Anonymous Referee #2
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I found this manuscript well written and structured, and this easily allow the understanding of the complex multidata analyses presented. The focus is on an interesting topic and the analysis of people health vulnerability is new in the framework of countries, as Bangladesh, where floods impact on very large amount of people. I have no major change to suggest because the manuscript can be easily understood from the beginning to the end. I suggest the following minor modifications:

> We thank the anonymous reviewer for the positive comments and further critical comments that we believe have enhanced the overall quality of the manuscript.

1) The authors could include in the introduction some references to the analysis of flood mortality in other countries, and to highlight the difference that the indicators used can assume according to the socio-economic framework of the flooded area.

> Thanks for your comment. We added the following paragraph as the first paragraph of the introduction.

> *Flood-induced mortality, one of the most telling statistics of flood impacts, has been studied extensively in conjunction with environmental and socio-economic factors. For example, Kundzewicz and Takeuchi (1999) demonstrate the relationship between economic losses per death and overall national wealth for the most severe flood events of the 1990s. Kundzewicz and Kundzewicz (2005) also emphasize that flood-related mortality is indirectly related to wealth level and instead is more directly related to social and health factors and perceptions of flood risk, based on information from flood victims in Poland in 1997. According to Jonkman and Vrijling (2008), the primary causes of flood-related mortality are a lack of warning, inability to reach shelter, building collapse, flood level and velocity, and impacts on children and elderly. Doocy at al. (2013) review global flood fatality data during 1980-2009 and related articles, concluding that socio-demographic factors such as population growth, urbanization, land use change, disaster warning systems, and response capacity all contribute to flood mortality.*

2) It must be stressed that the "validation" is based on a single case of flood, in order to offer to the reader the clear perception of the weight of the results.

> We agree with the reviewer. To emphasize the need for further validation of the proposed approach, Lines 356-359 have been changed to:

> *We note that the proposed framework has been validated with a single observed flood event, and additional validation using more flood events is warranted. Furthermore, the validation process could be improved using up-to-date data, indicators, and flood records across the country to enhance management practices. Specifically, more*

detailed post-disaster impact records at the local level (e.g., Upazila scale) may improve future vulnerability and risk assessments and impacts prediction.

3) Maps need some geographical grid, otherwise they are not easy to understand for people who do not know the regions.

We have added a location map indicating flood forecast and inundation areas with geographical grids. We have also better presented key regions in the manuscript (e.g., Dhaka, Chittagong, and Haor basin). Please see Figure 1 below. We have opted to not modify all maps, as we believe Figure 1 will help readers become familiar with Bangladesh's geographical position and extents.

4) Line 100: maybe "coarse" instead of course?

Thanks for correcting this. We have changed it to "coarse."

5) Figure 2: I suggest to modify the names of indicators, to be more clear (i.e.: Pfemale or P-FEMALE or something similar)

Thanks for your comment. We have changed the names of the indicators to make them more intuitive. Please see Table 1 below. Also, the names of the indicators in the manuscript and Figure 3 have been properly changed as well.

Table 1. Changes in the names of the indicators

Before	After
PAGEWEAK	P_WEAK-AGE
PFEMALE	P_FEMALE
PDISABL	P_DISABLE
PRURAL	P_RURAL
PWEAKBUILT	P_WEAK-HOUSE
PNOWATER	P_WATER-SUPPLY
PNOSANITARY	P_SANITATION
PNOELEC	P_ELECTRICITY
PLITERACY	P_LITERACY
PETHNIC	P_ETHNIC
PRENT	P_RENT
PNOPRIEDU	P_EDUCATION
PPOOR	P_POOR
PAGRICULT	P_AGRICULTURE
PNOEMPLOY	P_EMPLOYMENT
PDISEASE	P_DISEASE
PDIARRHEA	P_DIARRHEA
PDISEASEDWATER	P_WATER-DISEASE
NHOSPITALBED	N_HOSPITAL-BED
NPHYSICIAN	N_PHYSICIAN
PAFFTHOUS	P_HOUSE-AFFECTED
PNOSCHOOL	P_CHILD-SCHOOL
PNOPREPARED	P_PREPAREDNESS
PPERCEPTION	P_PERCEPTION
PSUPPORT	P_SUPPORT
DAMAGERATIO	R_DAMAGE-INCOME

