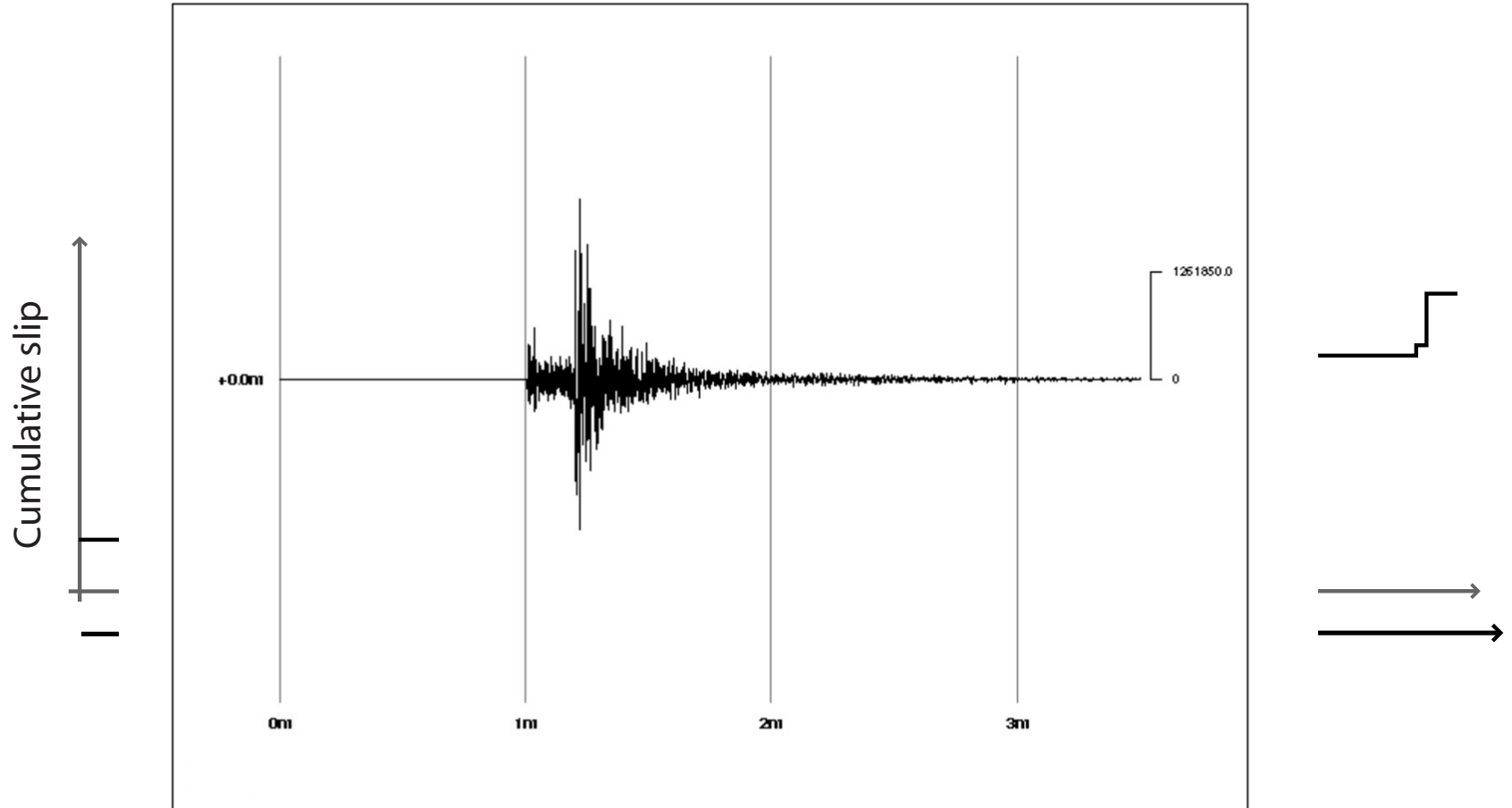


Earthquakes are sudden

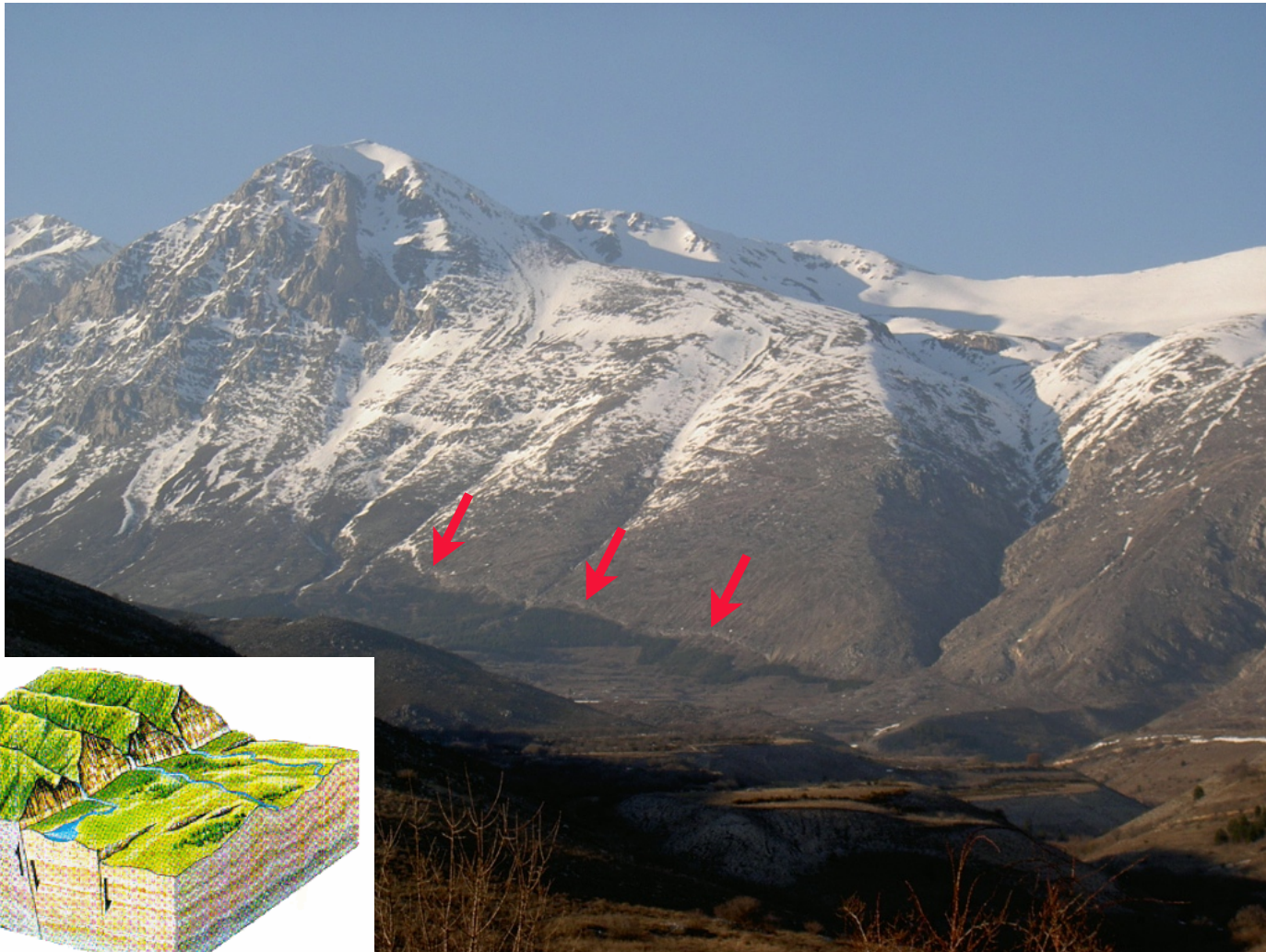


Earthquakes impact society

L'Aquila 2009



Earthquakes shape landscapes



Frequency of large past earthquakes in the Aegean and associated risk susceptibility.

