The history of earthquakes is an important factor in the study of seismicity of any region. For this kind of study the location, depth and magnitudes of the past earthquakes are necessary. But unfortunately for north-east Indian region all these informations are available only from the later part of 19th century whereas in some countries like China, detailed information about the earthquakes which occurred during the last 3000 years are available. The description of earthquakes of north-east India can be traced from "A History of Assam" by Sir Edward Gait et. al. (1967).

The first recorded earthquake in north-east India occurred in the year 1548 and described as a severe one. It caused openings of the earth in many places and, sand and ashes were poured forth. There was another terrible earthquake in the year 1596. Sand, ashes and hot water were thrown up from below the crust and one of the king's palace was collapsed.

In 1607, there was another severe earthquake in which a number of hills disappeared in north-east India. The earth also opened in several places in plains throwing water and mud and tracks of ground suddenly sunk.
There were several earthquakes in the year 1642, which were followed by heavy flood in the year.

On the 7th February, 1663, a severe earthquake occurred which lasted for about half an hour. Report of damage and destruction are not available.

Another great earthquake occurred in the region during the reign of the King Rudra Singhna (1696 - 1714). It was reported that a number of temples were damaged in the region.

On the 10th January, 1869, another severe earthquake which caused damage to surma valley occurred at Cachar and felt upto Manipur. Many buildings were damaged. Roads were cut off. It was reported that a market place sank down to about 15 - 30 feet and subsidence occurred in many parts in the Sylhet district. The water level of the river Barak was raised by two feet and didnot fall for several days. It was felt in an area of 64,000 square kilometers. Epicentre was reported to be in the east of Shillong plateau.

A high intensity earthquake was also reported in the year 1882 which felt in Silchar causing some damages.

The first instrumentally recorded earthquake felt in north-east India on 12th June 1897 was one of the biggest earthquake of the world. The epicentre was over Shillong plateau and its assigned magnitude was 8.7 (Richter scale). The earthquake was studied by R. Oldham (1899) in details and
an excellent short summary is given by Davison (1936). The earthquake lasted for about two and half minutes and destruction spread over an area of 384000 square kilometers.

The intensity of the earthquake was so large over the epicentral area that the ground shaking was experienced by human observers upto a distance of 1500 kilometers from the epicentre. In some places the horizontal acceleration reached about 4200 mm/sec$^2$. On the slope of Khasi hills a number of round small blocks of granite were thrown up and projected to other places. This indicates that at those places the vertical acceleration exceeded the value of gravity. Land slide occurred on an enormous scale in the hills. River beds were tilted, even the river Brahmaputra was affected resulting in much flooding after the earthquake.

Two faults Chedrang and Samin were found. The Chedrang fault located about 160 km WNW of Shillong along NNW-SSE direction. It has vertical displacement in which the eastern side moved upwards, the maximum throw being about 10.5 metre in a length of about 19 kilometers. The Samin fault is trending about E 30°S - W 30°N near the village of Samin. In addition to these faults a fractures of ground surface occurred at Bordwar. Some ponds were also formed by interruption of the gradient of drainage channels. These are also known as sag ponds. Some seismologists believed that the Chanddubi beel of south Kamrup district was formed during this earthquake.
There were also a large number of aftershocks of this earthquake which scattered over a large area. The decline of the frequency of aftershocks gradually decreased but they continued for about 10 years. As there were a large scattering of aftershocks which is a characteristic of deep focus earthquake, Oldham thought it to be a deep focus one. However, a recent study tends to indicate that it was a shallow focus earthquake (Goswami and Sarmah, 1982).

Various seismologists (Kelleher, 1972; Seeber et al., 1987; Chander, 1989; Molnar and Pandey, 1989) studied the cause of the earthquake within the framework of the plate-tectonic hypothesis. But this earthquake does not seem to fit into their hypothesis.

Gahalaut et al. (1992) tried to find out a rupture model for the great earthquake of 1897 in north-east India. They suggested that the low angle thrust fault was responsible for the earthquake.

Other recorded earthquakes whose detailed study are still unknown are Srimangal earthquake of 8th July 1918, the earthquake of 9th September 1923 (latitude 25.5°N and longitude 91.0°E), Dhubri earthquake of 2nd July 1930, earthquake of 14th August 1932 (latitude 26.0°N and longitude 95.5°E), the earthquake of 16th August 1932 (latitude 23.5°N and longitude 94.3°E), the earthquake of 23rd October 1943 (latitude 26.0°N and longitude 93.0°E), Dibrugarh earthquake...
of 29th July 1947. The magnitude of all these earthquakes are believed to be within 7 and 8 of the Richter scale.

Another great earthquake occurred on the Tibetan plateau on 15th August 1950 near the Indo-China border. The epicentre was near a place named Rima, latitude 28.5°N and longitude 96.5°E. The magnitude of the earthquake estimated both at Pasadena and Strasbourg was 8.6 on the Richter scale with depth of about 25 kilometres. This earthquake was followed by a large number of aftershocks (about 54 numbers) with epicentres scattered over a large area around the epicentre of mainshock, with magnitude ranging from 5.6 to 7.1.

Due to blocking of the rivers by landslides and subsequent release of impounded water, flash flood in the Brahmaputra valley occurred killing about 532 people.

On 21st March 1954, an earthquake of magnitude 7.1 occurred in Manipur - Burma border. The epicentre of the earthquake was latitude 24.33°N and longitude 95.15°E and depth was about 180 kilometres.

The fault plane solution shows thrust fault mechanism striking N50°E and dipping to NW at an angle of 60° (Tandon and Mukherjee, 1956).

In Cachar an earthquake of bodywave magnitude 5.5 occurred on 30th December 1984. The epicentre of the earthquake
was 24.67°N latitude and 93.07°E longitude and depth was about 35 kilometres. This earthquake was found to be preceded by a well defined precursory seismic swarm and seismic quiescence. Twenty people were killed and thousand became homeless.

On February 6th, 1988, an earthquake of magnitude 5.8 (Mb) in Bangladesh and known as the largest earthquake in the immediate vicinity of Dauki fault. Two people were killed and at least 100 injured in Bangladesh as a result of this earthquake.

The latest big earthquake occurred in Manipur - Burma border on 6th August 1988 of body magnitude 6.8. Its epicentre was 25.14°N latitude and 95.12°E longitude with focal depth 92 kilometres. This earthquake was of tectonic origin and may be caused by a sudden fracture of a portion of the earth's crust or relative movements along old fault planes. It occurred in the subduction zone between Indian and Burmese plate. The damages extended to the areas of the districts of Sibsagar, Lakhimpur and Dibrugarh of Assam.

Cracks developed in many high rise buildings in Guwahati city. The colony which consisted of four stored blocks allocated to the Reserve Bank of India's employess, have developed cracks on the walls and the staircases. Some bricks and concrete lumps of the Great Shiva temple at Sibsagar gave away. The railway line at several places on Lumding - Diphu section of north-east Frontier Railways was
damaged. Near Rāha the national highway 37 had been fissured. The Nagaland Pulp and Paper Company Ltd. at Tuli was completely damaged. At least 4 persons were killed and 15 others seriously injured during this earthquake in north-east India. Unprecedented flood occurred in all parts of Brahmaputra and Barak valley.

The above discussion shows that north-east India is vulnerable to destructive earthquakes and as such the study of earthquake hazard is very important for this region.