References

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Doocy, S., Daniels, A., Murray, S., and Kirsch, T. D.: The human impact of floods: a historical review of events 1980-2009 and systematic literature review, PLoS currents, 5, 2013.
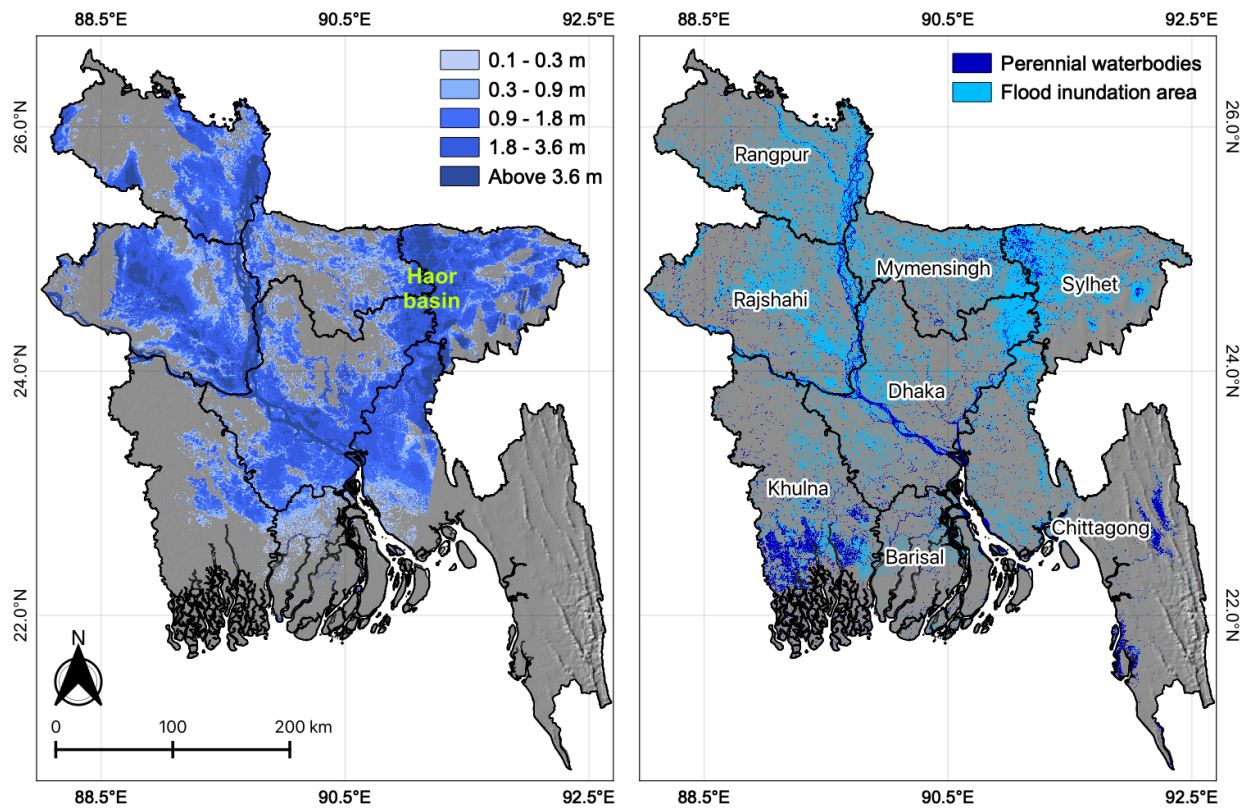
Figure 1. (left) FFWC's flood forecast issued on Aug-16, 2017 and (right) Sentinel-1 based satellite flood inundation for the August 2017 flood event. The borderline represents the boundary of divisions.
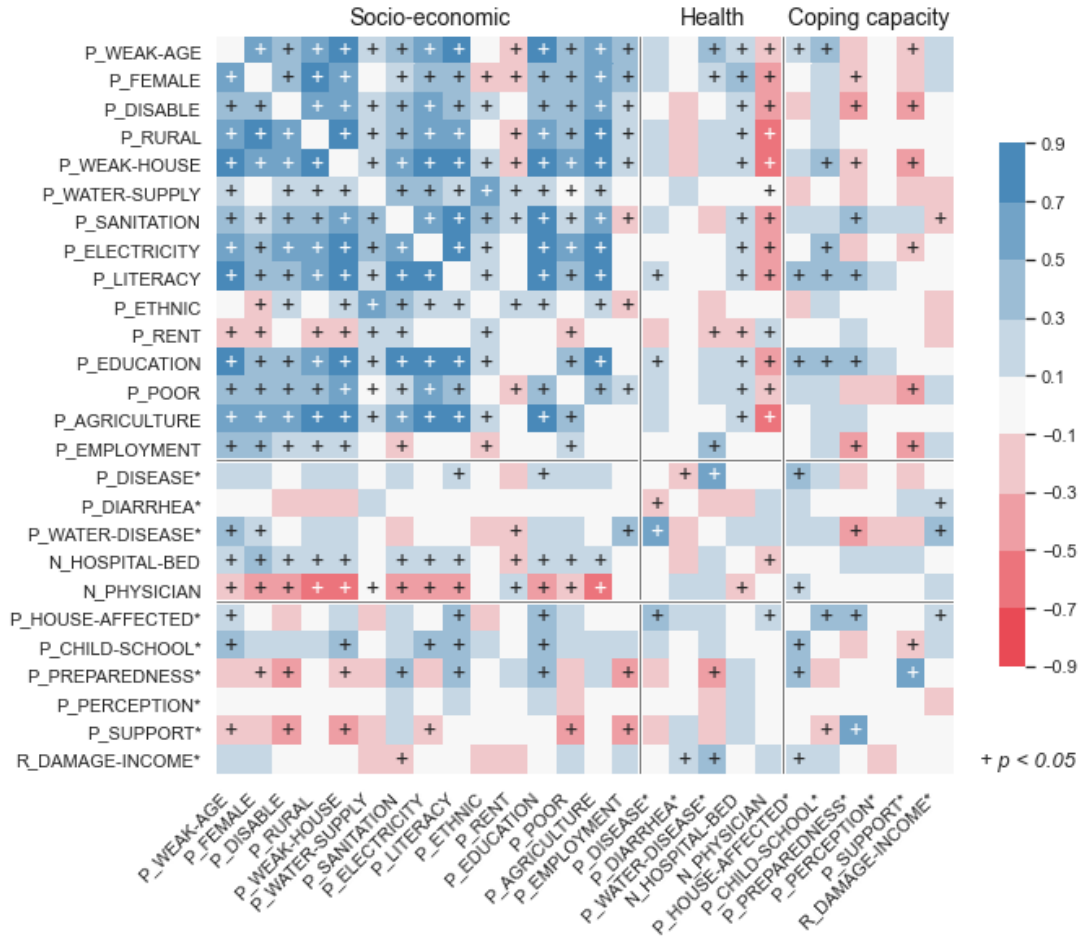
Figure 3.Cross-correlation matrix of the selected indicators calculated at Upazila-level unless followed by an asterisk (district-level.) Theplus sign indicates a statistically significant correlation (p <0.05).