

Response to anonymous referee #1

Significant remarks

According to the results, response cost (RC) was found to have a positive effect on intention, instead of negative, opposite to the hypothesis or previous findings. How is this interpreted? From Table S1 and Table 1, the reader understands that higher RC means a higher expected cost, i.e., a positive effect on intention means that the higher the expected cost, the higher the intention. Is this correct? In 4.4.1, this should be commented on if the authors expected a negative effect, as explained in Line 125 (H2a-c).

Then, I read in L459 that H2 is confirmed and that this is explained by the means in Table S7. This statement is wrong! Actually, the expected effect of RC is not confirmed, independent of the means of the constructs. This is a significant methodological misunderstanding and should not be published like this. That is exactly why we implement SEM. The ‘means’ describe the views and perceptions of the respondents, while the SEM measures the effects of the predictor variables on the dependent variables. The effect of RC on intention was found positive, not negative. Can you explain this? Is this a mistake?

(Then I also need to ask why did you measure Cronbach’s a for RC? RC is not a psychological construct. Maybe you should keep all the items when developing RC variable.)

Response: We gratefully thanks for the precious time the reviewer spent making constructive remark. Thank you so much for pointing out this mistake in our manuscript. We went back over the initial experimental results and found that the results in the paper missed a negative sign. The co-authors failed to catch this error during the writing process, resulting in an inconsistent error.

Following your suggestion, we have used the first 4 measurement items of the response cost (RC) (except the “Move the shelter to a safe area away from flooding”), which is because intention (IN) kept only the first 4 measurement items. Meanwhile, we have modified the incorrect statement of L459 as follows:

Response efficacy and self-efficacy have a facilitating effect on residents’ preparedness intentions, while response cost acts as a disincentive. This is consistent with Parker et al. (2009) study that high response efficacy, high self-efficacy, and low response costs are positively associated with an individual’s intention to take protective action. This also suggested that when a flood control strategy is perceived by residents as having high response efficacy and self-efficacy as well as low response costs, the likelihood of the strategy being implemented will be greatly increased.

In addition, the data results of the model were changed because we modified the measurement items of RC. Fortunately, since RC is an independent independent variable, the change did not have an impact on the overall conclusions of the paper, but only resulted in a change in the data of the study results. We have likewise revised the Results and Supplement of the paper.

Minor comment

L184: Is Table A, Table S1? Please correct

Response: Thank you for your comment. The expression here is correct. In the first round of revisions, the complete questionnaire was translated and added to the supplement, Table A, in order to give the reader a clearer understanding of our survey. Table A is the questionnaire we used in our main research. Table S1 is the streamlined measurement scale and it contains more content such as constructs, retained measurement items, etc.