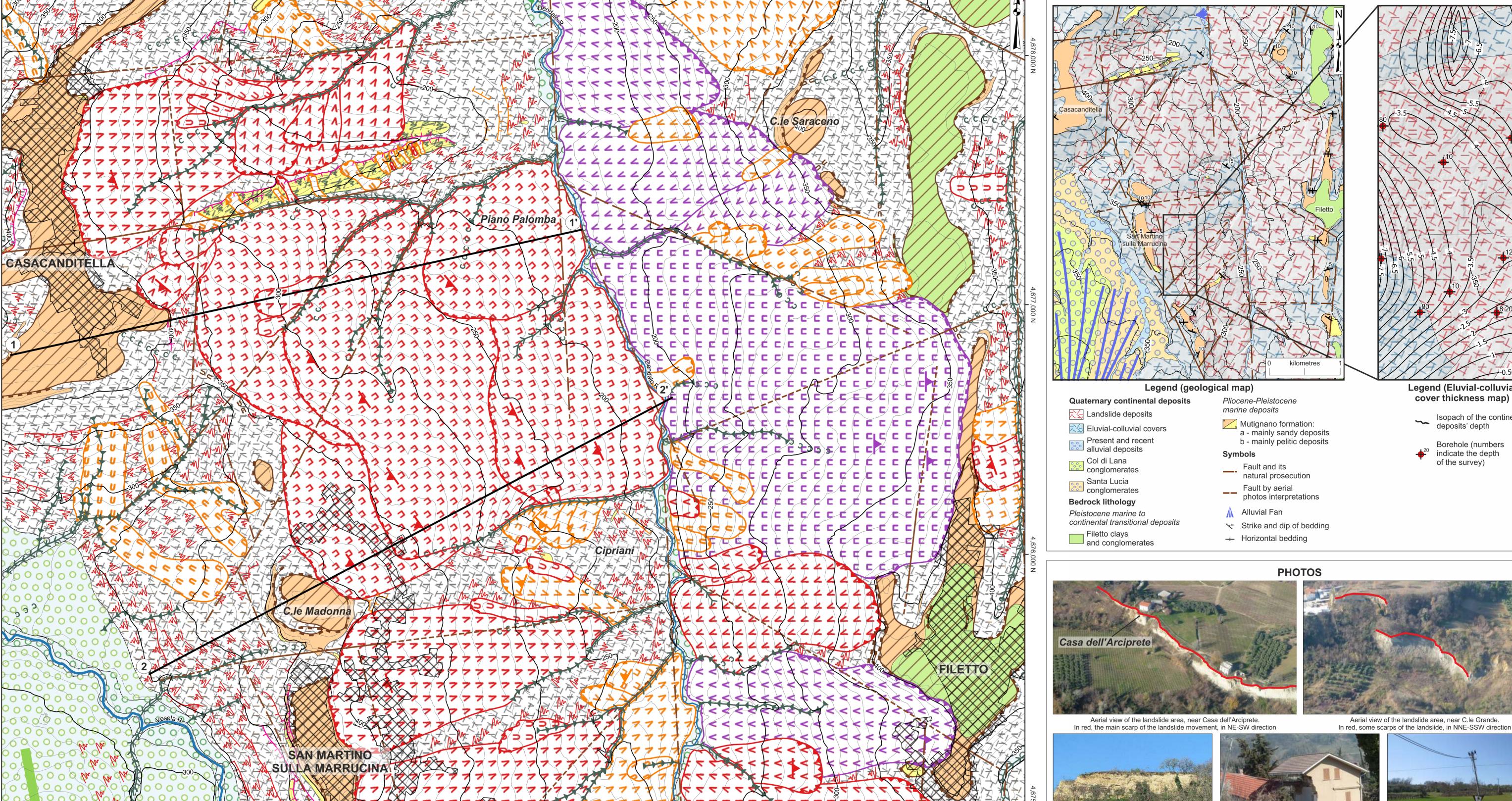
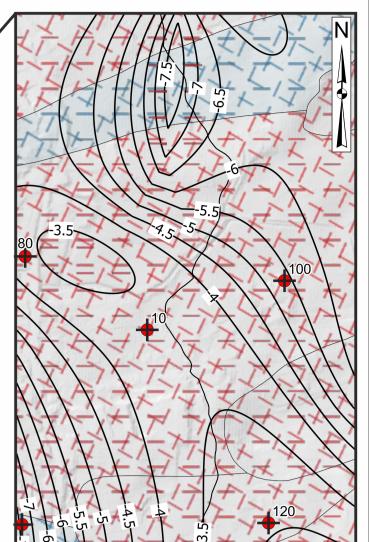


GEOLOGICAL MAP

Informations about lithological features and superficial deposit cover are synthesized in these maps. Where available, the thickness of superfiacial deposits was reconstructed through boreholes data; this analysis allowed the generation of the isopach of the top surface of the Pliocene-Pleistocene marine deposits.





