

Referee. P. 6272, L. 20: what do you mean for “complex geological and tectonic setting”? Can you explain in a more detailed way what do you mean for complexity and how it can trigger landsliding phenomena?

Authors. Ok. We have changed “In areas characterized by a complex geological and tectonic setting, the occurrence of ground deformation phenomena (landslide, subsidence) can be facilitated” with “The origin and development of landslides may be influenced by several geologic, biologic, climatic, and topographic factors, such as rock strength, precipitation rate and intensity, hillslope gradient, vegetation type and density, bedrock fracture density, uplift rate”

Referee. P. 6272, L. 21: subsidence can be activated also in simple geological and tectonic settings.

Authors. Ok.

Referee. P. 6273, L. 22-24: please, translate the name of the project, founded by ENI spa, in English.

Authors. Ok.

Referee. P. 6274, L. 1-2: as far as I know, deaths were caused by mainly by the earthquake itself and not by the landslide.

Authors. Ok, we rearranged the sentence between L. 1-2 (P. 6274).

Referee. P. 6274, L. 3: according to the title, in this paper you should report the results of both geological and geophysical surveys. You should briefly indicate the reason for reporting only geophysical surveys in this paper. Otherwise, I suggest changing the title.

Authors. Ok. We indicate the reason for reporting only geophysical surveys in this paper.

Referee. P. 6274, L. 6: what are these “rectilinear NW-SE scarps”? Are those NW-trending scarps connected to fault activity or to some surficial processes (i.e., fluvial terraces)? In Fig. 2 three main “scarps” (identified as F1, F2 and F3) are reported. However, in the geological map, these features are mapped like faults. In particular, it is clear, from the geological map alone, that the “scarps” offset stratigraphic and previous tectonic contacts (see, for example, F1 and F2, which interrupt two NE-trending vertical faults and the stratigraphic contact between Flysch di Gorgoglione and the Vallone dell’Aspro Alloformation).

Authors. Yes, they represent the surface expression of the previously unmapped fault (Montemurro Fault). In particular, in the Montemurro territory our surficial investigations (e.g. field geological survey, aerial photo interpretation, etc.) show rectilinear NW–SE trending and SW-facing scarps. In many cases, landforms can have the same appearance but a different genesis, which are examples of geomorphological convergence (e.g. fault scarps and fault-line-scarps; tectonically induced and anthropogenic scarps in alluvial deposits that could have exactly the same morphology; etc.). Accordingly, the nature of the morphological features could remain uncertain if solely based on superficial investigations like geomorphologic mapping. Thus, in order to verify the nature of the scarp observed at surface and to interpret it either as a tectonic landform (i.e., fault scarp) or as a geomorphic feature (i.e., erosional scarp), an ERT survey was performed. We think that a multidisciplinary approach based on the joint analysis of geological and geophysical data is a powerful and necessary tool in investigating tectonic structures.

Referee. P. 6275, L. 11-12: can you specify when the active landslide caused damages to the Montemurro village?

Authors. The Verdesca landslide appears to be currently moving. Thus, it causes damages to the residences, anthropic buildings and, especially, to the main road (SP11) leading to the urban area of Montemurro. We rearranged the sentence between lines 11-12 (P. 6275) of the manuscript.

Referee. P. 6275, L. 27: what do you mean for “surroundings”? Are you referring to the wall rocks that contain the structure that has to be studied?

Authors. We have changed “The suitability of a particular geophysical technique or a combination of them mainly depends on the physical property contrast involved between the target structure and surroundings,...” with “The suitability of a particular geophysical technique or a combination of them mainly depends on the physical property contrast between the target and the host material,...”

Referee. P. 6267, L. 13: “F3” represents only one of the lateral resistivity variations. This can be deleted. In addition, not all lateral variations fit with the rectilinear scarps.

Authors. Ok. We changed “From a structural viewpoint, the major feature of the resistivity models is the sharp later variations of resistivity (F3), which fits with the rectilinear NW–SE trending and SW-facing scarps observed at the surface (Fig. 2)” with “From a structural viewpoint, one of the major features of the resistivity models is the sharp lateral variations of resistivity (F3), which fits with one of the rectilinear NW–SE trending and SW-facing scarps observed at the surface (Fig. 2)”.

Referee. P. 6267, L. 20: “F4” is not outlined by rectilinear scarps and is not shown in the geological map. Can you explain how the displacement of “F4” can be deduced? You cannot infer this information from the ERT alone. Therefore, also the “tectonic depression” seems quite questionable.

Authors. The F4 trace at depth has been put in evidence by the sharp lateral variation of resistivity (see for example the sharp lateral variation of resistivity from 460 to 560 m and between about 670 and 520 m a.s.l., ERT2 in figure 3). The ERT was supported by interpretation of aerial photos, morphotectonic investigation, geological field survey, boreholes and seismicity data (see Stabile et al., 2014). In particular, Stabile et al., (2014) inferred the NE dipping fault (F4) from the joint analysis of seismicity data, geological observations, fluid injection data, stratigraphic log of the Costa Molina 2 injection well, and electrical resistivity tomography survey.

Stabile, T. A., Giocoli, A., Perrone, A., Piscitelli, S., and Lapenna, V.: Fluid injection induced seismicity reveals a NE dipping fault in the southeastern sector of the High Agri Valley (southern Italy), Geophys. Res. Lett., 41, 1–8, doi:10.1002/2014GL060948, 2014

Referee. P. 6267, L. 23: It seems to me that the cumulative displacement inferred for the F1: :F3 fault strands is overestimated. Which are the geological (or geomorphological) markers that have been used to estimate such displacement value? Probably you are basing your interpretation on the nearly vertical contact separating the low resistive (QD) from the high resistive (FG) formations. Please, detail and specify. A displacement of about 150 m affecting quaternary deposits (of Middle-Late Pleistocene – Holocene age according to Zembo, 2010) is really significant and should be documented in detail.

Authors. Ok.

Referee. P. 6280, L 13-14: do your data support the interpretation derived from the ERT analysis, and specifically that the rectilinear scarps may be considered fault planes displacing the contact between the high-resistive Gorgoglione Flysch and the low-resistive Quaternary Deposits? This would be a very important result produced by the integration of the two methods.

Authors. Ok.

Referee. P. 6280, L 21-24: also here the name of the project should be translated in Italian.

We translated in English the name of the project.

Referee. Please also note the supplement to this comment: <http://www.nat-hazards-earth-syst-sci-discuss.net/2/C2389/2014/nhessd-2-C2389-2014-supplement.pdf>

Authors. Ok.