

the Recurrence Periods of Earthquake in Sabah Using the CTBTO International Monitoring System Data

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Sabah is the most seismically active state in Malaysia where it has recorded higher number of moderate seismological activities for the past decades. The seismicity map of Sabah shows the presence of two zones of distinctive seismicity, which are Ranau in Kota Kinabalu and Lahad Datu in the southeast of Sabah. The International Monitoring System (IMS) network set-up by the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) has successfully detected seismic events that occurred in Sabah for the past decades. This paper aims at quantifying the recurrence periods and probabilities of occurrence of earthquake in Sabah using the IMS seismic data. The Extreme Value Distribution Type-I has been applied in this study to evaluate the maximum magnitude data, where the results of analysis have enabled the quantification of recurrence periods and probabilities of occurrence at any given earthquake magnitude. Consequently, the findings from this study could be utilized to further assess the impact of seismic events that are certainly useful to assist relevant entities in planning for disaster management in Sabah.

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Promotional text

This study aims at quantifying the recurrence periods and probabilities of occurrence of earthquake in Sabah, Malaysia using the IMS seismic, where the findings could be useful to further assess the impact of seismicity in the region.

Oral preference format

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