Earth Surface Dynamics Discussions

Earth Surf. Dynam. Discuss., referee comment RC2
https://doi.org/10.5194/esurf-2021-64-RC2, 2021

Comment on esurf-2021-64

Amaury Frankl (Referee)

Referee comment on "Comparative analysis of the Copernicus, TanDEM-X, and UAV-SfM digital elevation models to estimate lavaka (gully) volumes and mobilization rates in the Lake Alaotra region (Madagascar)" by Liesa Brosens et al., Earth Surf. Dynam. Discuss., https://doi.org/10.5194/esurf-2021-64-RC2, 2021

Well done. It is a well presented case study on gully quantification using RS products. Given that this is a technical paper, I would give more context on specific, but well-known, issues in volumetric quantifications using RS, such as the 2.5D problem caused by gully bank undercutting, or DEM vs DSM when vegetation was not filtered out. Also, from a theoretical point of view, one can already assess whether the pixel size is fine enough to study a landform of a particular size; and this should already be mentioned from the start. Please see detailed comments and suggestions in the pdf. After considering suggestions, I consider that with minor revisions this paper can be accepted for publication.

Please also note the supplement to this comment:
https://esurf.copernicus.org/preprints/esurf-2021-64/esurf-2021-64-RC2-supplement.pdf