Natural Hazards
and Earth System
Sciences

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Discussions

Interactive comment on "A flood risk oriented dynamic protection motivation framework to explain risk reduction behaviours" *by* Philippe Weyrich et al.

Anonymous Referee #2

General comments

The paper presents a method combining two theories to understand better motivation of people to undertake protection measures against floods. The paper is well written and well analyzed and is of interest for the readers of Natural Hazard and Earth System Sciences (NHESS). The authors argue that their approach, that splits people groups, according to a classification related to the type of protection measures people are ready to undertake, could help targeting better communication about risk reduction.

I believe that the paper could be further improved by providing more details about the context (flood prevention and alert) in the study area. The authors should also dis-

cuss how the combination of the two theories (Protection Motivation Theory – PTT) and Trans-Theoretical Model (TTM) and their implementation, mentioned to be different from previous ones, proved to be relevant and the limits they identified in their approach. They should also discuss how their methodology/results could be adapted to other countries/contexts. The conclusions section should also be rewritten, as its present content belongs more to the discussion section than to the conclusion section. The specific comments listed below should also be addressed before publication.

Therefore, I suggest moderate revision of the paper before publication in NHESS.

Specific comments

1/ p.3, line 14: the authors should precise what they mean by "flood risk". I guess they are referring to the "static" risk of people being affected in their home, as opposed to dynamic flood risk, when people are exposed during their mobility.

2/ P.3, line 18: when the authors write "motivations to protect themselves", do they mean to protect their property, not their life?

3/ P.4 line 28: I do not understand the last sentence. Consequential – do you mean sequential?

4/ P.5 line 1 "In these three studies.." to which studies does "these" refer to?

5/ P.5 line 30 " of the public to undertake."

6/ P.6 lines 14-16: could the authors provide more information about the flood risk maps. Are they built to map areas at risk of floods of different return periods? How is the information about flood risk communicated to people. This could be an important element for the interpretation of the results of the study and I believe it is important to communicate this information for people from countries where flood risk information could be different. In addition, how do you explain that some people had taken risk reduction measures before the flood if the area was not declared at risk?

7/ P.6 lines 26-27: Is there any warning to people when heavy precipitation is expected in a region? How were the losses compensated if few people subscribe to a insurance policy?

8/ P.6 in the presentation of the case study, could you also indicate the types of houses that were affected by the flood: are they located in old or new parts of the town? Do the house have several floors (it seems to be the case as basement is mentioned p. 9 line 11)?

9/ P.7 lines 16-17: did some people mention other protection measures than the ones that are included in Table 1?

10/ P.7 lines 24-28: it could be easier for the reader to present the percentages in terms of increasing of decreasing level of education. Furthermore, the authors use "compulsory school" and "middle school": it is the same thing.

11/ P.8 lines 1-14: If you are able to affect the different interviewees in the three categories, it means that they are aware that there is a risk and are ready to protect themselves. Are you sure of that? Apparently not as you mention p. 9 line 14 that the majority of people are not ready to implement any protection measure.

12/ P.8 line 20: when you ask people if they consider their house to be at risk of flooding, are you referring to their perception of the risk or to objective information like maps of flood prone areas?

13/ P.8 line 31: You mention the use of regression analysis: does it mean that all the variables were transformed to quantitative values? How did you perform that for "benefits"?

14/ P.9 line 14: you mention that the majority of people has not or did not plan to perform protective measures. How did you classify these people in one of the three categories?

15/ P.11 line 2: Have you any idea of the results of the survey if it has been conducted

before the flood?

16/ P.11 line 22 "more important influence than threat"

17/ P.11 line 26-27: when you performed the survey, had people already recovered from the flood? Did some people were affected on the long term? Did they received any compensation for the damages? Which type of communication would be required so that people remain aware of the risk of flash flooding?

18/ P.12 lines 17-18: the last sentence is not clear.

19/ Discussion: could you add some elements in the discussion explaining how general/particular are the results of your case study? You should also discuss the relevance of your methodology as you mentioned that you applied the PTT-TTM models differently than others.

20/ P.12-13: what is presently in the conclusions, should appear in the discussion and the conclusions should include the main findings of the study, not possible outcome of the study.