



กองเฝ้าระวังแผ่นดินไหว
EARTHQUAKE OBSERVATION DIVISION



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Thai Meteorological Department (TMD)

Earthquake Observation Division

General Administration

Earthquake and Tsunami
monitoring section

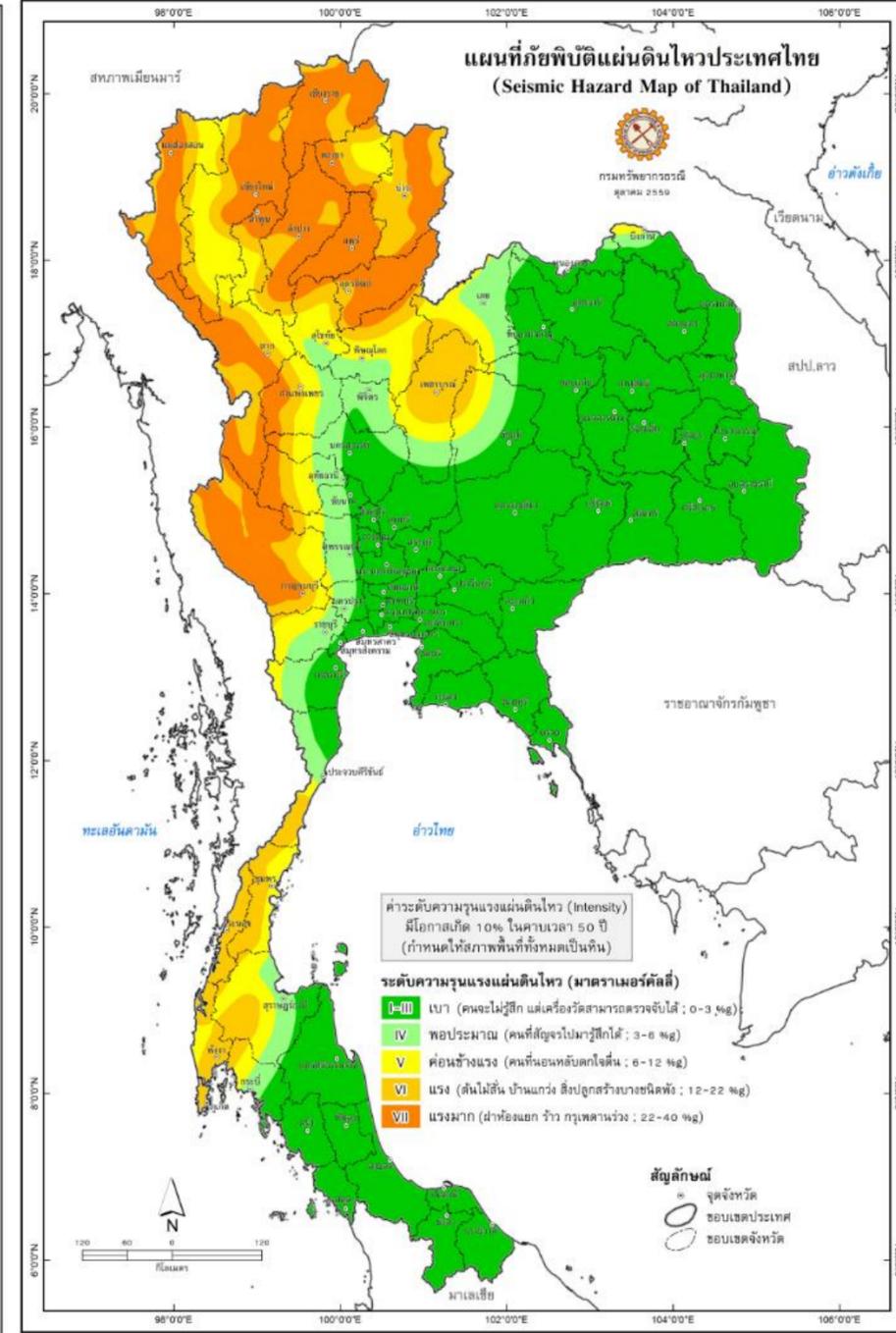
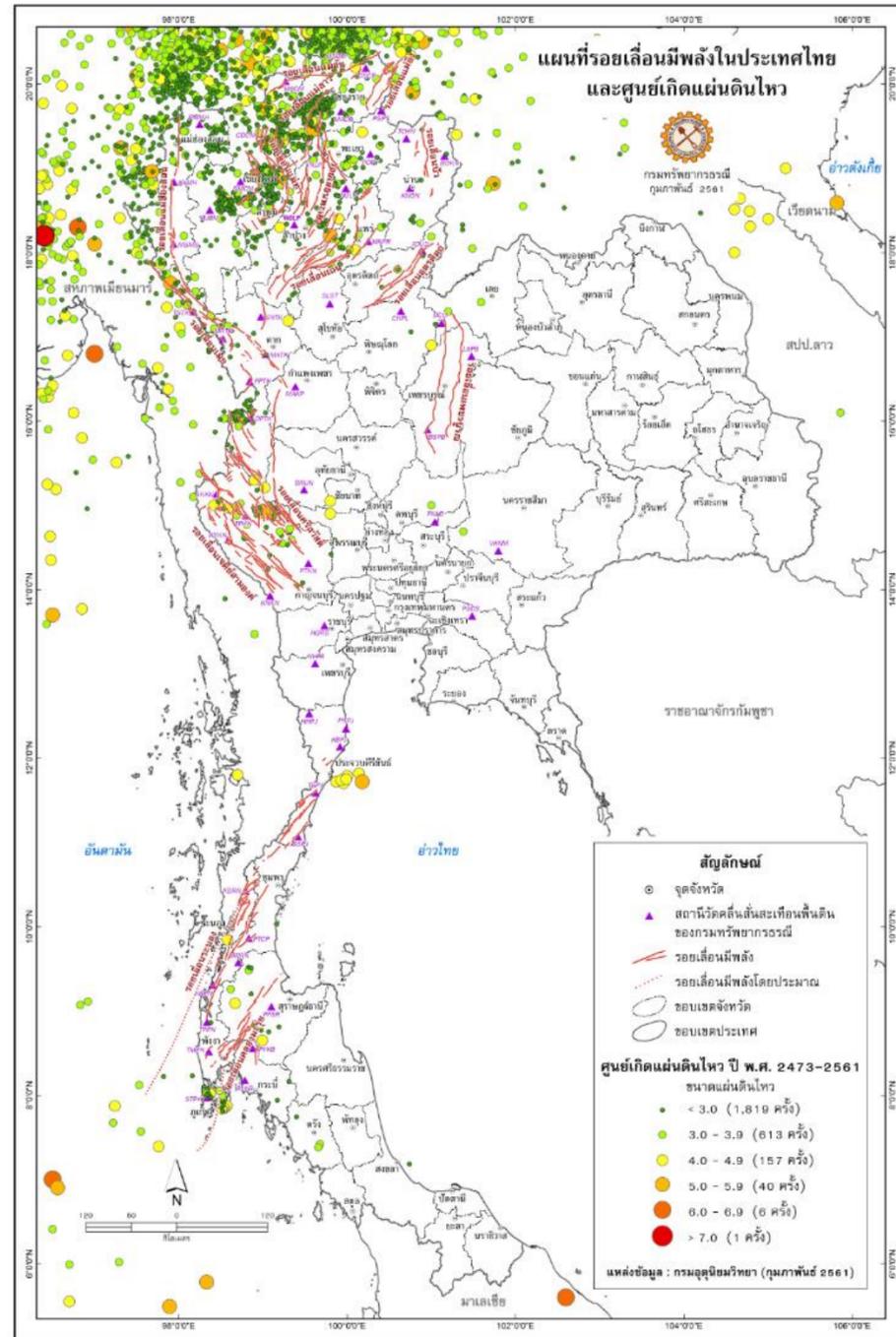
Earthquake monitoring system
development section

