

Dear Prof. Christian Franzke,

Thank you for your response and for your positive feedback regarding the revised manuscript. We appreciate the thorough review process and are glad to hear that the reviewer now recommends accepting the manuscript for publication.

Regarding the clarification of the two sentences you mentioned:

Line 45: We apologize for any confusion caused by the wording. The phrase “zone of increasing risk” means that the Earth system is at a high risk of exiting the safe operating space and entering an unstable state. The exact threshold of exiting the stable state that resembles the Holocene epoch is uncertain, so we use zones of lower and higher risks based on the planetary boundary framework.

We appreciate your feedback and have revised the sentence accordingly:

“Transgression of this boundary (20%, 40% and 40% remaining forest extent for temperate, tropical and boreal, respectively), means going beyond the upper end of the zone of increasing risk to the stability of the Earth system, which can have a range of other impacts, such as altering the carbon cycle and contributing to climate change (IPCC, 2023), as well as links to the hydrological cycle and moisture recycling, biogeochemical flows and aerosol emissions, which are beyond the scope of this study.”

Line 155 we changed to:

“In the scenario names, "Lower" and "Upper" refer to the zone of increasing risk to the stability of the Earth system, with the "Lower" end representing the boundary defining the "safe operating space" and "Upper" representing the transition from risky to dangerous.”

Thank you again for your valuable feedback.

Best regards,

Markus Drücke
on behalf of the Co-Authors