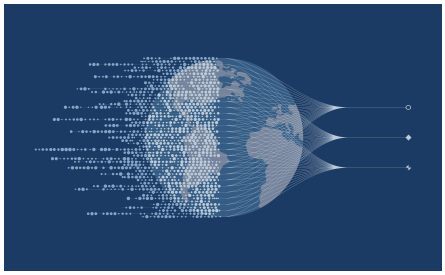

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Location Capability of the Thailand Seismic Network

The performance of earthquake detection and localization within the seismic network of Thailand was analyzed, encompassing the Thai Meteorological Department (TMD) network, which serves as the main authority for monitoring seismic activity in Thailand and adjacent regions, along with the seismic network of the Department of Mineral Resources (DMR) and the CMAR array of the CTBTO. The minimum magnitude is influenced by the seismic noise present at the seismic station as well as the distance between the earthquake and the station. A total of 173 seismic stations distributed throughout the country used to calculation of a P-wave impulse amplitude recording at station that is higher than the seismic noise level of the station to estimation the detection threshold of the seismic station or the magnitude of completeness Mc of seismic network. Based on data from at least 4 detecting stations, the average magnitude of completeness for earthquake localization in the Thailand seismic network is ~2.9. The Northern part has the lowest Mc of 2.3, especially in Chiang Mai Province, we can locate earthquakes with a magnitude of less than 1.5 due to a dense station, including the CMAR array, which is utilized in the calculations.

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