

## ***Interactive comment on “Reducing volcanic risk on Fogo Volcano, Cape-Verde, through a participatory approach: which out coming?” by P. Texier-Teixeira et al.***

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Dears authors,

I read carefully your manuscript and I found some points that deserve some comments and suggestions. Here I present them, and I hope these comments and suggestions may help you to improve the quality of your manuscript.

First a general comment: after the title of the paper, the reader hopes to find a general analysis of the volcanic risk in Fogo. But, you analysis is limited to Chã das Caldeiras. However in the figure 2 of the paper it is shown that other parts of the island, and mainly

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a set of several villages in steep East flank of the islands are also exposed to the lava flows hazards, and others volcanic hazards as well. In these villages due to the slope of the flank, the lava flows may reach a speed as high as 60km/h (as in 1951 eruption), while in Chã das Caldeiras it was only 700 m/day (as in 1995 eruption). Thus, why not considering also these villages, where the lava flows may have much more destroying effects than in Chã das Caldeiras? If it doesn't fit into your data, please modify the title of the paper.

1- Pag. 6565, line 15: The distance between Africa and Cape Verde seems too high; actually this distance is not greater than 550 km. 2- Pag. 6565, line 21, why not citing the paper by Foeken et al. (Quaternary Geochron, 2009) instead of the Fall Meeting poster? 3- Pag. 6565, line 27: the term “continuous eruptions” was used by the sailors passing between Fogo and Santiago in between the end of the 17th and the middle of the 19th century, to describe the phenomena that they were observing, meaning that they were observing lavas and pyroclastic fall continuously at the precise moment of observation and not for a long term observation (not more than one month). Both Ribeiro (1960) and Day et al. (1999) argue against the idea of a continuous eruption. Probably here it would be more appropriate to use “frequent and prolonged eruptions”. Actually the term “continuous eruption” is contradicting what is shown in the figure 2 of your paper. 4- Page 6566, line 7: It would be appropriated to stress out that all the (small) vents (that were active only in the few days after the beginning of the eruption) where over two fissures (intersecting them self), which one about 1 km long (cf figure 2 of your paper). After about the first week after the beginning of the eruption, only one vent was active (cf. Torres et al., 1997). 5- Page 6566, line 11: actually the rainy season in Cape Verde is between July and November (cf Ribeiro 1960). Presently, the rainy season tends to be between September and November. 6- Page 6566, line 23: After the data of the National Institute for Statistics (Cape Verde) the population of Chã das Caldeira is 697 inhabitants (Census of 2010). In 2000 the population was less than 600 inhabitants. 7- Page 6568, line10 (and p. 6571 line 5): so far there is no geophysical evidence supporting the hypothesis of a new flank collapse. Both GPS

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measurements performed until 2000 (Fonseca et al., JVGR, 2003) and seismic data (Faria and Fonseca, NHESS, 2013) show that presently the collapse scar infilling is stable. So, it could not be appropriate to refer to a phenomenon that may happen (or not, or even the very low probability of its occurrence) in a very distant future, since this may not be an issue for the present generations. 8- Page 6569, line 3: typo São Filipe instead of Saõ Felipe. 9- Page 6569, line 6: Why not including a reference for these figures? 10- Page 6571, line 6: Since about 200 years the time interval between successive eruptions is increasing. So, it is very unlikely that a period of very frequent eruptions as in was until the mid 19th century to happen again in the near future (next 100 years, see for example Blong, 1996). It would be then appropriate to rephrase this sentence. 11- Page 6572, line 16: Actually the formal responsibility for the volcano monitoring is very clear in the Cape Verde. In fact, after the DR 9/2000 and DR 13/2009 INMG has the responsibility for volcano monitoring in Cape Verde. 12- Page 6572, line 20: INMG headquarter is in Sal, and the INMG Volcano Observatory is in Mindelo (S. Vicente, island), and not in Praia as it is said in the text. 13- Page 6572, line 22: the first evacuation exercise was organized in June 2006 (not 2007), during the NRF (NATO Response Force) Steadfast Jaguar exercise. And it involved, if not all, almost all the population of Chã das Caldeiras. For example civil vehicles where used for the evacuation. I would advise to check with SNPC about this exercise, as they have a complete report on this exercise.

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