Seismic data processing and
statistical section

Research & development section

NDC2 : Waveform

- Earthquakes and tsunamis are followed 24 hours a day
- Dissemination of information to the public
- Research in related fields
- Exchange information & data with national and international agencies
- Operating, maintaining and developing the national seismic network



SEISMICITY IN THAILAND

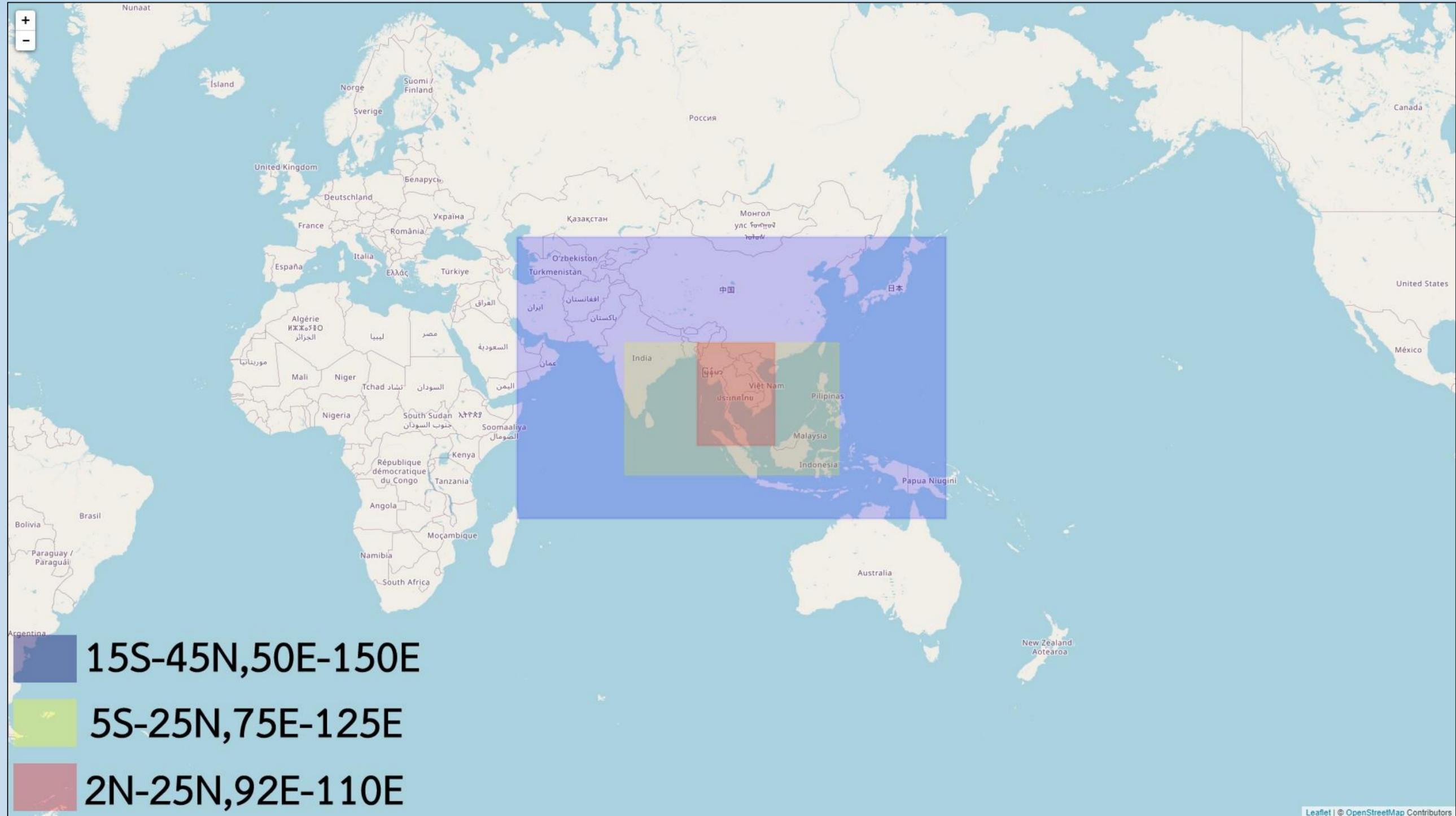
Most of the earthquake occur in northern, western and southern part of Thailand along the active fault.



