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Comment on nhess-2021-134

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Community comment on "Chronicle of a forecast flood: exposure and vulnerability on the southeast coast of Spain" by Rubén Giménez-García et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-134-CC2>, 2021

The authors presented an assessment of exposure to flood hazard through a case study located in two municipalities in the Region of Murcia, Spain. Although this assessment seems well executed, according to my point of view, the work presents a series of weaknesses that should be taken into account before considering the publication:

- I think the authors do not correctly distinguish the terms exposure and vulnerability. Throughout the text these terms are treated equally despite the fact that these terms are being agreed upon by the scientific community. There is no reference to this debate at work. In relation to the above, consult:
 - Papathoma-Köhle, M., Thaler, T., & Fuchs, S. (2021). An institutional approach to vulnerability: evidence from natural hazard management in Europe. *Environmental Research Letters*, 16(4), 044056.
 - Cho, S. Y., & Chang, H. (2017). Recent research approaches to urban flood vulnerability, 2006–2016. *Natural Hazards*, 88(1), 633-649.
- In my opinion, the authors do not detail the drawbacks of working with the cadastre for its use in assessing exposure to flood hazards. Nor do they consider the depth of floodplains. It is not the same for a cadastral parcel to be affected by a 1 cm deep flood than 1 m deep despite the fact that the return period in both cases is 500 years.
- The applied methodology is neither novel nor original. The authors ignore and do not include previous references to works that use the same databases (cadastre/land registry and floodplains) and with which evaluations are carried out for study areas such as Holland or Spain:

Netherlands:

- Koks, E. E., Jongman, B., Husby, T. G., & Botzen, W. J. (2015). Combining hazard, exposure and social vulnerability to provide lessons for flood risk management. *Environmental science & policy*, 47, 42-52.

Spain:

- López-Martínez, F., Pérez-Morales, A., & Illán-Fernández, E. J. (2020). Are local administrations really in charge of flood risk management governance? The Spanish

Mediterranean coastline and its institutional vulnerability issues. *Journal of Environmental Planning and Management*, 63(2), 257-274.

- The case study on which they apply the methodology has been previously evaluated with the same approach and methodology that the authors present in at least four previous Works that have not been referenced:

- Garcia-Ayllon, S., & Radke, J. (2021). Geostatistical Analysis of the Spatial Correlation between Territorial Anthropization and Flooding Vulnerability: Application to the DANA Phenomenon in a Mediterranean Watershed. *Applied Sciences*, 11(2), 809.

- In my opinion, the conclusions are not the product of the stated results. Urban planning is discussed as responsible for increasing the exposure without having considered that spatial information from the two municipalities analyzed or from the regional or state legislation that organizes it.