

Interactive comment on “Are interactions important in estimating flood damage to economic entities?” by David Nortes Martínez et al.

Anonymous Referee #1

Received and published: 21 December 2020

The manuscript addresses the important issue of flood indirect damage to complex productive system (CPS) at local level. The authors applied an agent-based model as a virtual laboratory for the ex-ante estimation of impacts over cooperative winemaking system (CWS). They investigated the interactions within and between the elements (plots, farm, cooperative) composing the CPS to quantify the links between them depending of the season. Despite the amount of work done and the data collected, the manuscript does not convey the substance of the work. It is too much fragmented in subsections that it is almost impossible to read and understand by readers who are not expert of their calculation model. As it currently appears, the manuscript is more like a technical report than a scientific manuscript. The description of the model and the workflow are too synthetic, they need to be enlarged and supported by a workflow

C1

diagram that could help the reader across the different simulations. In particular section 3, 4 and 5 should be completely restructured and better described. The figures should be better described in the text and it would be better to add the labels of the x-y axes and the unit of measurement, also specify which axis the various curves refer to. Please give an extended explanation of what the farm coping tactics are since they are important in the model results. The reviewer recommends the author improving the discussion, explaining their results in the light of past flooding events and making practical cases of the different interactions occurred between and within the damaged elements to better understand how the different damage (to buildings or to plots) had negatively impacted the CWS. It would also be important to understand how this ex ante analysis can help the economy of the wine sector.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2020-386>, 2020.

C2