Natural Hazards and Earth System Sciences Discussions

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC2
https://doi.org/10.5194/nhess-2021-153-RC2, 2021

Reply on RC1

Anonymous Referee #2

Referee comment on "Brief communication: Radar images for monitoring informal urban settlements in vulnerable zones in Lima, Peru" by Luis Moya et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2021-153-RC2, 2021

This work aims to show how Sentinel-I radar images are effective and can be used to map hazardous unused land spaces. In addition, an application of this technology to map hazardous land spaces recently occupied by groups of people in Peru is shown.

This is not cutting-edge work. In fact, it does not present any scientific novelty, nor does it suggest any new methodology. Indeed, it is an application of SAR technology in the field of risk prevention. Therefore, at best, this work can fall within the scope of a "Technical Note" or a "Case Study" (Possibly "Brief communication").

However, even as a "Technical Note" ("Brief communication"), in order to be useful to an interested reader, and possibly less knowledgeable about this technology, the manuscript should provide more insights and sufficiently detailed contents on the ground conditions of the areas imaged and common backscatter intensity values, including the variety of factors on which they depend (types, sizes, shapes and orientations of the scatterers in the target area, soil characteristics, vegetation cover, moisture content of the target area, as well as the incident angles of the radar beam).

In addition to the general comments above, I would like to draw attention to the following three notes:
- Figure 1 caption reads "Red band: image recorded on April 14, 2021; Green and blue band: image recorded on December 03, 2020"; later on the same figure, lines 65-66 read "The red band denotes an image recorded on December 10, 2020, and the green and blue band denote the image recorded on April 14, 2021".
- Figure 2c) must include units on the vertical axis.
- Given the great relevance of the colors and sharpness of figures, improvements are expected (at least) in Figures 1c), 1d) and 3.