Combining cosmogenic dating, historical data, and
spatial analysis - FEARS

L. Benedetti **CEREGE** and S. Robert **ESPACE**

WP1 / WP3

Participants:

Olivier Bellier (CEREGE)

Jules Fleury (CEREGE)

Matthieu Ghilardi (CEREGE)

Magali Rizza (CEREGE)

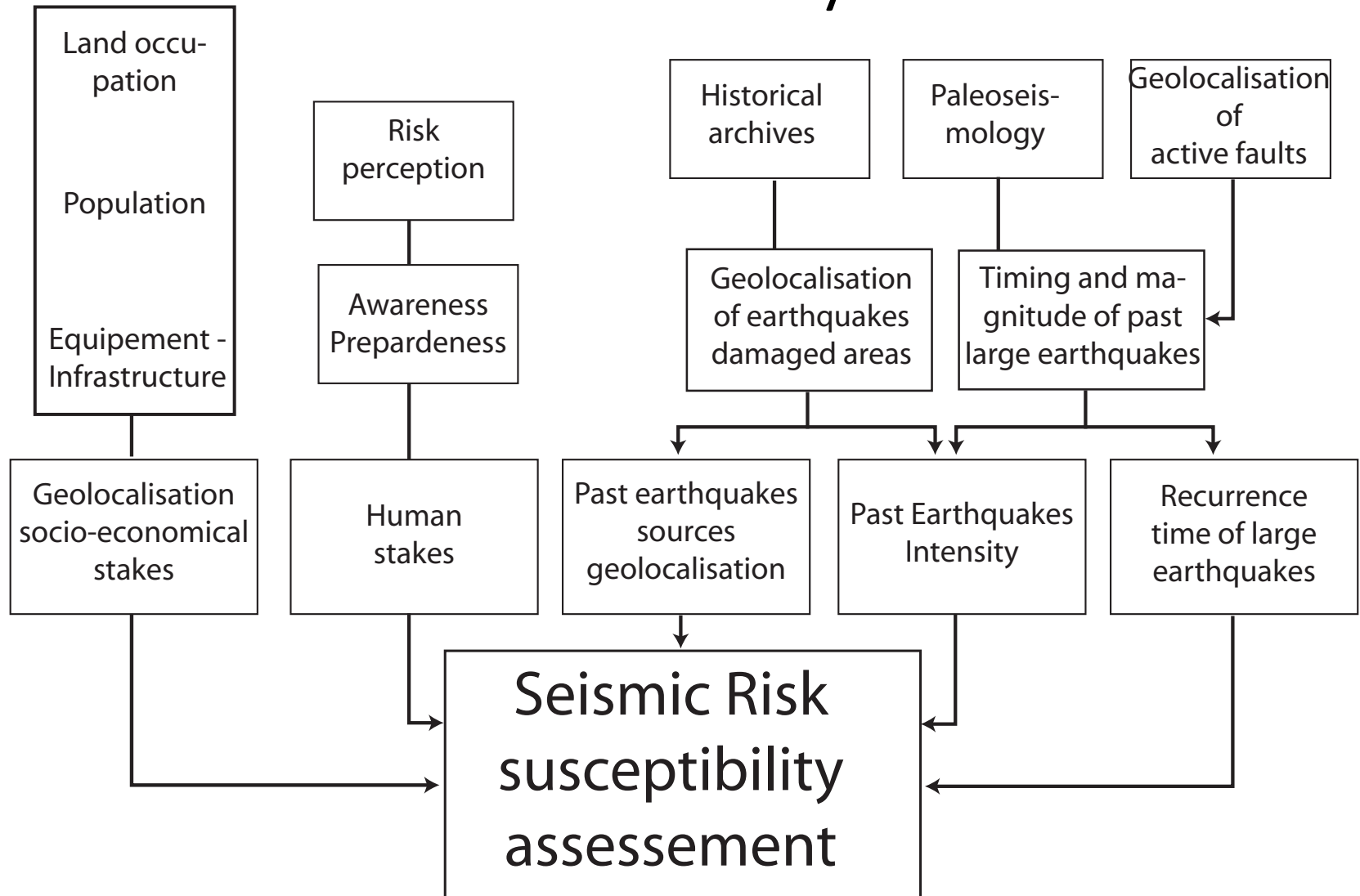
Jim Tesson (CEREGE)

Cengiz Yildirim (ITU)

