

## ***Interactive comment on “Reconstituting past flood events: the contribution of citizen science” by Bocar Sy et al.***

### **Anonymous Referee #1**

Received and published: 7 June 2019

#### General comments

This is an interesting paper on the use of citizen science to create flood maps (extent, depth) using the memory of leaders and people in the community in an area of Dakar, Senegal. The extent is compared with remote sensing and the idea is innovative but lacking in details in places.

#### Specific comments

Line 45 – what is meant by citizens from the community? Sometimes citizens are located around the world so I think this is too narrow a definition of citizen science

Line 48 – “. . .social media, mobile, smartphones. . .” – what do you mean by mobile here? Do you mean mobile devices? Mobile phones? You mean phones that are not

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smartphones?

Line 49 – Open Street Map should be OpenStreetMap

Line 49 – the references of Goodchild 2007 and Silvertown 2009 seem strange for OpenStreetMap, Google Earth and Geo-Wiki – there are much better references for these three applications. If you reference Goodchild (2007), then you should really mention Volunteered Geographic Information. You need better alignment between your references and your text.

Line 50-54 – the literature review on flooding/hydrology and citizen science is a bit brief. There is quite a bit of work in this area and should be described in more detail.

Line 54 – this paper used memory and citizen science in the context of wildlife conservation so it is worth citing as one example: <https://onlinelibrary.wiley.com/doi/full/10.1111/tgis.12300> Section 2 – I am missing details about the type of flooding that occurs in this area, i.e. pluvial, fluvial, surface, etc.?

Line 78 – I do not see how Figure 2 shows ‘novel methods in citizen science’ – why are these novel in the context of citizen science? Based on what evidence? Perhaps it is better to say that you are combining different participatory approaches together. Otherwise I think the figure is good for showing the approach taken.

Line 96 – what does “In some cases it was possible to register the narrative” mean? Record it digitally?

Line 102 – what does “fixing pins” mean – putting pins on the map? What does “handled GPS” mean?

Line 106 – “. . .were put into a mental condition” does not make sense in English – you probably mean put into a relaxed state or something else?

Line 119 – what does “using scale mapping” mean?

Line 127 (and in other places with similar use of confronting) – “confronting the story” – this needs to be rewritten to something clearer in English as we would not express it this way

Lines 129-130 – this appears to be an assumption. Do you have a reference or evidence to back this up?

Line 154 – you do not need to mention Bland and Altman the second time or the third time on line 156.

Section 3.1.3 – there are few details on the remote sensing, e.g. where did you obtain the training data? Where did you obtain the validation data? What was the accuracy? Perhaps add this to your supplementary material.

Line 184 – use of the word “aggravating” – replace this with another, more appropriate English word such as worsen, exacerbate, etc. or you can remove it, e.g. “Regarding the processes that worsen the flood...”

Figure 5 – can you provide R-squared values or correlations with each image?

Line 229 – what is a “graphic semiology”?

Line 250 – in-deep should be in-depth

Line 269 – what does “To ensure people implication in our project...” mean?

Figure 6 – You need to label a), b) and c) in your figure caption.

Technical corrections

There are numerous English errors in the text as well as awkward phrasing and incorrect use of verb tenses. I suggest that you ask a native English speaker to edit your paper or you use a professional editing service. This will also help to improve the readability of the paper. Here is an example of awkward phrasing:

Line 97: “...the narrative allowed identifying which neighbourhoods were flooded”

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would be rewritten as “. . .the narrative allowed the neighbourhoods that were flooded to be identified” OR “. . .the narrative allowed for identification of which neighbourhoods were flooded.

Here is an example of an incorrect verb tense:

Line 180: “identify rainfall” should be “identified rainfall”

Here is an example of some phrasing that needs rewriting:

Line 171: “results from both images treatment were compared” – not entirely sure what you mean

Line 183: “removal of the wall painting” – I think you mean removal of the wall paint or removal of the paint on the walls

Line 275 (and other places): Do not use contractions in scientific writing, e.g., don't

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2019-188>, 2019.

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