

Interactive comment on “Considering hazard estimation uncertain in urban resilience strategies” by B. Barroca et al.

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First and foremost, we would like to thank all the authors who have written five commentaries on the article.

As pointed out in several commentaries, the work is multidisciplinary as it has been carried out by researchers on statistics of extremes, on urban development, on urban engineering and on hydrology. This work is also the consequence of an observation. This observation concerns studies on urban resilience in the face of flooding, which are almost exclusively based: - Either on flood levels (considered as an absolute, which is the case for a large number of regulations) and which are therefore concentrated on the town's resilience in relation to flood levels. - Or on being totally independent of the

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hydrological part and concentrated on functions, uses, life styles, etc.

Our article provides an extra approach inasmuch as it clearly reveals the limits found in modelling. This does not mean ignoring this important level of uncertainty (by arbitrarily setting one or more levels of flooding) or abandoning the use of hydrologic models. On the contrary, by revealing the high levels of uncertainty that appear when different statistical models are applied, the work helps in decision-making when orientating resilience strategies. A complete study of the “hazard” part is being made on Besançon where elements of orientation for a resilience strategy (with regard to the study that has been made) are proposed.

An anonymous commentary points out that the abstract quality is not good and that it does not appear to have understood all the interest that exists behind the article. This is regrettable and, in order to solve the problem, we are going to review the abstract entirely, propose clarifications on the purpose of the article in the introduction and add a number of minor corrections, especially concerning use of the term “territory”.

However, the novel character of the article was recognized in four commentaries, especially concerning "Section 2.1.3, which highlights some similarities between block maxima and peaks over threshold approaches" (commentary by S. Rao). The work's novel characteristics are also underlined by commentaries made by M. Gonzva, M. Balsells and V Becue, who, all three, insist on the interest of this innovation in the field of adapting resilience strategies.

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