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Seismotectonic characteristics of Aegean-type faults: insights from palaeoseismological investigations in the Mediterranean Region.

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We consider two decades of palaeoseismological investigations carried out in extensional provinces within the Mediterranean realm, mainly Greece, Italy, Turkey (western Anatolia) and Southern Bulgaria. Available information about past morphogenic earthquakes is revised focusing on some key seismotectonic parametres, like the coseismic displacement associated to past events and the length of the seismogenic structures. All study structures are dip-slip normal faults, 10-40 km long, commonly active since Middle-Late Pleistocene, characterised by moderate to strong earthquakes (M 5.6-7.1), maximum vertical displacements of some 10s to few 100s of centimetres and return periods of 100s to 1000s of years. Based on few assumptions, new field observations and literature data, we also attempt to calculate the Maximum Seismic Moment (Mo) possibly associated to the past earthquakes documented from palaeoseismological trenches and surficial morphotectonic investigation. These seismic moments are then compared with those estimated for historical earthquakes for which both Maximum Vertical Displacement (Dmax) and Surface Rupture Length (SRL) are available. The cumulative distribution obtained from the two datasets are compaired, while similarities and differences are discussed.