

## ***Interactive comment on “Flood warnings in coastal areas: how do social and behavioural patterns influence alert services?” by G. Pescaroli and M. Magni***

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Received and published: 16 March 2015

We wish to thank the reviewer for the positive feedback and for his/ her commitment to improve our work. We provide the answers to each point suggested in the following lines under the label "GP and MM". In general, we agreed to the reviewer and used the comments to clear some unclear elements that were present in the original text. We hope in the near future our paper will be a useful contribution to the literature.

R) It is recommended that the reviewers reconsider the title of the paper, at the moment it is a bit misleading. The article focuses primarily on the respondents' past flood

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experiences and exposure to information (therefore awareness and perception) and how this then influences responses (behaviour) to alert services.

GP and MM) Many thanks for the comment. We recognize that the title as it is can be too broad. We reconsidered it according the specifications as: "Flood warnings in coastal area: how do experience and information influence the responses to alert services?"

R) More generally, the paper should return to and consider the use of the terms 'cultural', 'social', 'psychological', 'behavioural', 'perception', and 'awareness' and all variations, as these seem to be used interchangeably, where the reader could easily misunderstand the authors' meaning. Along these lines, the paper would benefit from definition of 'culture' in the context of risk and this paper. Or alternatively, the paper should avoid attributing differences here.

GP and MM) Thanks to the reviewer for the useful comment. We assured a more coherent use of the terms. In particular, the term "Psychological" is not included anymore in the article. It has substituted with behavioural or removed according to the single cases, as also suggested in the next comment.

R) P 642. Line 4: In regard to the use of 'psychological' in this sentence. Should this be replaced with behavioural, as used in the title and further in the abstract. GP and MM) Many thanks for comment. As said, we adopted a more strict use of the vocabulary in all the paper.

R) P 642, Line 21: It is not clear what these are referring to, disaster victims means displaced people, since number of deaths are 6 out of 10? And what is considered 'worst natural disasters'. Suggest using percents for all statistics, i.e. 60% and 40%. In 2012, they caused 53 % of disaster victims and six of the ten worst natural disasters for number of victims and four out of ten in terms of number of deaths.

GP and MM) Many thanks for the useful comment. The line is effectively not clear and

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has been reformulated as follows: "In 2012, they caused 53 per cent of disaster victims, intended as the sum of deaths and total affected people, and represented six out of the ten worst events in the same field. For example, the flood that struck China in June 2012 caused on its own 17.4 million victims (Guha-Sapir et al. 2013)". Please note that we cannot use "percent" six out of ten because it is not a statistic but a ranking, but this should be clearer now.

R) P 645. Line 5: It is not clear why the years between 2000 and 2013 were selected for review. The early phases of our research involved a screening of European publications on flood warnings released between 2000 and 2013.

GP and MM) Many thanks for the comment. The Sentence made clearer and "2000" has been cut off.

R) P 652. Line 11. This sentence should be made clearer. It is the perception of the interviewees regarding the effectiveness of the barriers that is influenced by local flood history – it is not the effectiveness alone. Structural protection barriers were generally perceived to be insufficiently effective, and this is likely to be influenced by local flood history. The sentence made clearer.

GP and MM) Thanks to the reviewer for the suggestion. The sentence has been changed in: "Structural protection barriers were generally evaluated to be insufficiently effective, and this is likely to be influenced by the local flood history as individually perceived by the interviewees".

R) P 654. Line 7-9. Is there a reason or explanation for why shopkeepers in the area of Porto Canale were more concerned with training? Furthermore, the need for training was strongly perceived by shopkeepers, especially in the area near the "Porto Canale". GP and MM) Thanks for highlighting this point. We added the following sentence in line 9: "Here the effects of floods are most frequent, and training could be perceived as a way to reduce damages".

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R) P 658. Line 10. The paper states that it will avoid a discussion on risk perception. However, in some instances perception is included. It is suggested that the author review this element in the paper, and either reduce the statement, or make it clearer as to what is meant, for example distinguishing between perception and awareness.

GP and MM) Many thanks for the comment. We did not state that risk perception will be completely avoided but we state that we will avoid a discussion of our results focussed on risk perception, as this could be the subject of a paper on its own. In other words, we are simply recognizing the potential impact of risk perception as main driver, but we prefer to maintain it as a complementary element. Those lines were introduced during the earlier review of the paper to answer another comment. However, we recognize that the lines can be misinterpreted and we reformulated them as: "The main focus will be on how experience and information can be related with alert services, as we will consider as main aspects that can influence the effectiveness of warning systems. Please note that risk perception will be included in the discussion, but further research about its relations with alert services could represent an open challenge for the future".

R) P 659. Line 22. Remove 'be' so that it reads 'but can also be ignored'. '(. . .) daytime and at night, but can be also easily be ignored, not heard or misinterpreted.'

GP and MM) Thanks for proofreading. The correction has been done.

R) P 659. C58 Mod Line28. The use of the term 'cultural' should be reviewed in this sentence. While Romania certainly is a different culture than Italy, it is questionable whether this is the most influencing factor as the sentence currently suggests. Especially as the paper focuses more on experience/awareness, as opposed to the broader idea of 'culture'.

GP and MM) Many thanks for the point. We recognize that the term "culture" in this line generated a misunderstanding and we removed it.

R) Line 19. Should read '42 % would prepare'. '42 % would prepared to evacuate and

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10 % would do nothing or would' P 661.

GP and MM) Thanks to the reviewer for pinpointing this typo. We corrected the sentence.

R)Line 2 to 4. It is unclear why there is a discussion on 'risk perception' when it is stated on P 658. Line 10 that the paper will avoid a discussion of risk perception. Perhaps it should be changed to risk 'awareness'.

GP and MM) Many thanks for the comment. This problem should be solved with the correction included in p. 658

R.)In other words, P 662. Line 20 to 22. Suggest that the authors review this statement. Here again, is it not awareness that affects patterns. 'Our case study shows in detail how the different behavioural and social patterns provide an essential background that enables us to understand the critical interactions that affect warning services.'

GP and MM) Thanks to the reviewer for the useful comment. We modified the sentence according to the title.

R.)P 663 Line 1. Should be considered. 'As structural measures were not consider effective, lack of information seems to'

GP and MM) Many thanks for highlighting this. We removed "Structural measures were not consider effective" as it could lead to a misinterpretation of the key sentence of the paper.

R.) P 663. Line 19. Should be an SMS 'Warning services, such as SMS one, may be perceived as very useful even' P 663. Line 27. This may be true, but there is no evidence coming from the paper. 'Again, this problem has its roots in deficiencies in the national culture of risk management.' GP and MM) Thanks to the reviewer for this suggestion. We deleted the line as effectively this point had wider implication that could require a different focus in the work.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 641, 2015.

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