

***Interactive comment on “Use of the 3-D scanner in mapping and monitoring the dynamic degradation of soils. Case study of the Cucuteni-Baiceni Gully on the Moldavian Plateau (Romania).” by G. Romanescu et al.***

**Anonymous Referee #2**

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This paper shows an exercise that consists of the repeated topographic surveying of a large gully by means of a high resolution terrestrial laser scan equipment. Both the example target, a very active landform, and the equipment used are of high potential interest for readers working in the fields of Geomorphology and Soil Sciences. The topographic changes shown in the figures 10, 11 and 13 would represent vertical denudation rates of gully slopes of about 3 m per year, possibly at the level of the highest records.

Nevertheless, there are some inconsistencies in other figures that cast doubt on the reliability of the former ones. Figure 12 shows the deposition of up to nearly 4 m in the upper part of a gully side, a feature difficult to understand. Figure 15 shows generalised changes (both positive and negative?) in the upper rim of the southern wall of the gully, which are also difficult to understand, particularly in a gully which seems no particularly asymmetrical. These inconsistencies suggest to this reader the possibility that some relevant errors might be introduced in the topographic information during the data acquisition or during the removal of the vegetation from the original data.

Actually, the information as shown in the manuscript does not need the use of this kind of equipment; more classical topographic methods would be sufficient to obtain the information with the same resolution as shown in the figures, presumably with a higher degree of trustworthiness. Even in this case, the paper would be of higher interest if it would contain a critical analysis of the information obtained with the equipment that might be useful for other users, such as the operational precision of the data, the minimal topographic changes detectable and the possible errors introduced during the acquisition or post-processing of the data.

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Discussion Paper