

Answer to the comments of the Editor for: The mud volcanoes at Santa Barbara and Aragona (Sicily, Italy):
A contribution to risk assessment.

Alessandro Gattuso, Francesco Italiano, Capasso Giorgio, Antonino D'Alessandro, Fausto Grassa, Antonino Fabio Pisciotta, and Davide Romano

1. The first paragraph needs some (classical/review) references for the phenomena of mud volcanos. This is also related to the comment of R1: 'Authors speak about the big eruptions related on the MVs but do not take into account a series of bibliographical references relating to huge emissions of mud in similar geological conditions C1 in other sites of the world. Especially works in which the multidisciplinary approach through the joint use of geophysical, geochemical methods and images from drones and or cameras have already been used. One example out of many is that of the works published on Lusi MV in Indonesia'.

Thanks for your comment.

We integrated the main references as suggested at lines 56-65 of the new file attached and added in the Reference list.

We integrated in the text, the multidisciplinary monitoring approaches from line 71 to 88 of the new file attached as suggested by Rev 1.

2. Line 239, define MV in the text (not only in the abstract).

Thanks for your comment.

We integrated the general definition of Mud Volcanism at the first part of the introduction, as suggested at lines 50-55 of the new file attached

3. Line 259, change 'important' to 'significant'.

We presented, in general, the two sites at lines 94- 163 of the new file attached before to describe their geodynamic and geological features in par. 2.0.

4. Line 311-314: study sites are mentioned before presented.

We inserted in each figure a picture of the small gryphon for the site of Santa Barbara (Fig.2a) and Aragona (Fig.2b).

5. Figure 2. Picture of the MVs from the ground would be useful to add (hard to understand the vertical dimension).

We would thank in our paper, the Editor Oded Katz for the constructive comments and integrations to the paper, the prof. Martinelli for his prestigious contributions and the anonymous reviewer for the correct and constructive analysis.

In Acknowledgments we added at line 533 the following sentences:

Alessandro Gattuso

Best Regards

Sincerely,