

Earth Syst. Sci. Data Discuss., referee comment RC1
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Comment on **essd-2022-301**

Louise M. Vick (Referee)

Referee comment on "Geomorphological landslide inventory map of the Daunia Apennines, southern Italy" by Francesca Ardizzone et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-301-RC1>, 2022

This paper outlines the method and initial results of a landslide inventory map for the Daunia Apennines region. Landslides are presented in terms of age and type, with reference to spatial occurrence and some statistics.

I would like to congratulate the authors on producing such a well-written paper. The writing is excellent. It is engaging, well-formed and very well referenced. It flows well and is easy to read from start to finish. In addition it does not get bogged down in technical language in the methods while still communicating the complexity of the research project. Figure 2 nicely illustrates the development process of the LIM. As such, I do not have any minor comments, only some more broad thinking points to be addressed.

In the early manuscript there is a slight lack of clarity. My main confusion was what exactly they were inventorying. Is the G-LIM pertaining to soil or rock landslides? Are they events which have already occurred completely, or slow moving slides in progress? This information is needed early on to engage readers. More than 50% of the abstract is introduction material. There is space to achieve more depth about the specifics of the study and move this information to the introduction.

The temporal factor needs to be clarified. Since the main data sets bracket a period of time (1954-2003 and 1988-2006), was the G-LIM updated to resolve geomorphic changes during that period? Was the development of a slide taken into account in the delineation? More concrete detail would be welcomed in the first pages of the ms.

There is some conceptual information missing around what is considered a landslide in this study. These specific types of landslides need to be put into context to global landslide understanding. Firstly, it seems like the object mapped include both a potentially active portion, and the deposit of a failure. Secondly, the are mostly flows and slides of soil(?) material, or the highly weathered carapace of weak rock (if I connect the dots between

the geological setting and the results correctly). I understand these are typical landslides types in Italy, but since the journal is international the context is important. This context is also important since the end-use of this LIM, as mentioned in the text, should inform planning decisions by e.g. the regional authorities.

Can the authors make any inferences about the meaning of the data, in terms of why they see what they see? For example, how is there only one rockfall across an entire mountain range? How do the results connect back to the study setting, and what is the implication of the results in terms of the end-use of this LIM going forward?

Figure 1: you might consider adding a broader location map to indicate location within Europe for those not familiar with southern Europe.

Table 2 and section 4.2: A description of what is meant by 'widespread landslide' types is missing. Now I found it in section 4.4, but I am still confused about what it means. More information is needed, or an explanatory figure/image.

The information about other geomorphic elements comes as a surprise. This should be mentioned earlier on or otherwise appears as an attempt to shoehorn extra data into the study. Is the method for this part of the study mentioned?