Comparison between the LSR method and the Aki's method for estimating the b-value of the Gutenberg-Richter law.

The Figure S1 shows the comparison between two methods, LSR and Aki's method, for estimating the b-value of the Gutenberg-Richter law. By the LSR method, complete range of magnitudes of the frequency-magnitude distribution, plotted on log-linear scales, is fitted by a straight line, whose slope furnishes the estimate of b.

The Aki's method is based on the MLE method for estimating the b-value, that is calculated by applying the following formula:

$$b = \frac{log_{10}(e)}{< M > -(M_c - \frac{\Delta M_{bin}}{2})}$$

where *<M>* is the mean magnitude of the earthquake dataset, M_c is the completeness magnitude and ΔM_{bin} is the bin size (typically 0.1).

It is clearly seen that the estimation of b by LSR is better than that performed by Aki's method.

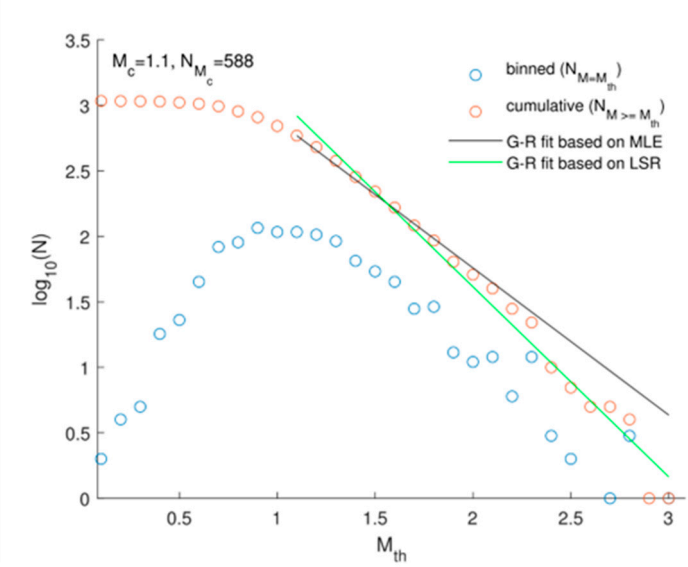


Figure S1. Comparison between the LSR method and the Aki's method for estimating the *b*-value.