Seismicity Rates

The daily seismicity rates in each cluster are computed by convolving the time series from the number of earthquakes for each day by a Gaussian function as in Figure S3. The temporal resolution of the rates depends on the length of the Gaussian operator. An example of the cumulative and rate of the seismicity for a cluster is displayed in Figure S4. The time series of each cluster are put into a single matrix and singular value decomposition is applied. The displayed traces correspond to the first 8 eigenvalues and corresponding eigenvectors and thus eliminate the majority of the uncorrelated part of the signals (Figure S4b).

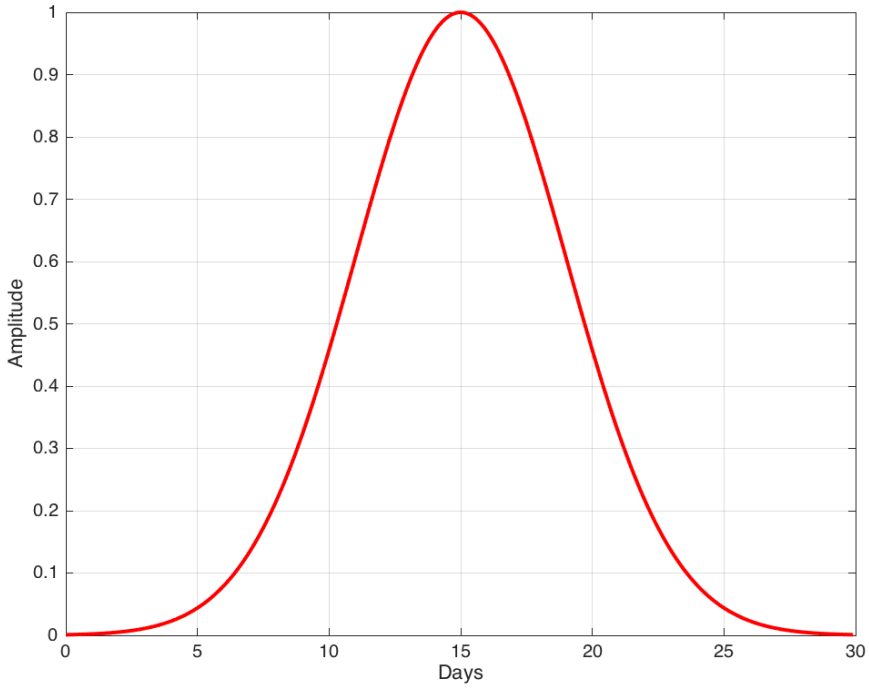

Figure S3 : Gaussian smoothing operator

Declustering of the Catalog

The earthquake time series are processed to separate the factors contributing to seismicity rate changes: stress changes generated coseismically by main shocks and also due to postseismic relaxation. Declustering amounts to such a removal of coseismic and postseismic effects, with the aim of reducing the temporal dependence of the remaining, i.e., "background," earthquakes (Helmstetter et al., 2003; Marsan, 2003) . FigureS4b shows the effect of declustering of a single cluster and Figure 4 shows the declustering of the seismicity in Figure 1.

