

Earthquake Report

Earthquake occurred in Goalpara, Assam on 07/07/2021

1. A Perceptible earthquake of magnitude (M) 5.2 occurred in North-East Region of India at District - Goalpara, Assam, at 26.15 N and 90.28 E with focal depth 14 km near Lakhipur sub-division of Goalpara district at 08:45:25 IST. The epicenter is about 141 km West of Guwahati.
2. The earthquake occurred around 20 km at the western side of North-South trending Dhubri Fault of Assam. The high seismicity of the northeast Indian region has been attributed to a complex tectonic province displaying juxtaposition of the E–W trending Himalaya and the N–S trending Arakan Yoma belt. The major tectonic background includes the eastern Himalayan structures, the Mishmi massif, the Indo Myanmar arc, the Brahmaputra valley, and the Shillong plateau. The Himalayan structures mainly consist of the thrust planes namely the Main Central Thrust (MCT), Main Boundary thrust (MBT), Main Frontal Thrust (MFT), and their subsidiaries.
3. The occurrence of today (7th July 2021) Goalpara earthquake (M 5.2) is found located at distance of about 250 km in the south west of the 28th April 2021 Sonitpur earthquake (M 6.4) that rocked at 17 km depth, which signifies two different source ruptures associated with varying amount of structural heterogeneities
4. The Northeast India falls in seismic zone V in seismic zoning map of India (IS 1893 (Part 1): 2016) which is highest seismically active zone. Location and intensity map of earthquake are shown in **Fig. 1 and Fig.2**, respectively.
5. The assimilated intensity of the 7th July Goalpara earthquake (**Fig. 1**) suggests that the source zone is associated with strong degree of shaking of intensity and gradually died out by assuming value from the slight to weak. No damage of structure or casualty reported from the region.
6. At present 21 Seismological observatories of NCS are functioning in the Northeast India whose data along with the remaining observatories have been used for locating the earthquake.
7. The list of past earthquake events of Mag. 5.0 and above occurred within the 200 km of radius from the today's epicenter during the last 20 years is as follows:

Origin Time	Lat	Long	Depth (km)	Magnitude	Location
2002-06-20 05:40:43 UTC	26.3	88.96	15	5.0[ML]	73km SE of Siliguri, West Bengal, India
2003-03-25 18:51:24 UTC	27.43	89.47	10	5.4[ML]	16km WSW of Thimphu, Bhutan
2006-02-14 00:55:25 UTC	27.45	88.28	30	5.4[MB]	10km NNE of Yuksom, Sikkim, India
2006-02-23 20:04:53 UTC	27.13	91.58	10	5.6[MB]	57km SSW of Tawang, Arunachal Pradesh, India
2007-05-20 14:18:19 UTC	27.45	88.42	43	5.1[MB]	16km NNE of Ravangla, Sikkim, India
2007-07-22 14:03:03 UTC	25.42	88.86	39	5.0[MB]	135km W of Tura, Meghalaya, India
2009-09-21 08:53:05 UTC	27.30	91.34	10	6.1[MB]	61km WSW of Tawang, Arunachal Pradesh, India
2009-10-29 17:00:38 UTC	27.14	91.30	10	5.3[MB]	74km SW of Tawang, Arunachal Pradesh, India
2009-12-31 09:57:27 UTC	27.43	91.60	10	5.5[MB]	31km WSW of Tawang, Arunachal Pradesh, India
2011-09-18 12:40:46 UTC	27.85	88.6	45	6.9[MW]	22km NW of Lachung, Sikkim, India
2013-10-03 06:12:39 UTC	27.32	88.58	5	5.3[Mb]	3km WSW of Gangtok, Sikkim
2015-04-27 12:35:51 UTC	26.84	88.10	10	5.2[ML]	27km SW of Drajeelind, West Bengal, India
2015-06-28 01:05:25 UTC	26.40	90.25	5	5.6[ML]	98km N of Tura, Meghalaya, India
2017-01-03 09:09:03 UTC	24.14	91.88	33	5.4[Mb]	38km SW of Dharmanagar, Tripura, India
2017-11-08 04:50:53 UTC	24.24	91.16	34	5.0[Mb]	40km NNW of Agartala, Tripura, India
2018-09-12 04:50:46 UTC	26.40	89.96	10	5.8[Mb]	101km NNW of Tura, Meghalaya, India

