



Interactive comment on “Pyroclastic flow mitigation strategies: a new perspective for the red area” by Mauro Iacuniello et al.

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“The objective of this research paper should be clearly exposed at the beginning.”

Through the proposed mitigation strategy, the task is to establish a resilient sector within the red areas where buildings can withstand pressure and temperature to achieve both economic benefits and decrease the time of reconstruction.

“A section on the research method should also be included. The method must be detailed and argued” The document sets out the methodology for both the exposure assessment and for the vulnerability assessment.

The bibliography refers mainly to the authors’ publications. It is necessary to com-

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plete it with various references

Unfortunately, there is not an extensive bibliography about the volcanic risk and mitigation strategy. Nevertheless, some new pieces of research have been referred to; such as Todesco, M., Neri, A., Ongaro, T. E., Papale, P., Macedonio, G., Santacroce, R., and Longo, A. (2002). Pyroclastic flows hazard assessment at Vesuvius (Italy) by using numerical modeling. i. large-scale dynamics. *Bulletin of Volcanology*, 64(3):155–177. Walker, G. P. (1973). Explosive volcanic eruptions—a new classification scheme. *Geologische Rundschau*, 62(2):431–446. Newhall, C., Self, S., and Robock, A. (2018). Anticipating future Volcanic Explosivity Index (VEI) 7 eruptions and their chilling impacts. *Geosphere*, 14(2):572–603. Newhall, C. G. and Self, S. (1982). The volcanic explosivity index (vei) an estimate of explosive magnitude for historical volcanism. *Journal of Geophysical Research: Oceans*, 87(C2):1231–1238. Ongaro, T. E., Komorowski, J.-C., Legendre, Y., and Neri, A. (2020). Modelling pyroclastic density currents from a subplinian eruption at la soufrière de Guadeloupe (west indies, france). *Bulletin of Volcanology*, 82(12):1–26.

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