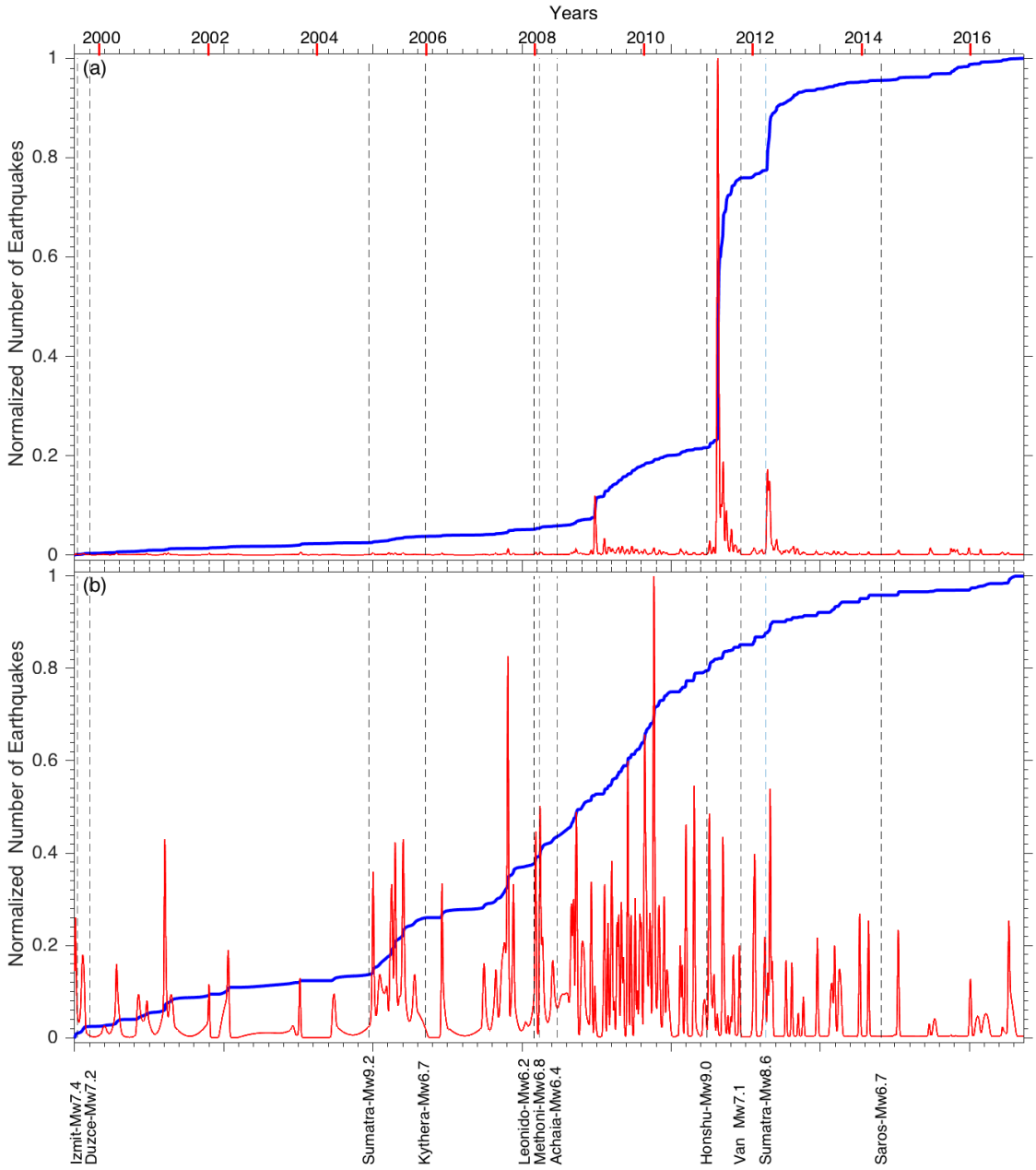

Figure S4 : (a) Cumulative number of earthquakes and seismicity rate for the Simav cluster (b) after declustering.

