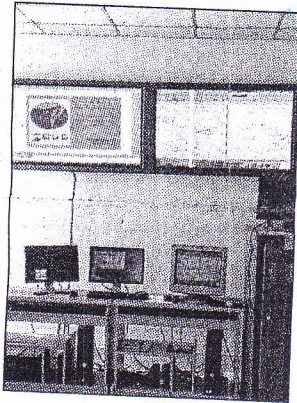


Blame on twin factors

PULLOCK DUTTA

Jorhat, April 28: Northeast states are likely to witness three to four times more damage than Nepal if an earthquake of a similar magnitude recurs in the region, especially in the thickly populated state capitals.

The chief scientist of the geo-science department of the North East Institute of Science and Technology (NEIST), Ranju Duarah, made these observations to **The Telegraph** at the central seismic recording observatory of NEIST today. The geo-science department of NEIST is the only institute in the region to have 27 remote high-resolution seismic observatories.



The central seismic recording observatory in Jorhat. Telegraph picture

Duarah said the young sedimentary rock formations in this part of the region would result in a massive destruction because of site-dependent ground amplification which could be much more than Nepal.

"The destruction in all Northeast state capitals would be more because of rapid increase in population and reckless construction. The thickly populated Nagaon and Morigaon districts in Assam would bear the brunt of the earthquake. Several parts of Upper Assam would also witness heavy damages as seen in the last major earthquakes of 1897 and 1950," said Duarah, who is doing research on seismic activities in the region.

He said Assam valley is highly susceptible to ground rupture and liquefaction (when vibrations of an earthquake cause a soil to lose strength and flow) and may suffer the maximum damage if a major earthquake hits the region. The impact, however, would also depend on epicentral distance.

Duarah said Assam is in a highly active seismic zone (zone V) and frequent earthquakes are observed here although these are not always felt. The state has already witnessed two big earthquakes — in 1897 and in 1950.

He said though it is impossible to predict when and where an earthquake would strike, big earthquakes, which are above magnitude 8 on the Richter scale, have an approximate recurrence of 50-80 years along the Himalayan belt while smaller magnitudes of 6.5-7 have a repeat rate of 25 to 30 years.

At present, the Council for Scientific and Industrial Research (CSIR), NEIST, in collaboration with the National Disaster Management Authority (NDMA), is implementing a project, M 8.7 Shillong 1897 Earthquake Scenario: NE Multistate Awareness Campaign.

The Shillong earthquake, with an estimated magnitude of 8.7, ruined all masonry buildings over a large area of 390,000 square km and was felt over 650,000 square km from Myanmar to New Delhi.

"Although the loss of life and property as a whole was quite minimal then, a revisit of Shillong quake in the present day is likely to present a very damaging scenario because of polarisation of population in the capital cities and the change in building typology in the region," Duarah said.

CSIR NEIST, with support from NDMA, New Delhi, and NE state disaster management authorities are making an attempt to develop a scientific scenario for a repeat of the Shillong earthquake to give an approximate estimate of loss and damage and forewarn on the challenges to be met.