

[General comments]

The paper overviews the history of “burning embers” comprehensively in the Introduction chapter, explains the structure of database for archiving knowledge on climate risks and communicating them with the burning-embers format in Chapter 2, exemplifies analyses in Chapter 3, and finally discuss possible contributions of the database to future risk assessments and update of the burning-embers.

I highly evaluate this paper with the following reasons in summary and hope that it is published as a reviewed article on ESSD to be read by a wide range of readers.

Timely article for the initial period of the IPCC-AR7 cycle: Just at the initial period of the IPCC-AR7 cycle, this article will be beneficial both for researchers contributing to the assessment report as a lead author of WG2 and researchers who are willing to conduct research to be assessed properly in the report. Traceability and objectivity of the burning embers assessment have been strengthened gradually for the previous 20 years. This paper will significantly contribute to the further improvement of the RFCs and burning embers approach both from theoretical and practical aspects. Things discussed in Section 4 are describing current research gaps concisely and will send useful signals to impact projection researchers who are willing to contribute to the IPCC-AR7’s risk assessment. Researchers may also use this paper for explaining the potential value of their new research proposal to funders in the coming years.

*We thank you for this positive evaluation of our manuscript.*

Potential flexibility of the proposed database structure: We are not sure how long the proposed database continues to work effectively. Key aspects or uncertainties of risk analyses may radically change in future and database for storing analyses outputs will need to be flexibly revised or extended to be continuously functional. The authors of the paper seem conscious about it and they are not selling the current design of the database as the ultimate and perfect one. I suppose the attitude will allow effective extension and improvement of the database structure in future.

*This is our wish and intention. As a rule, having data well structured while avoiding the introduction of more details and/or structural elements than needed can be expected to facilitate future changes, which will need to be discussed with researchers assessing or synthesising impacts.*

Well balanced technical documentation: This paper not only explains the technical detail of the database structure but also exemplifies how the database can be really used for storing and communicating climate risk assessments outputs in Chapter 3, that would help readers contribute to the community effort for fulfilling risk analyses.

[Specific technical suggestions]

Table 5 (P28): From the viewpoint of decimal position, “2” in some cells should be written as “2.0”.

*Thanks, this is corrected.*

4.2.1 (P39): There is no 4.2.2 to be put in parallel here. Considering the logical flow and structure of the story, it may not be needed to be separately put as 4.2.1 but connected to the previous paragraphs (as a part of 4.2).

*We agree that there was a problem, thank you. Our perception is that it is useful to have two subtitles in section 4.2 to clarify the structure, so we added a new 4.2.1 which includes the (existing) content on adaptation potential and the existing subtitle becomes 4.2.2, with a focus on the limits of adaptation.*