

Review of “Flood Impacts on Emergency Responders Operating at a City-Scale” by Green et al.

General comment:

The paper by Green et al. presents a GIS based methodology to assess Ambulance and Fire & Rescue responses during 1-20, 1-100 and 1-1,000-year surface and fluvial flooding events. The main results show the decrease in the emergency service accessibility proportional to the extent of the flood event, and the authors argue that these results can guide strategic planning for decision makers on the response to flood events. The paper is very well written, and explains clearly the methodology used, which is based on existing data and models. My main comment is related to use the word “transport modelling” in this work, however, the authors have clearly recognised the limitations of their approach in the Conclusions section. As such I find that the manuscript would be suitable for publication if the authors would address two minor comments discussed in more detail below.

Specific comments:

In the Introduction, the authors say that the paper describes “a novel approach to evaluate and forecast the impacts of surface water and fluvial flood events.... on emergency responders operating at the city scale...”. I would like to see more detailed explanation what exactly is the novelty in the presented methodology. In addition, can the authors please explain how the approach could be used in the forecasting mode.

The main purpose of this work is to provide the information to inform the decision making on planning the transport routes during flooding events. The literature review section would benefit from a more detailed overview of the current approaches to decision making during flood events, and where this work fits within existing frameworks.