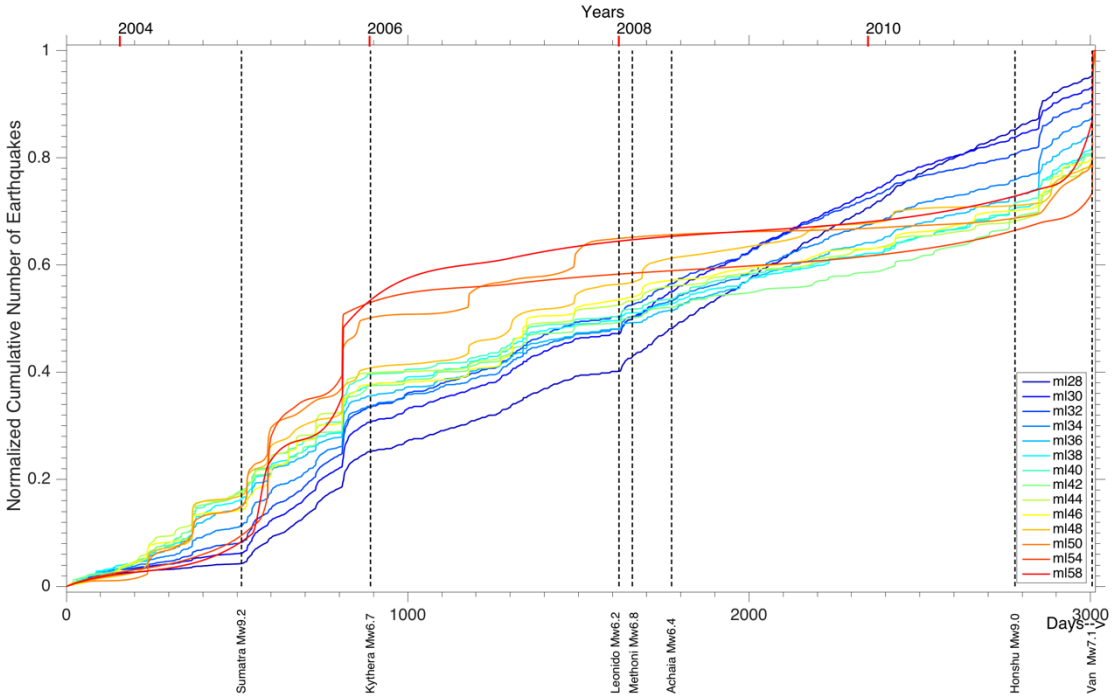

Figure S5: Cumulative number of earthquakes in Anatolia between 36.80N-41.00N latitudes and 25.5E-44.0E longitudes (includes all clusters in Figure 1) for varying lower magnitude cut-offs between 2.8 and 5.8. We limit the display to the occurrence of 2011 Van earthquake.

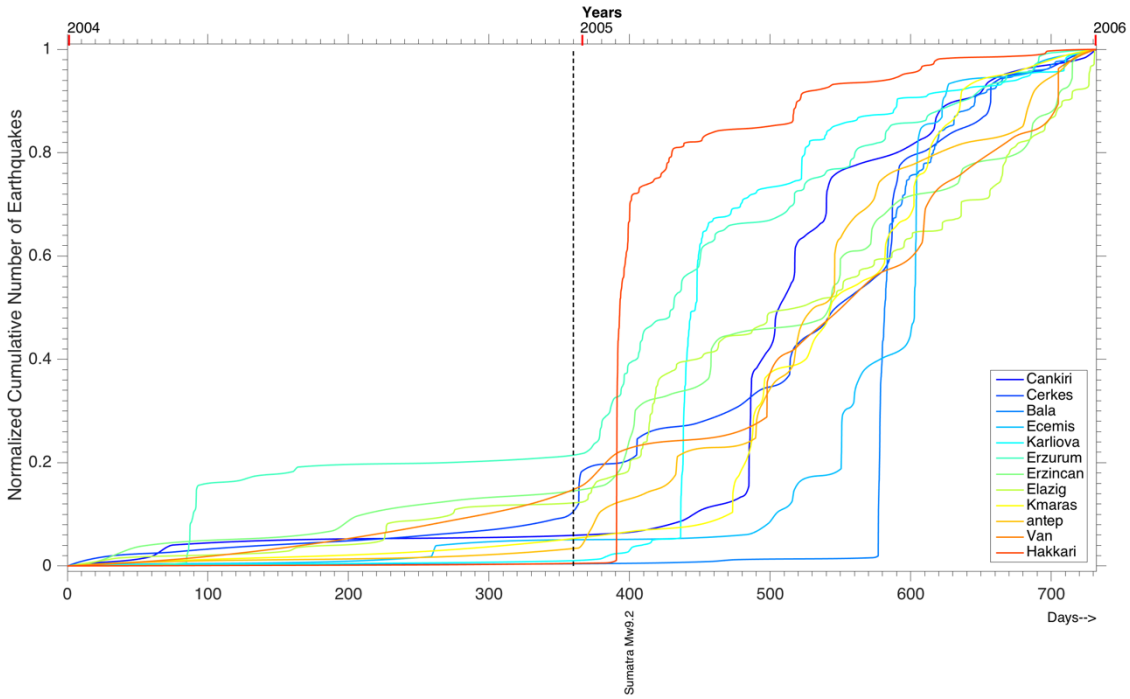

Figure S6: Cumulative number of events of selected clusters in central and eastern Anatolia for the time period of 2004 Sumatra Mw9.2 earthquake (See Figure 1 for the locations of the clusters).