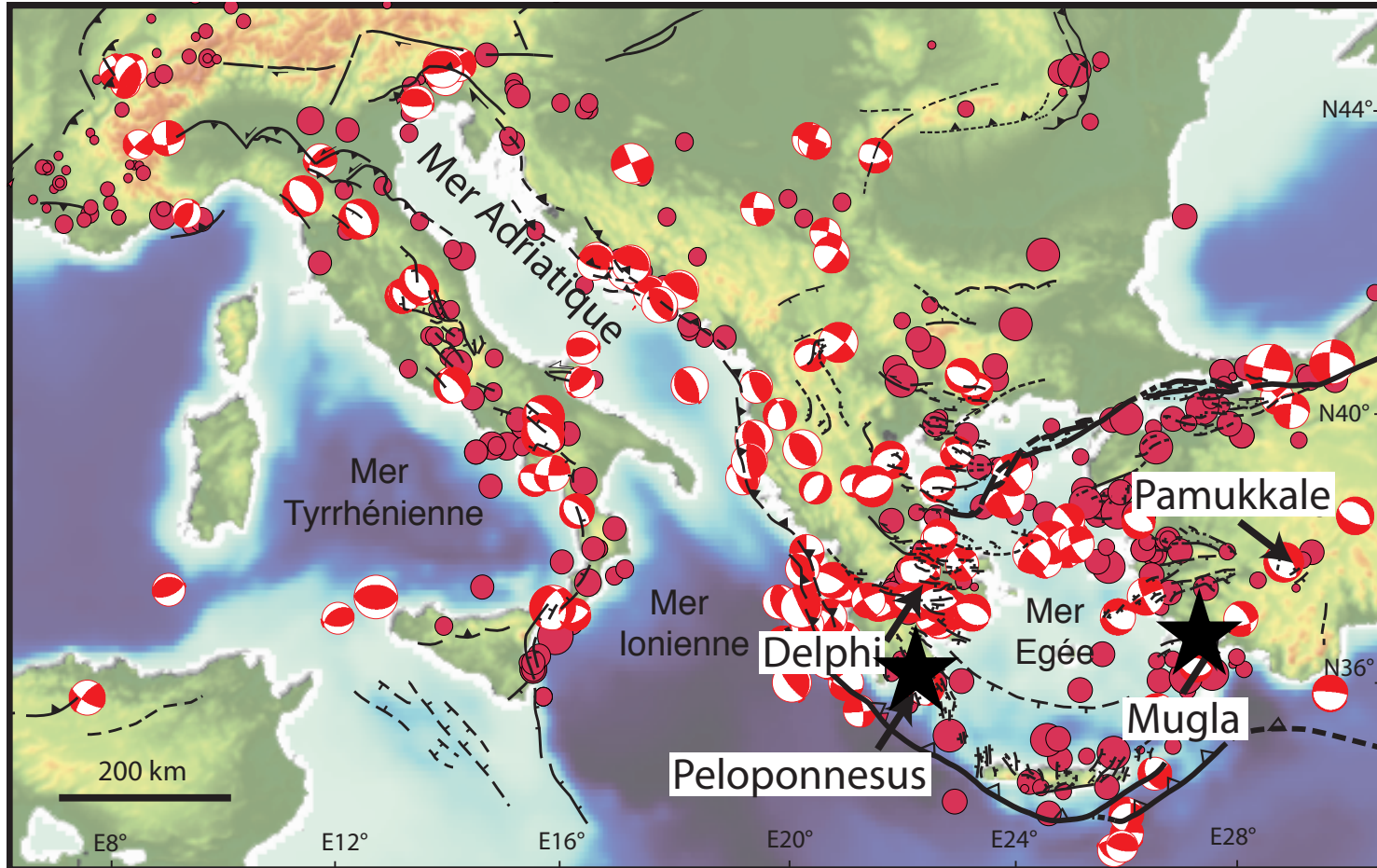
Vasiliki Mouslopoulou (**GFZ Postdam**)

Ersen Aksoy (**Mugla Univ.**).

