TGEI-2021-0590 - **View Abstract**

> Examination of current landslide areas and improving the landslide inventory map with the help of SNAP - STAMPS integration

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The manuscript of this paper focuses on updating the landslide inventory map by using SNAP - STAMPS software integration. The Sentinel-1 data was used and the research method is PSI. A large number of studies that applied the PSI technique for landslide detection can be found in the literature. Therefore, there is no novelty in terms of methodology in this paper, however, the application area and the objective are new. Here are some notes for the author. - In the literature review, the author presented quite a mess. The author should focus on the problem related to landslides and determined by the methods of SAR Interferometry and analyze much in the choice of method is PSI. This section can cover the time period in which the articles were published and then focus on the selected image type (Sentinel-1 image). Studies that are similar in terms of methods and types of images can be grouped together. - You should use PS points instead of PSI points because PSI often stands for

a method - All resulting maps must have a coordinate frame (Figure5, 9,10,13) and figure 7, 8 are too hard to see. - Inconsistent citations, sometimes parentheses all authors and the year, sometimes only parentheses the year of publication. - 20 images for the observation time period from 2017 to 2020 were selected based on which criteria (the perpendicular baselines are smaller than 100m)? The advantage of PSI is that it can overcome the difficulties of coherence loss and atmospheric heterogeneities in conventional SAR interferometry. To get reliable results, a significant number of SAR images in the stack is required. Why the authors did not take all of the images in the observed period for mitigating the atmospheric effects on deformation detection results? - The use of Kriging to interpolate landslide regions has not been well explained. How do you get the PS points for interpolation? Get all or only a group of points? - You also need to put a limit on how many mm/year a landslide is considered slides, otherwise, it can be ignored as a method error. - What are the newly discovered landslide locations? How do you choose? because when you overlap the old LIM map to separate out the old landslide positions, the remaining landslide points are new? Are those landslide points accurate? Because there is no validation from the field, I don't know what criteria to use to determine that the slide points are new for updating on the map. - The reported landslides locations when superimposed on the PSInSAR landslide map had only 8 matches while the reported number of points is 22 points, so the accuracy achieved from PSInSAR is exactly (8/22*100)= 36%. So are the other slide points by PSInSAR really likely to be the landslides? So taking those slide points to update the LIM map will get good accuracy? - As for the conclusion, it does not reflect the conclusions from the study, for example, with the help of SNAP-STAMPS, what did the research method bring, and how accurate was it? - As the final remark, the authors have to check the English language of the manuscript carefully before submitting the revision as it contains grammatical errors.