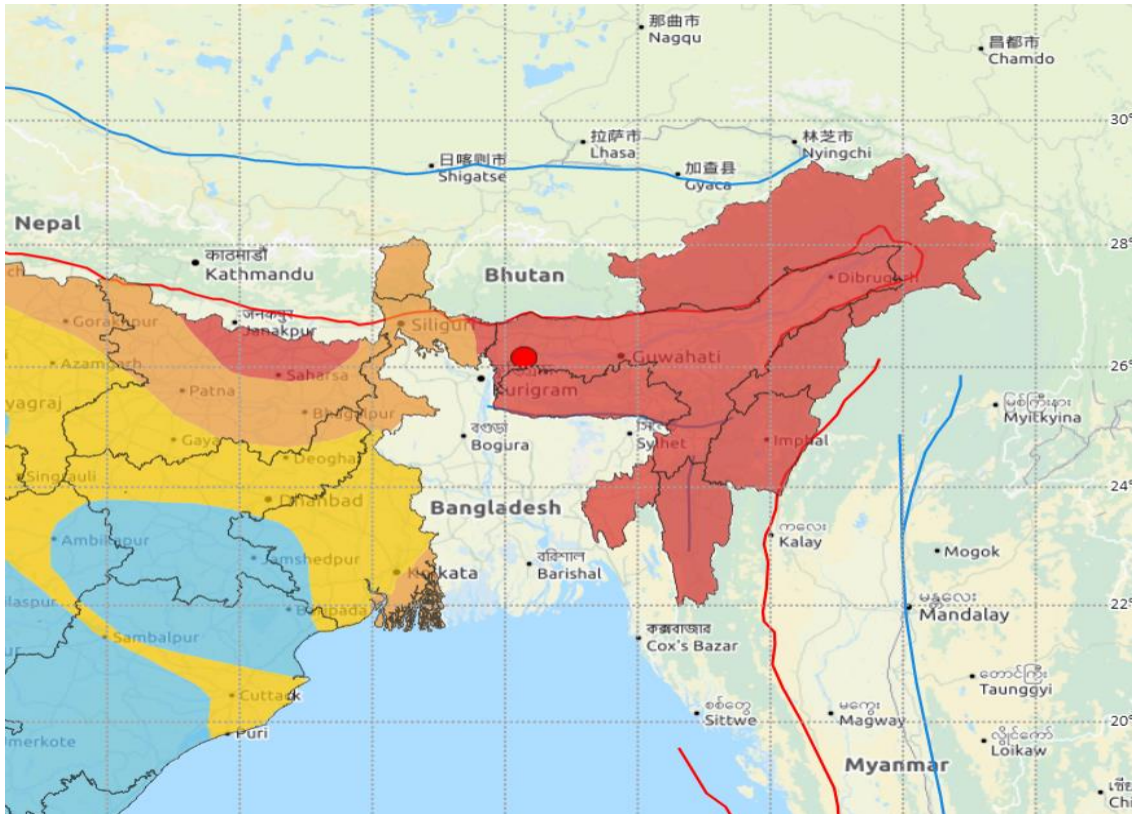


Fig 1: Location of earthquake of 7th July 2021 (M:5.2), Epicentre of earthquake is District - Goalpara, Assam.

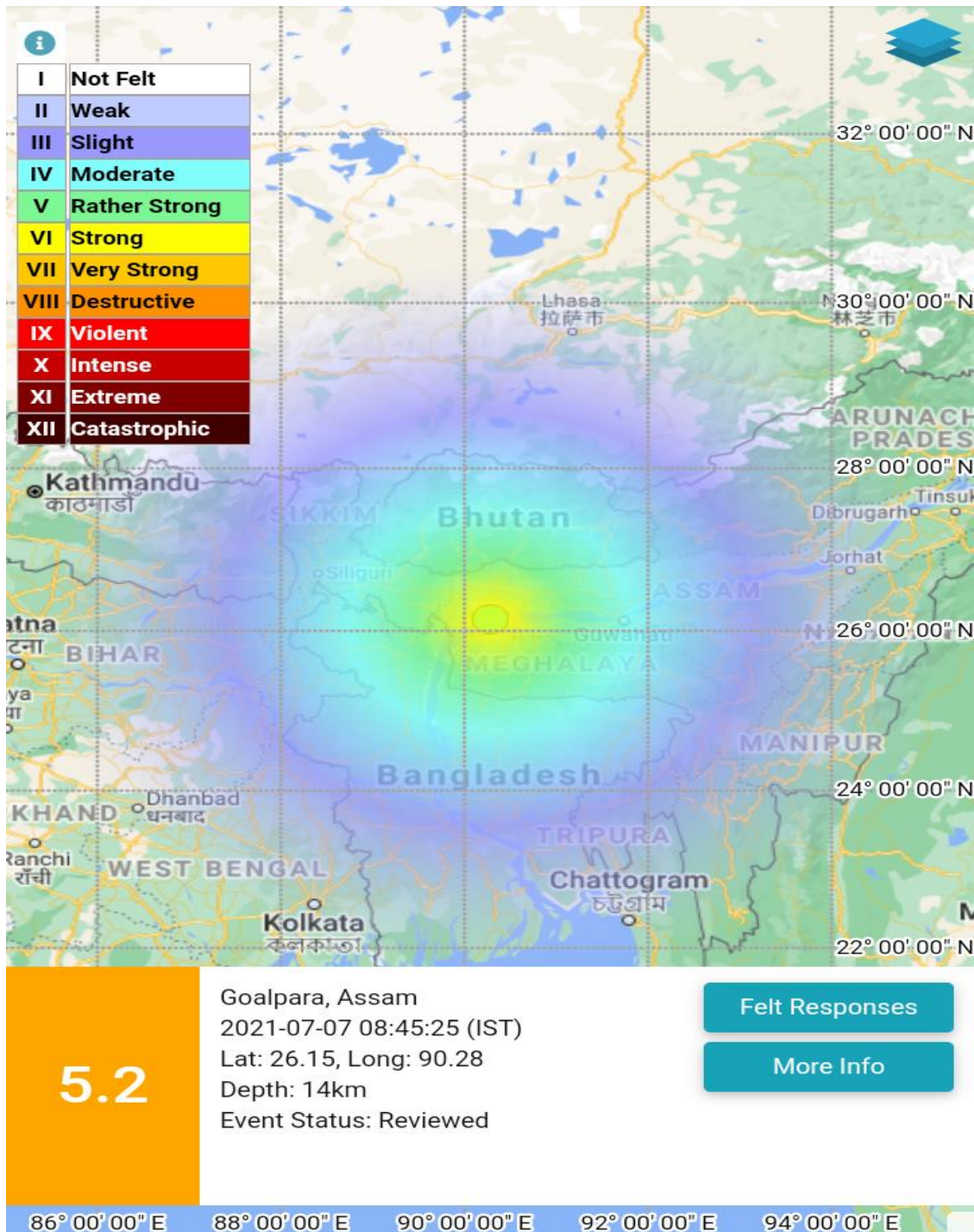


Fig 2: Intensity map of earthquake of 7th July 2021 (M:5.2), District - Goalpara, Assam.

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