Our aim : combine knowledge on earthquake recurrence and on socio economical aspects of the territory



Two target sites in the Aegean



Data to unravel timing and slip of past large earthquakes



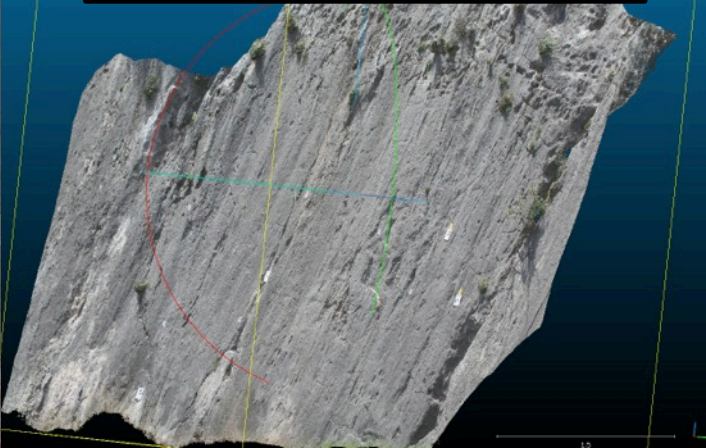
Historical archives



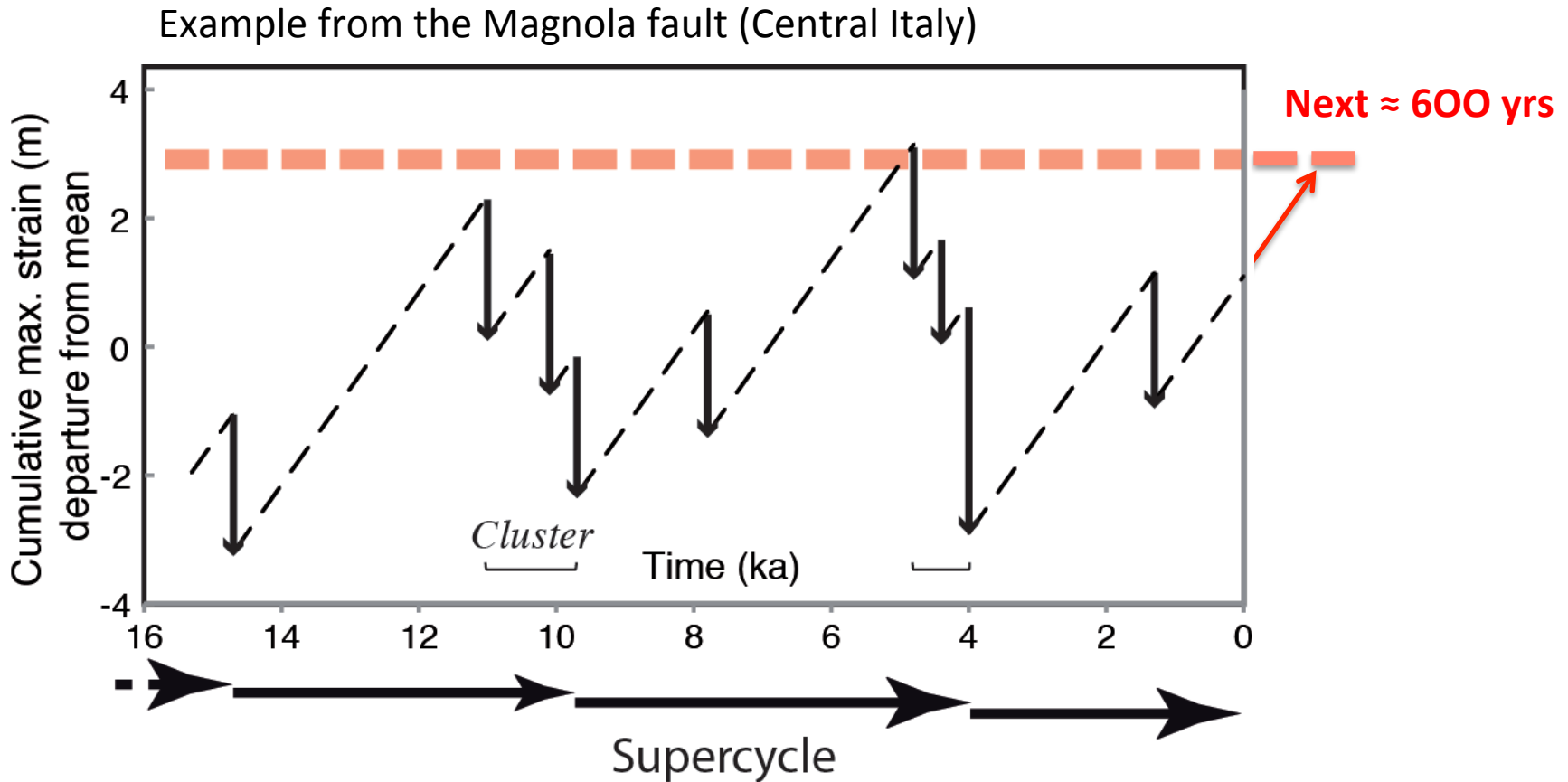
Dating past earthquakes with cosmogenic nuclides



