

Sikkim Earthquake 2011: Bangladesh Experience

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Bangladesh is mostly floored with Holocene alluvial and deltaic unconsolidated sediments and minor Tertiary folded sedimentary rocks, and located close to the one of the active tectonic regions of the world. Whole of Bangladesh was shaken due to Sikkim earthquake of 18 September 2011, although there was no serious damage. Because the country experienced the highest shaking during last 60 years so the necessity for an assessment on the impact of this earthquake was felt. As the epicenter of the earthquake of 6.9 magnitude was near the Indian-Eurasian plate boundary and 495 km away from Dhaka, the capital city, the assessment was made mostly on the basis of the reports published in the newspapers, information collected from different parts of the country and interviews of local people.

Based on these information an intensity map of the earthquake was prepared showing how the shaking affected the people, natural bodies and artificial structures. The intensity map clearly showed that response to earthquake shaking was not only related to the distance from the epicenter and magnitude but also more related to the earth material i.e. local soil condition.

The maximum intensity was estimated to be IV-V which was found in areas close to the epicentral region, and in areas of clay-rich deposits and in the Old Ganges delta. Result of the study gives a clear relationship between the earthquake shaking and response of unconsolidated sediments.

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