



Interactive
Comment

Interactive comment on “Application of flood risk modelling in a web-based geospatial decision support tool for coastal adaptation to climate change” by P. J. Knight et al.

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This paper is very timely in light of the pressing need for relatively simple and inexpensive decision support tools (DST's) to inform local governments, the private sector, and the general public about the increasing risk to coastal communities from storm surge due to rising sea levels. Indeed, recent observations of glaciers in West Antarctica suggest that the rates of glacial melting, and by inference the rates of increase in global sea levels, are even greater than previously thought (<http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo2388.html>).

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The authors describe a web-based DST developed with open-source software that allows users to compare the levels of inundation and the resulting losses to infrastructure for different scenarios by varying input data. Case studies are described for two coastal areas in NW and SW England. With its low cost, its use of public data, and its relative simplicity of operation, the DST will be of considerable use to both planners and emergency responders in smaller coastal towns at risk from catastrophic flooding.

One of the biggest challenges in deploying DST's such as this is finding the resources needed for website maintenance, local training, periodic data updates, and software enhancements. I would like to ask the authors if they gained any insights as to how these needs might be met in the two areas where the case studies were conducted.

Editorial comments:

1) Figure 2 is too small to see the components of the DST's user interface or the scenarios referred to in the text. One alternative would be to use a single larger screenshot to display the DST's control panel, then to draft a second composite figure (or figures) to illustrate different scenarios. 2) More explanation is needed for the economic analyses performed at the Fleetwood site, e.g., sources of cost data, scale of analysis. Also, more detail on the cost analysis done according to land-use type would be helpful. 3) The first paragraph in section 4.1 (lines 10-26) belong in Section 2. A larger figure showing the user interface would go here.

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