Point-by-point response to reviewer's comments Manuscript NHESS-2024-3

"Social sensing a volcanic eruption: application to Kīlauea 2018"

By James Hickey, James Young, Michelle Spruce, Ravi Pandit, Hywel Williams, Rudy Arthur, Wendy Stovall, and Matthew Head

First, we would like to extend our gratitude to both reviewers and editors for their thoughtful critiques of our manuscript; we appreciate the time and effort that goes into this work. We have acknowledged all of the suggestions and believe the manuscript has been further improved by these revisions. We hope that you will now find it suitable for publication in NHESS. Our point-by-point responses to the reviewers' comments are detailed below in red text beneath the original comment. We have also re-checked figures for colour-vision deficiency interpretation and all seem fine.

Yours sincerely,

On behalf of the authors,

James Hickey (Corresponding Author)

Response to Reviewer 1

Correct the color name (e.g., black, indigo).

This change has been made. Thank you to the reviewer for spotting this error.

Response to Reviewer 2

complicated by little early warning and scarce...

We prefer to keep the original wording, as "little early warning" is a relative phrasing and may not be relevant for all eruptive situations, and early warnings are also not the focus of this manuscript.

many more people? depend on volcanoes for their livelihoods? How? Depend on the fertile soil in volcanic regions? Might need to expand on this just slightly for clarification.

We have updated the wording to clarify "many more people" and added text to clarify the "how".

media types, including *Specific example* (citation), *Specific example* (citation), and *Specific example* (citation).

This suggested change has been implemented.

This does not make sense. Due to lack of resources, there is currently no common, large-scale mechanism that tracks how that information....

This suggested change has been implemented.

...the... are inadequately understood...

The suggested re-wording does not change the clarity or meaning of the phrase, or affect the science; it is just a difference in preferred writing style. We prefer to keep our original wording.

comma

We have added a comma.

acknowledging?... notifications

We prefer to keep 'noticing' in place of the suggested 'acknowledging', but have added 'notifications' as suggested.

Don't need a comma here.

We have deleted the comma.

It may be impactful to add that analyzing social media posts following hazardous events can help emergency response managers improve communication and warning efforts for future disasters.

We have added text along these lines to the conclusion section. Thank you for the recommendation.