Erosion as a proxy of time elapsed between quakes

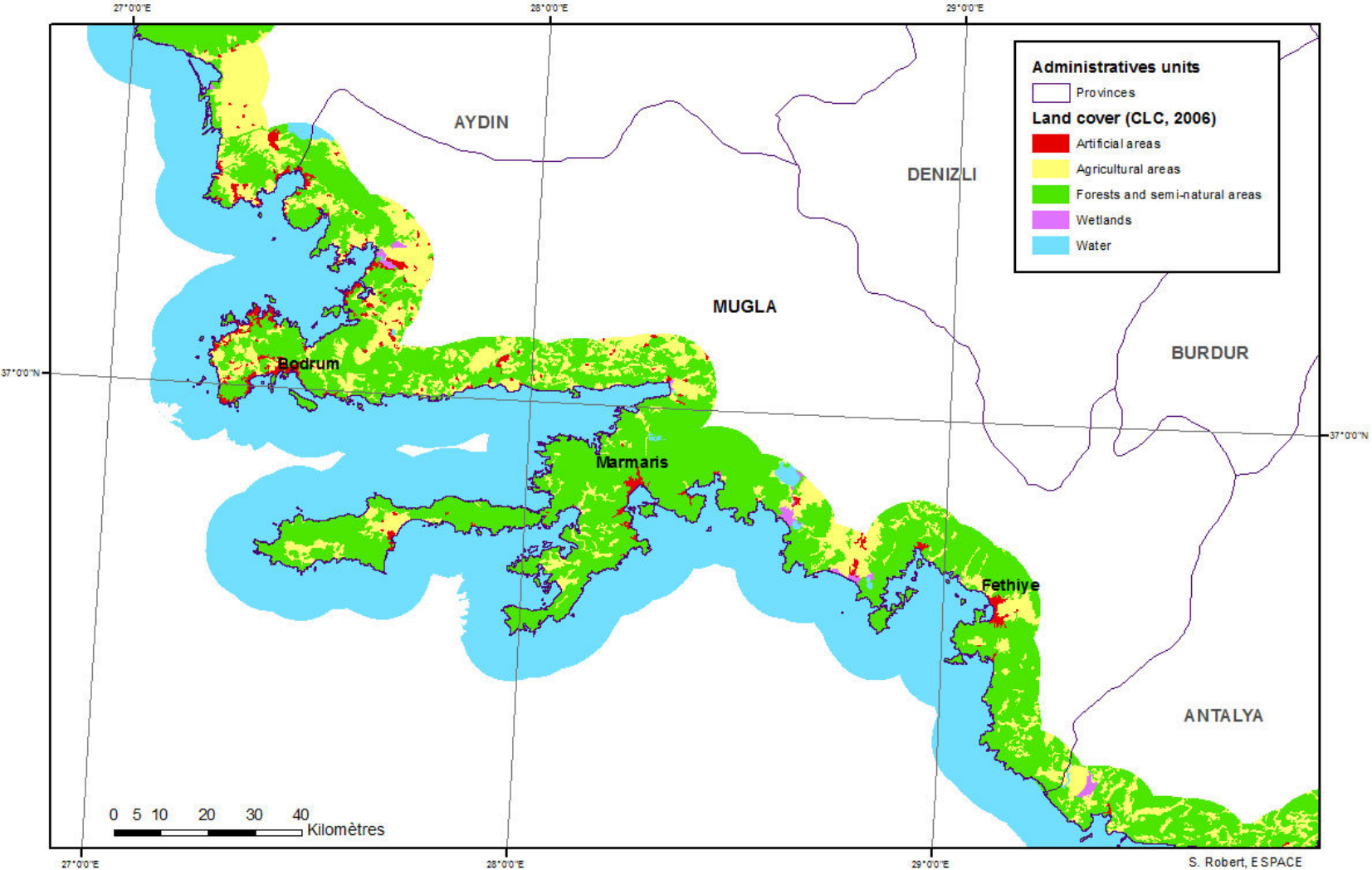


Results from 7 faults in Italy: Clusters of earthquakes and strain threshold



Data to characterize human and economical stakes

Land cover in the Mugla coastal zone



Data to characterize human and economical stakes

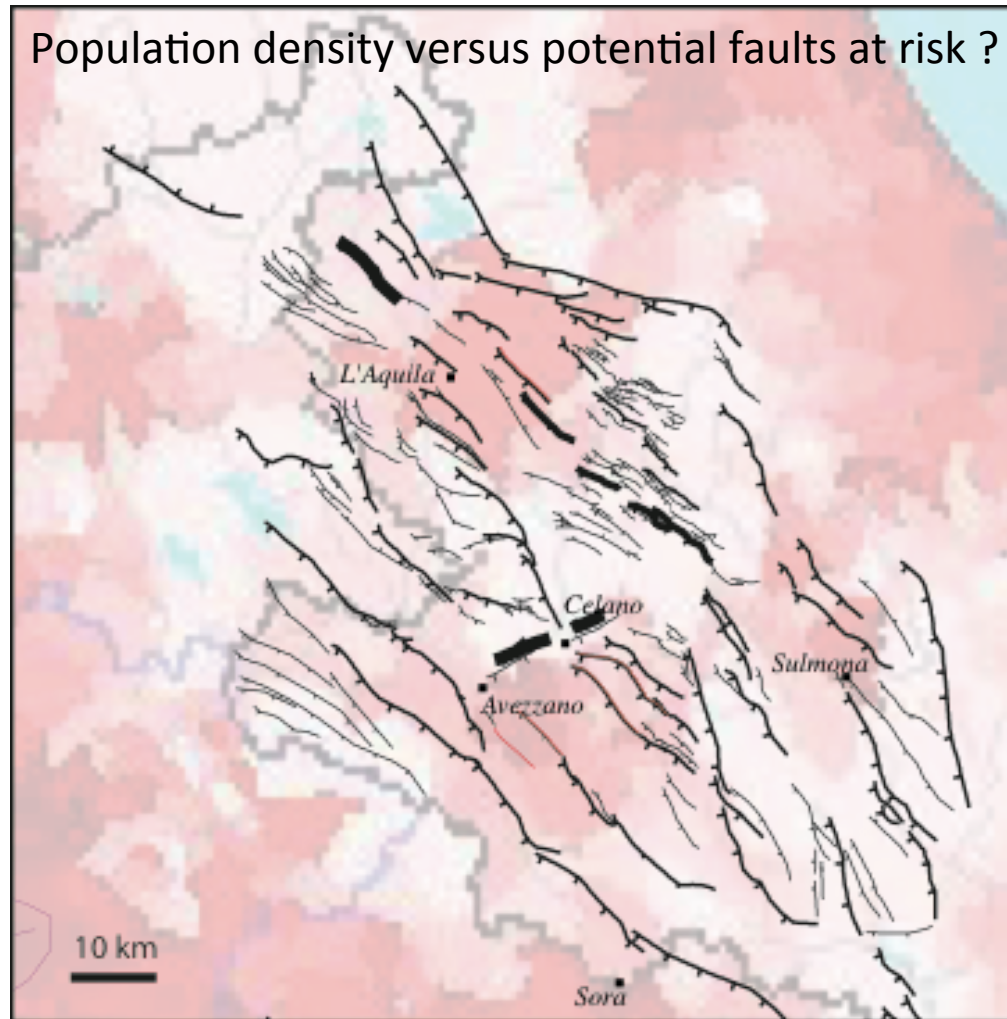


Land use data from field survey



Metrics to characterise high seismic risk susceptibility ?

- MS starting in Janv 2015
- J. Tesson PhD MRT funded 2013-2016



Main expected outcomes

- Understand how large earthquakes repeat in the Mediterranean area and what consequences on population and economy
 - Reducing the gap between scientists and population in earthquake prone areas
 - EU Project to widen this approach within the Mediterranean
- ⇒ International Training Network **QUAKE'N'TIME**



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