

Interactive comment on “Interdependence and dynamics of essential services in an extensive risk context: a case study in Montserrat, West Indies” by V. L. Sword-Daniels et al.

Anonymous Referee #1

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The manuscript is of scientific significance and has likewise a sound empirical basis, a promising research approach, and some interesting new ideas. It is properly organized and well structured. But nonetheless some improvements could enhance the paper.

(1) Due to the long duration of the hazard presented, there are some specific limitations of the case study that need to be reflected upon. The volcanic activity in itself is not a totally surprising event, but rather it is a "long-duration volcanic hazard context." The bespoken recurring heightened volcanic activity is highly probable and even anticipated in routine periods where there is an absence of volcanic activity. Therefore "hidden" volcanic relationships might be already implemented in the non-volcanic

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general relationships.

(2) The focus on relationships between sectors indiscriminate of their relevance and performance, is a weakness and ought to be considered in more detail. The relationships are not only minor interconnections, rather some of them represent "essential services" for the relevant communities. If one does not focus on differentiating the respective relevance of essential services, those being really essential at all times, such as healthcare, are treated equally as relationships which could be suspended in volcanic periods without major harm (education). Which relationships are essential and which can be suspended? Even if said relationships persist in times of volcanic activity their performance might be decreased. Hence how emerging relationships might have a considerable reduced performance and so on.

(3) Some changes in categories and terms ought to be considered so as to improve the clarity. Analyzing social relationships (as defined in the manuscript: "Influence that one service may have on societal factors such as public opinion, public confidence, or cultural issues that cause an effect in another infrastructure") with a sole focus on organizations and infrastructures without taking the general public into account runs the risk of missing essential relationships.

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