Title: Increasing flood risk in the Indian Ganga Basin: A perspective from the night-time lights

This study assessed the flood hazard, exposure, vulnerability and risk level of Indian Ganga Basin based on a multi-criteria risk assessment methodology (hierarchical analysis) using selected hazard, exposure and vulnerability assessment indicators. The novelty of the study lies in using night-time lights as a proxy for exposure within the basin, unlike the conventional population data.

I have a few comments/questions:

(1) The abstract section of the manuscript is illogical and lengthy. For example, the innovation of the paper is highlighted twice in the beginning and in the end of the abstract. It is recommended that the authors rewrite the abstract section according to research background, methods and content, results, validation, innovativeness and application value.

(2) The confusing use of professional terms such as "flood risk" and "flood susceptibility" means that the professional level of research manuscripts needs to be improved.

(3) I disagree with the discussion of the superiority of the methodology of this study in lines 652-655 of the manuscript. Accurate flood risk assessment results are obtained by driving a hydrological-hydraulic model to capture flood hazard, and then combining exposure, vulnerability, and level of prevention and mitigation. The use of multi-criteria methods to assess flood risk levels in this study may be limited by data and technical expertise. Hydrological and hydrodynamic models can simulate the depth and range of flooding and obtain more accurate risk assessment results.

Lines 652-655: "Our flood risk map of the Ganges basin was developed using an integrated hydrogeological approach and AHP methodology, which is superior to traditional hydrological and hydraulic modelling as it combines physical (geomorphological) criteria with hydrometeorological data. This emphasises a process-based understanding that overcomes the need for intensive hydrological data required for flood hydraulic models (Mishra and Sinha, 2020)".

(4) The vulnerability assessment in the study used existing vulnerability products, the reliability of which was not verified. In addition, which indicators were considered in the vulnerability assessment were not clearly given.

(5) The novelty of the work lies in using night-time lights as a proxy for exposure within the basin, unlike the conventional population data. However, in the flood risk assessment framework based on multi-criteria methods, using night light data instead of population and economic data as an innovation in flood risk assessment seems to be somewhat insufficient for the entire study, but it is acceptable.
In flood risk assessment, research innovation would be more prominent if hazard assessment used flood inundation information obtained based on remote sensing data while taking into account changes in flood vulnerability.

(6) The dynamic trends of flood risk levels should be placed in the results section of the study rather than the discussion section, which should focus on the superiority of using nighttime light data for flood exposure and risk assessment.