The author's response is shown below in blue text.

Anonymous Referee #2
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The paper is well written and the presentation is clear.

However, I still have to suggest to reject the paper. The reason is that it misses certain elements of a scientific paper and is rather a technical report.

The main reason is that the results are never put into any context or prepared to any other method. So, we do not know if they are good or bad. Are other approaches better? It is nowhere shown.

The authors argue that because GEE makes the use of SAR data easy, so basically no other method can compare to that. That basic assumption of the paper may be correct, but even that could be questioned. Nevertheless, it is essential that the approach is compared to other state-of-the-art methods, so that we can validate the approach and see if there are other methods that can get a higher accuracy. Then the authors could argue, that this is still acceptable (or not), because their approach is easier to use, doesn't require expensive software, etc. However, the lack of any comparison with other methods, makes it impossible to validate the importance and correctness of the work.

Furthermore, just dismissing coherence based methods remains also questionable. In the case of Sentinel-1, at least in areas with 6-day repeat cycle, coherence maybe acceptable. Again, the authors should prove that and it seems to me that this is an excuse, as GEE does not support this. Again, this leads back to the main point. There is no comparison to other methods.

We thank Referee #2 for their review of the manuscript. It is unfortunate they do not feel our manuscript contains all of the elements of a scientific paper. Nonetheless, we will address the issue they have raised.

The main issue Referee #2 has with our manuscript is that we did not directly compare our SAR change method to any other method. However, this is not the focus of our manuscript. We know from many previous studies that optical data provide the highest quality information for identifying landslides under cloud free conditions and we discuss the success of optical data in the Introduction section of our paper.

We do note that optical data from Sentinel-2, Landsat, and MODIS are currently available in Google Earth Engine (GEE) and therefore could be used to identify landslides. In fact, in our GEE codes that are available on Github, we include functionality for adding Sentinel-2 (Figure 2) and Landsat data, and we encourage those who are interested to develop methods using these data. But again, a detailed comparison between optical and SAR is beyond the scope of our manuscript as the main point of our work is to document a SAR based method that does not require downloading a large volume of data to a local system, or specialized processing software and training. Furthermore, we are not claiming it is the best possible method for identifying landslides, but rather it is one of several methods that can be used, particularly when there is significant cloud cover.

Lastly, Referee #2 would have liked us to have used Sentinel-1 coherence change to identify landslides. SAR coherence change has been used to successfully identify landslides but successful case studies are limited to urban areas or areas without dense vegetation (as is described in the Introduction and Discussion of our manuscript). However, these data are not available on Google Earth Engine. We do not feel that it would be useful to provide a comparison with SAR coherence since the users of our GEE codes would not be able to employ this approach. Furthermore, SAR-based coherence does not work well for identifying landslides in forested regions because coherence is always low and thus does not change (see Jung and Yun, 2019 for a detailed analysis).

Reference:

Jung, J. and Yun, S.-H.: Evaluation of Coherent and Incoherent Landslide Detection Methods Based on Synthetic Aperture Radar for Rapid Response: A Case Study for the 2018 Hokkaido Landslides, Remote Sens., 12(2), 265, https://doi.org/10.3390/rs12020265, 2020.