



**Figure S1.** Diagram of magnitude and frequency.

The relationship between the magnitude and frequency is close to linear, which follows the law of G-R. There is a small uplift when the magnitude larger than 6 that is normal in this area. Note that there exists an offset between the frequency of magnitude smaller than 2.5 and the linear value of fit, which may indicate an incompleteness of the seismic catalogue when the magnitude below 2.5. Therefore, we decide to choose magnitude of 2.5 and above for the completeness of catalogue.