Reviewer comments in black, *authors' answer in blue italic*, authors' changes in blue.

We thank the two reviewers for their comments and suggestions, which we incorporated, in the revised version of our manuscript. We also added some discussions points to the manuscript to make our interpretation stronger regarding to the conclusions, as suggested.

Reviewer 1: The present preprint titled "Mud Volcano Dynamics in Azerbaijan: The Overlooked Role of Creeping Mud Flows in Landscape Evolution" describes one of the geologically interesting territories – Azerbaijan – that hosts the greatest number of the different kinds of mud volcanoes. A definite part of them are quite active, expressing themselves in emissions of mud, gas, water, oil sometimes and eruptions, often with gas ignition and giant fire columns. Generally, the role of mud flows in landscape-forming and evolution had been studied over many years. Nevertheless, in the preprint the authors show a new approach, demonstrate an interesting idea to reconsider the well-known issue and apply accessible techniques like Google Earth images. One of the positive moments in the preprint is the detailed description of the measurement methodology. That will greatly assist other researchers dealing with similar issues. Generally, the preprint is quite good and can be accepted for final publication.

Some specific comments regarding Table #1: some items need the corrections. That might help authors to improve their preprint before the final publication and get more useful information.

#1 mud volcano Agzybir - last documented eruption is October 2002 (see Aliyev, A., Guliev, F., Dadashov, F.G., Rahmanov, R.R., 2015. Atlas of the world mud volcanoes. Nafta Press. ISBN 978-9952-437-60-7.)

#4 mud volcano Bozdaq Quzdek - last documented eruption is May 13, 2024 (see https://seismology.az/en/news/an-eruption-of-the-guzdek-bozdag-mud-volcano-was-recorded/383)

#7 mud volcano East Cheildag - last documented eruption is June, 2004 (see Aliyev, A., Guliev, F., Dadashov, F.G., Rahmanov, R.R., 2015. Atlas of the world mud volcanoes. Nafta Press. ISBN 978-9952-437-60-7.)

#10 mud volcano Kyurdamich - last documented eruption is autumn 1971 (see Aliyev, A., Guliev, F., Dadashov, F.G., Rahmanov, R.R., 2015. Atlas of the world mud volcanoes. Nafta Press. ISBN 978-9952-437-60-7.)

#12 mud volcano Melikchobanly - last documented eruption is March 08, 2024 (see https://seismology.az/ru/novosti/set-seismiceskogo-monitoringa-gryazevyx-vulkanov-rcss-nana-zaregistrirovala-izverzenie-gryazevogo-vulkana-melikcobanly/366)

#13 mud volcano Otman Bozdaq - last documented eruption is October 11, 2025 (see http://gia.az/news/detail/4651/otmanbozdag-palciq-vulkani-yeniden-puskurub)

#14 mud volcano Pirsaat Burnu. It is wrong name. The correct name is Khamamdag. Last documented eruption is October 1996 (see Aliyev, A., Guliev, F., Dadashov, F.G., Rahmanov, R.R., 2015. Atlas of the world mud volcanoes. Nafta Press. ISBN 978-9952-437-60-7.)

#16 mud volcano Shakhikan. It is wrong writing. The correct writing is Shekikhan. The volcano is divided into two groups. According to coordinates, provided in the preprint, this is West Shekikhan. The last documented eruption is October 2018 (see the attached supplement file Cataloque of mud volcanoes eruptions of Azerbaijan (208-2019), Baku, 2019 (Ad.Aliyev, I.S. Guliyev, R.R. Rahmanov)

#17-19 mud volcano West Cheildag - last documented eruption is summer 2018 (see the attached supplement file Cataloque of mud volcanoes eruptions of Azerbaijan (208-2019), Baku, 2019 (Ad.Aliyev, I.S. Guliyev, R.R. Rahmanov)

We sincerely thank the reviewer for their kind words and positive evaluation of our work. We have corrected the dates in table 1 and figure 4, and two names in table 1 and in the text (new line 118 and caption of figure 4). We also added the relevant new references.

Reviewer 2: Dear authors,

The manuscript is a well-written short communication that clearly presents the main results of the study. The figures are of good quality and effectively illustrate the key findings, making the interpretation straightforward and easy to follow.

The study is concise and well structured. As a minor suggestion, the authors could consider adding a few additional details in the results or discussion sections to further support the conclusions, which are currently quite strong compared to the amount of information provided. Strengthening this aspect would make the final interpretation even more robust.

Overall, I consider this manuscript suitable for publication after minor revisions.

Daniele

We are pleased that the reviewer finds the manuscript well written, well illustrated, and clear. As you suggest, we decided to shortly expand in our resulsts and discussion to support better our conclusions.

Thus, we added:

- *New line 93 in the results "*This corresponds to ~40% of the surveyed population, indicating that creeping is not an isolated phenomenon.*"*
- *New lines 157 to 160 in the discussion "*Even if some MVs display creeping behaviour without any eruptions like Goturdag, most behave similarly to the Lokbatan MV. For example, Garyja (MV 8) and Goturlug (MV 9), show the same behaviour, where creeping mud flows are observed after eruptions (see Fig. 4 and Supplementary materials, movies S8 and S9)*";*

- *New lines 161-162: "*Although we cannot fully exclude that some of the detected surface changes reflect processes such as erosion or local collapse, the spatial coherence of the observed displacements and their repeated occurrence across multiple time steps strongly support a gravity-driven mechanism.*";*
- *New lines 167-169: "[…]* (Tab. 1), as can be seen while comparing e.g. Melickchobanly (MV12), with an approximate mean slope of 2°, and Otman Bozdaq with a mean slope around 14°. It *[…]"*
- *New lines 216 to 218: "*Another example is Bozdag Gobu (MV3) in a populated region of Baku, where house displacements can be observed (Fig. 1 and Supplementary material movie S3) due to renewed mud flow activity by smaller scale eruptions during the last decade*."*
- *New lines 220-221: "*Future integration of InSAR data and in situ monitoring will be essential to quantify displacement rates with higher precision and to further constrain the underlying mechanisms*."*

We also corrected some spelling and sentence structures to make the manuscript flow clearer and smoother:

- *New lines 75-76: "*In addition, the use of non-orthorectified historical imagery may introduce minor positional offsets between scenes, which could affect the apparent displacement of small-scale features*";*
- *New lines 77-78: "[…]* as well as flow movements*.";*
- *New line 153: "[…]* within the studied region*";*
- *New line 170: "[…]* (Fig. 4)*"*
- *New line 226 "*show*" instead of reveal.*

We thank the reviewers once again for their insightful and well-considered comments, which have helped us improve the clarity and quality of the manuscript.