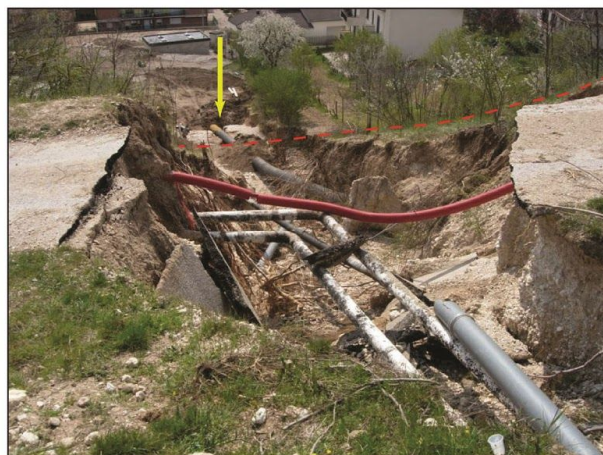


FROM 1997 TO 2016:

THREE DESTRUCTIVE EARTHQUAKES ALONG THE CENTRAL APENNINE FAULT SYSTEM, ITALY

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ACTIVE FAULTS IN THE INNER NORTHERN APENNINES: A MULTIDISCIPLINARY REAPPRAISAL

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The recent seismic events in Garfagnana (January 2013 Mw 4.8) and Lunigiana (June 2013 Mw 5.1) have drawn new attention by the geological community on the seismotectonic problems of the internal segment of the northern Apennines, its seismogenic sources and related surface expressions, i.e. active faults. The long term to recent geological evolution of the Apennines has been characterized by contractional tectonics in the foreland, accompanied by extensional structures in the internal domain (Elter et al., 1975; Meletti et al., 2000; Carminati and Doglioni, 2012). This kinematic setting is still active today as documented by the crustal deformation given by GPS analysis (Bennett et al., 2012; Faccenna et al., 2014) and seismological data (INGV). Within this tectonic frame our work focuses on a revision of geological, geomorphological, geodetic, and seismological (instrumental and historical) data, with the aim to present a reappraisal of active faults of the internal Apennines North of the Arno river. We present a revision of the structural and morphological characteristics of the active fault systems, as well as the kinematics and strain rate estimates. They represent a new frame for an improvement of the current Ithaca (ISPRA) as well as DISS (INGV) catalogues with some utilities for the MS local projects. Finally, this work allows a better understanding of the seismotectonics of a region which in 1920 hosted the Fivizzano EQ, with an estimated Mw 6.5 similar to the main shock of the 2016 Central Italy seismic sequence.