Dear Dr. Sven Fuchs,

thank you for handling our manuscript "Polarization in Flood Risk Management? Sensitivity of norm perception and responsibility attribution to frequent flood experience", your valuable feedback and criticism. In the following, we will address each of your comments and state how we adjusted the manuscript accordingly.

Comment: Include regression results for RQ1 that incorporate key socio-demographic controls in the appendix. These results should help demonstrate that your preferred models remain stable and that the magnitude and significance of the coefficients are largely unaffected.

Answer: In the revised version of the manuscript, we added regression results under consideration of sociodemographic covariates to the appendix (see Table B1 and B2). Namely, age, gender, tenure, and educational background of the respondents.

As only eight people indicated to identify as diverse, we solely focused on the difference between males and females in the regression analysis, which we also added as a note to the regression tables.

For the education variables, we decided to adopt binary variables to obtain the effect of each level of education. It could also have been a way to treat education as a linear variable. However, we assume that the gaps between the different educational levels are not equal. For example, it is not clear what kind of education respondents obtained who indicated not to have any degree. The fact that a proportion of the respondents participated in a different schooling system as they were educated in the German Democratic Republic (GDR) makes it even harder to assess whether the differences between the groups vary or not. Because of this, we decided that treating education categorically is statistically the most appropriate way to consider educational background.

A huge share of respondents did either not answer at all how much income their household has (N=156) or did not want to share that piece of information (N=431), implying a substantial reduction of the whole sample size when considering income in the regression. This also leads to an unequal reduction of each experience group by more than 100 respondents. As integrating the income variable to the regression models suggests that it does not have a significant effect on responsibility attributions and norm perceptions, we belief that this systematic exclusion of respondents is not reasoned in further knowledge acquisition. Although we believe that there is also value in understanding why so many respondents did not answer or did not want to share their household income in an anonymous survey, this is beyond the scope of the current study. Because of this, we prefer to not include the income variable in the current study's appendix.

In summary, integrating gender, age, and tenure does not alter the effect of flood experience. The same applies to the educational background of the respondents. The adjusted R-square increases marginally (in absolute terms). Consequently, the models remain largely stable.

Comment: Include socio-demographic characteristics in Table A1 (correlation matrix). Key variables such as gender, age, homeownership, education/qualification, and income should be added. For multi-category variables, please use simplified binary indicators (e.g., homeowner vs. non-homeowner; university degree vs. no university degree).

Answer: We added age, gender, tenure, educational background, and income to the correlation tables (see Table A2).

Comment: If you retain the preferred models that exclude socio-demographic characteristics, please adjust the structure of the explanation provided. The rationale for excluding these controls (lines 266–271) should be introduced earlier in the section – specifically, immediately after the sentence ending in "…of FFE comparable." at line 230 – because the justification applies to all models in the manuscript, not solely to those addressing RQ1.

Answer: We replaced the rationale to lines 230-236.

In addition to these key adjustments proposed by the editor, we also considered the following comments by the two reviewers:

Reviewer 1:

Comment: Regarding the presented education levels in table 1, it would be recommended to match the German levels to their English translation/equivalent to enhance clarity for non-German readers.

Answer: We added English translations (see Table 1 in combination with footnote 1) . However, as the germen schooling systems has some particularities and schools that do not exist internationally, these translations only serve as a rough orientation.

Reviewer 2:

Comment: It was mentioned that the descriptive analyses of the effect for norm perceptions is linear, making the linear model preferred. Why is it that in Table 6, the effects of each flood event as dummies is still reported? Was a similar regression to equation (1) also performed? Then this should also be reported in section 4.3 analytical steps.

Answer: We kept reporting the dummy variables to support the statement that the relationship between frequent flood experience and norm perception follows a linear path (i.e., the dummies are, except for one, not statistically significant, but the linear coefficients are). We added the following sentence to 4.3: "For comparison reasons, we also present the outcomes when applying the regression model in (1) for norm perception. " (lines 243-244).

Comment: Furthermore, for the analysis of norm perceptions, the linear model and the dummy variable model of FFE are two different regressions, so should they have different F-statistics? The regression statistics was reported in the same columns in Table 6, making it seem as if both the linear and dummy variables were estimated simultaneously. I actually prefer for equation (2) to be modelled the same way as equation (1) for consistency with other models (equation 3-8 are all with dummy variables), and that Figure 4 is shown as if FFE is estimated as discrete dummy variables.

Answer: We understand that the previous table was misleading. Therefore, we adjusted the table and present separate columns for the regression with dummy variables and the linear model. We prefer formula (2) to be a linear model as this is suggested by the descriptive analysis and also by the outcomes of the regression (i.e., significance of the coefficients within the linear model).

Comment: It would be helpful to include a translated English version of the survey, given that NHESS has an international audience.

Answer: The key variables of the study, i.e., norm perception and flood experience, have been translated in the methods section. Consequently, the questions and measurements that are crucial for understanding and replicating the current study are understandable by an international audience.

We hope that we have now addressed all major comments sufficiently and look forward to receiving your feedback on the revised version of the manuscript.

Kind regards,

Lisa Köhler, on behalf of all co-authors