Legend (Eluvial-colluvial

cover thickness map)

Isopach of the continental deposits' depth

Borehole (numbers

indicate the depth

of the survey)

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Details of collapsed and damaged dwellings downhill from the main landslide scarp, near C.le Grande

One of the most important landslide scarp,

with outcrops of sandy rocks

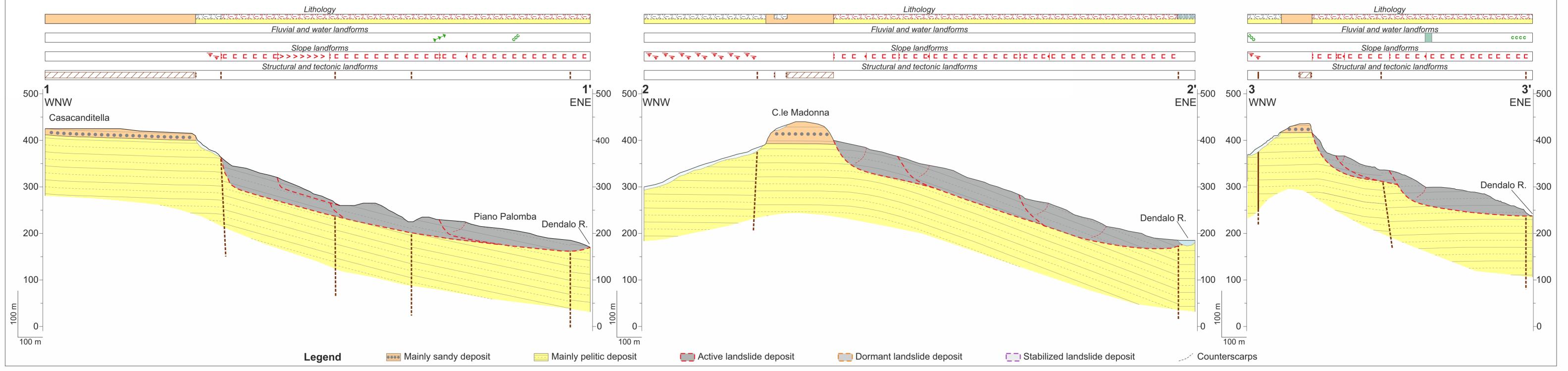
Pylon affected by instability near the landslide foot, near Piano Palomba

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GEOMORPHOLOGICAL CROSS-SECTIONS

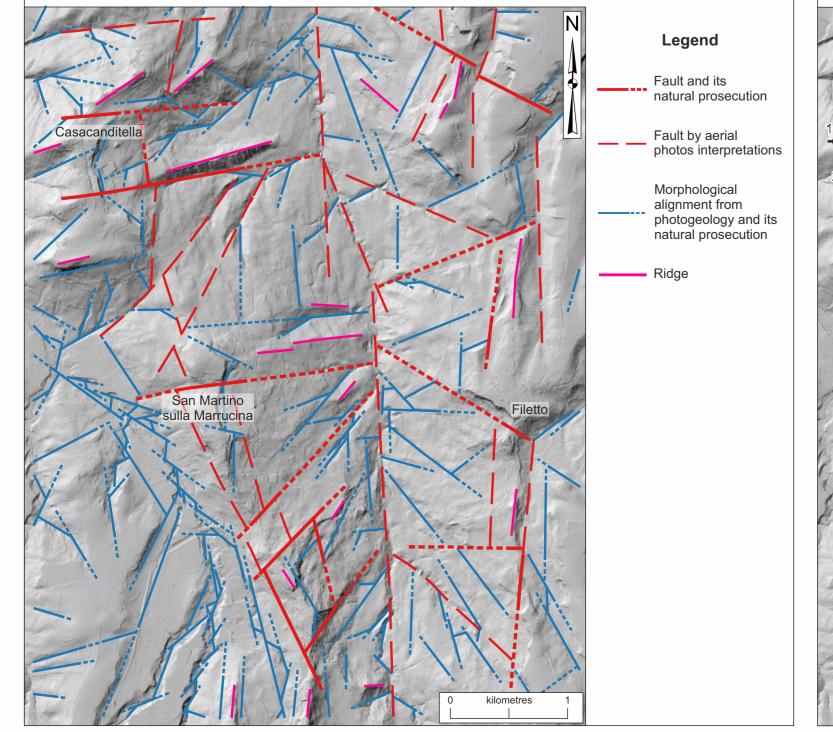
Geomorphological and available stratigraphic information on key areas were synthesized in three cross-sections. The profiles, chosen in order to best indicate the geometry of the bedrock and landslide bodies, clearly show how the landslides are in close connection with each other, often presenting several coalescent bodies.



STRUCTURAL SCHEME

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The analysis and identification of the main fault alignments were done by using morphological analysis, photointerpretation, and stratigraphic data. The main systems show a N-S, E-W, SW-NE, SE-NW, and SSE-NNW trend.



BOREHOLE AND DENDROCHRONOLOGY

San Martino

sulla Marrucina

Information on lithology and thickness of bedrock and superficial deposits were achieved through the analysis of boreholes. Dendrochronology was used to analyse the evolution of the complex landslide. Trees located in the central part, clearly showed more than one growth stress.



INTERFEROMETRY (modified from Bozzano et al., 2017)

Interferometric analysis was performed using ERS and Envisat data, which provided quantitative information about spatial and temporal evolution of landslides. The maps enabled the observation of the deformation affecting the study area, through the detection of targets affected by vertical displacement (mm/year). The displacement rates analysis allow to discriminate stable and unstable landslides areas in a 18-year period (1992-2010), in order to understand the landslide state of activity.