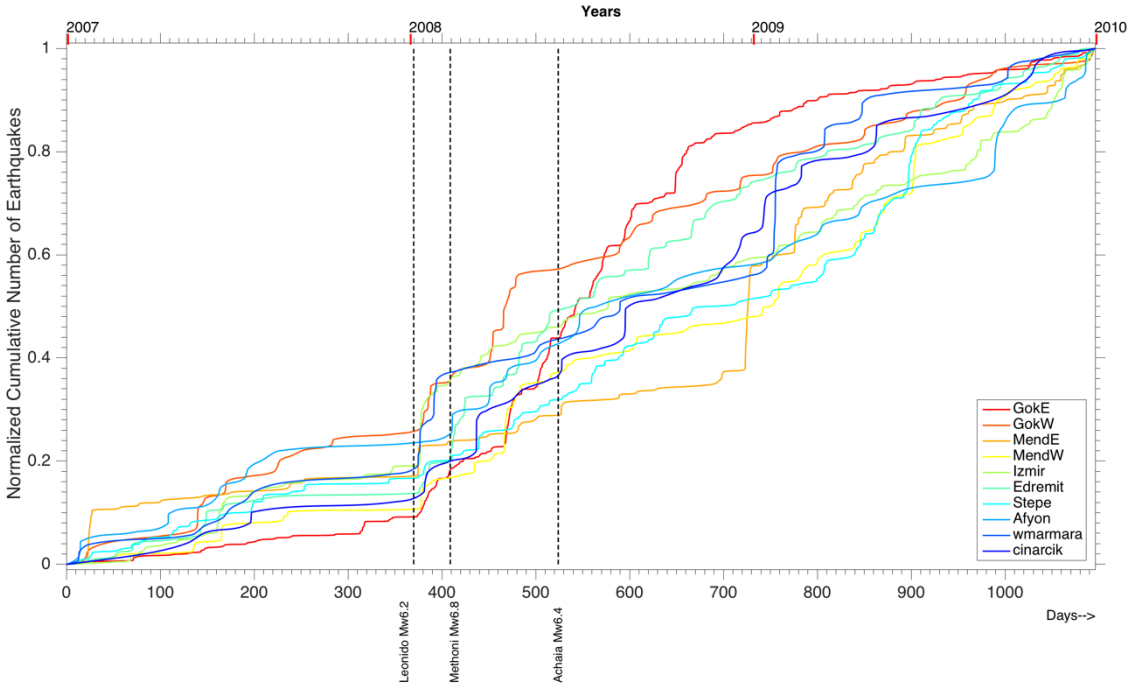

Figure S7: Cumulative number of events of selected clusters in the western Anatolia for time period of Hellenic subduction earthquakes (See Figure 1 for the locations of the western clusters).

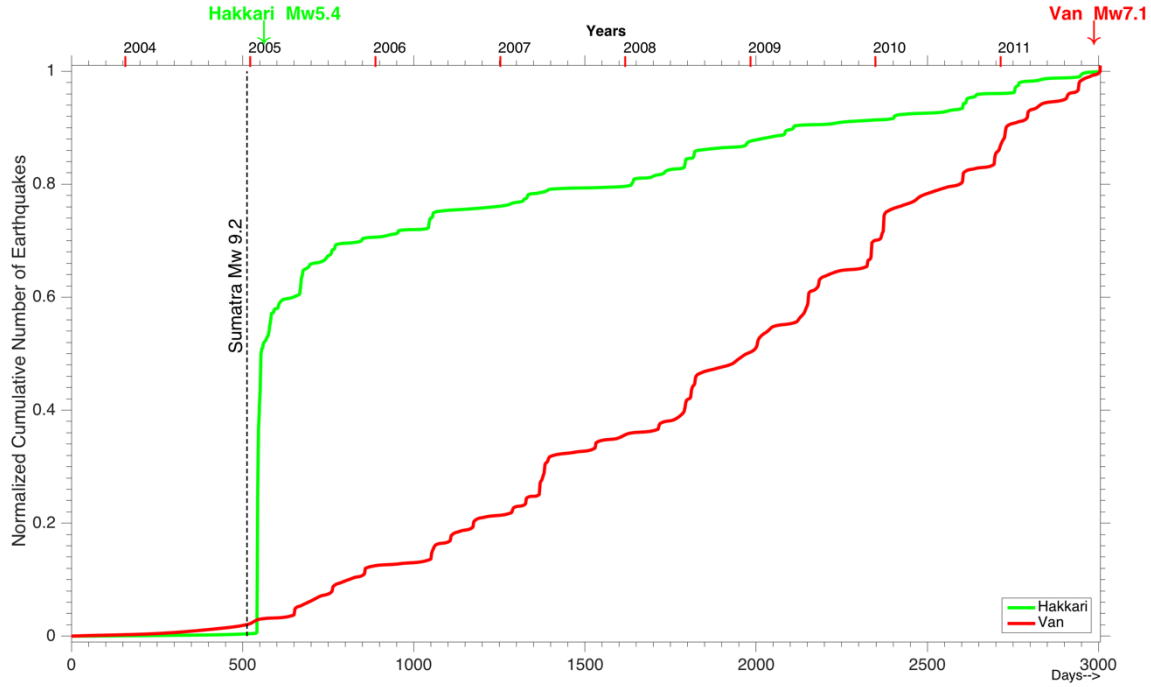

Figure S8: Evolution of the cumulative number of events of the clusters in the two easternmost clusters of Anatolia (See Figure 1 for the locations of the clusters)