

## ***Interactive comment on “Participatory flood vulnerability assessment: a multi-criteria approach” by Mariana Madruga de Brito et al.***

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Dear authors Generally, this research is very interesting for me, you used MCDM approach for flood vulnerability assessment. However, AHP has a complexity which difficult to be understood especially when deciding the criteria and weight of the ranking. This problem was explained in this manuscript. General comment: When I read this research from the beginning (page one) until part 3.8. validation (page 9), I could not imagine what the criteria or parameters for MCDM that used in this research. Difficult to understand the MCDM if we don't know the criteria. In this research, we could find the criteria in the result. Hence, I thought, it will be better and easy to be understood if the authors show and explain the criteria in the method. In some part of the research, the authors referred de Brito (2017). However, I could not find it in the references.

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Detail comments: Some determinations are confusing for example; Page 1 line 7; what do you mean vulnerability drivers, please give some explanation or example.

Page 4 figure 1 What do you mean with flood return period? According to Fig.1. dark blue color shows return period 100 years. Does it mean in 100 years, a flood occurs 1 time, and for the soft blue color means in 2 years, flood occur 1 time? If so, 2 years flood return means more vulnerable compared to 100 years. Hence, the color for 2 years should be darker comparing to 100-years flood return.

Page 5 Figure 2 Why is the number of experts different for each criterion?

Page 6 line 10 What are the 11 criteria? Please give the explanation

Page 6 line 18 and 20 How do you transform the data base into 20 m raster resolution? Why do you make it into 20 meters? why don't you select 10 meters or 30meter? What do you mean with “selected criteria” in this manuscript?

Page 9 line 11 What is the opinion of the 22 experts?

Page 9 line 19 Why do you select 4-point Likert scale?

Page Figure 9 What do you mean with 22 vulnerability scenarios?

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