

T1.5-P19. EARTHQUAKE OCCURRENCE STATISTICS AND DELIMITATION OF SEISMOGENIC SOURCE ZONES IN HIMALAYAN BELT

Himalayan belt bounded by 25° -40° N and 65° -85° E have investigated for seismogenic source identification and earthquake hazard assessment. An analysis of database for the period 1853 to Oct. 10, 2005 indicates that the seismic activities in whole area are linked with the ubiquitous tectonic features of the region. Study accomplishes that Hindukush and its surrounding areas are highly active and are responsible for maximum percentage of total activity relative to other. About 99% percentages of total intermediate earthquakes are confined in Hindukush region between 35.2°-38.8° N and 68.2°-74.9° E. It is observed that the intermediate and shallow focus events contributed equally to the seismicity of Hindukush and its close vicinity. The peaks of annual frequency for shallow and intermediate events correspond to the occurrence of large earthquakes since 1963, which are preceded and followed by low seismicity of varying periods. The seismicity of the Western Syntaxis and the Himalayan Frontal Arc are analogous to each other. The foci distribution of earthquakes in Hindukush and its surrounding areas are located in a vertical column suggesting V shaped structure of the region. Based on other seismological criteria, potential zones have been delineated and earthquake hazard in each sources forecast.

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Track Classification: 1. The Earth as a complex system