be added; it was a small error in the latex document.

**Line 443:** There is an extra bracket in the middle of a reference.

We updated the reference. During submission, the reference was still under review. We have corrected it. (change R1-m4)