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TMD EARTHQUAKE MONITORING SYSTEM





TMD EARTHQUAKE MONITORING SYSTEM

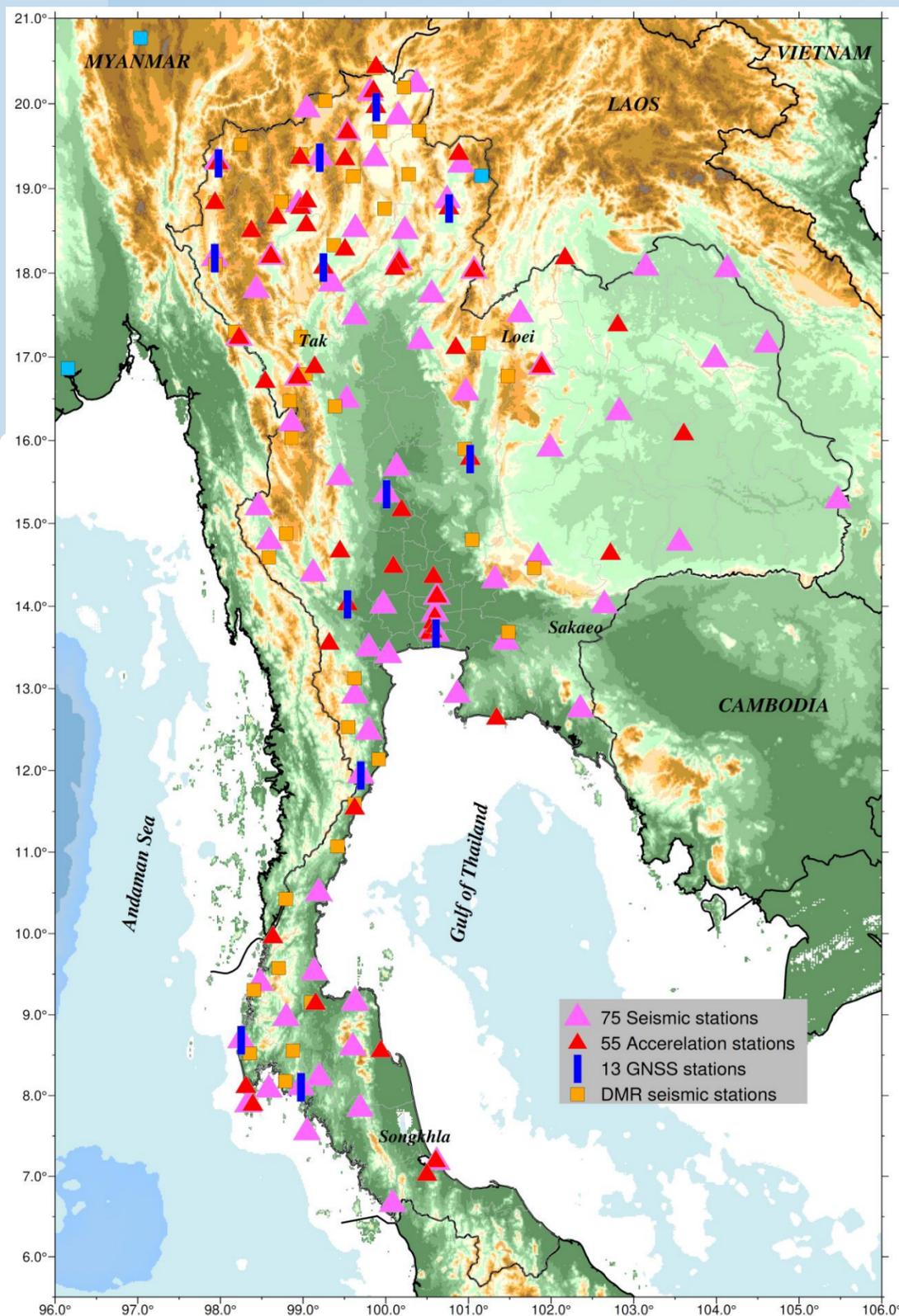


Real-time data streaming via Fiber Optic, 4G

DATA ACQUISITION BY SEISCOMP SERVER

24hr Earthquake and Tsunami monitoring

- **Analyst:** Earthquake Hypocenter, Magnitude, Moment tensor, Shake map, Tsunami height and arrival time
- **Archive of continuous data** (miniseed) and database on RAID hard disk **~20.0 GB/day**





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TMD EARTHQUAKE MONITORING SYSTEM



DISSEMINATION OF EARTHQUAKE AND TSUNAMI INFORMATION

- Local meteorological officer
- Local disaster prevention and mitigation officer
- National Disaster Warning center
- TV, Radio, Newspaper etc..



www.earthquake.tmd.go.th



Telephone



SMS



FAX



LINE ALERT

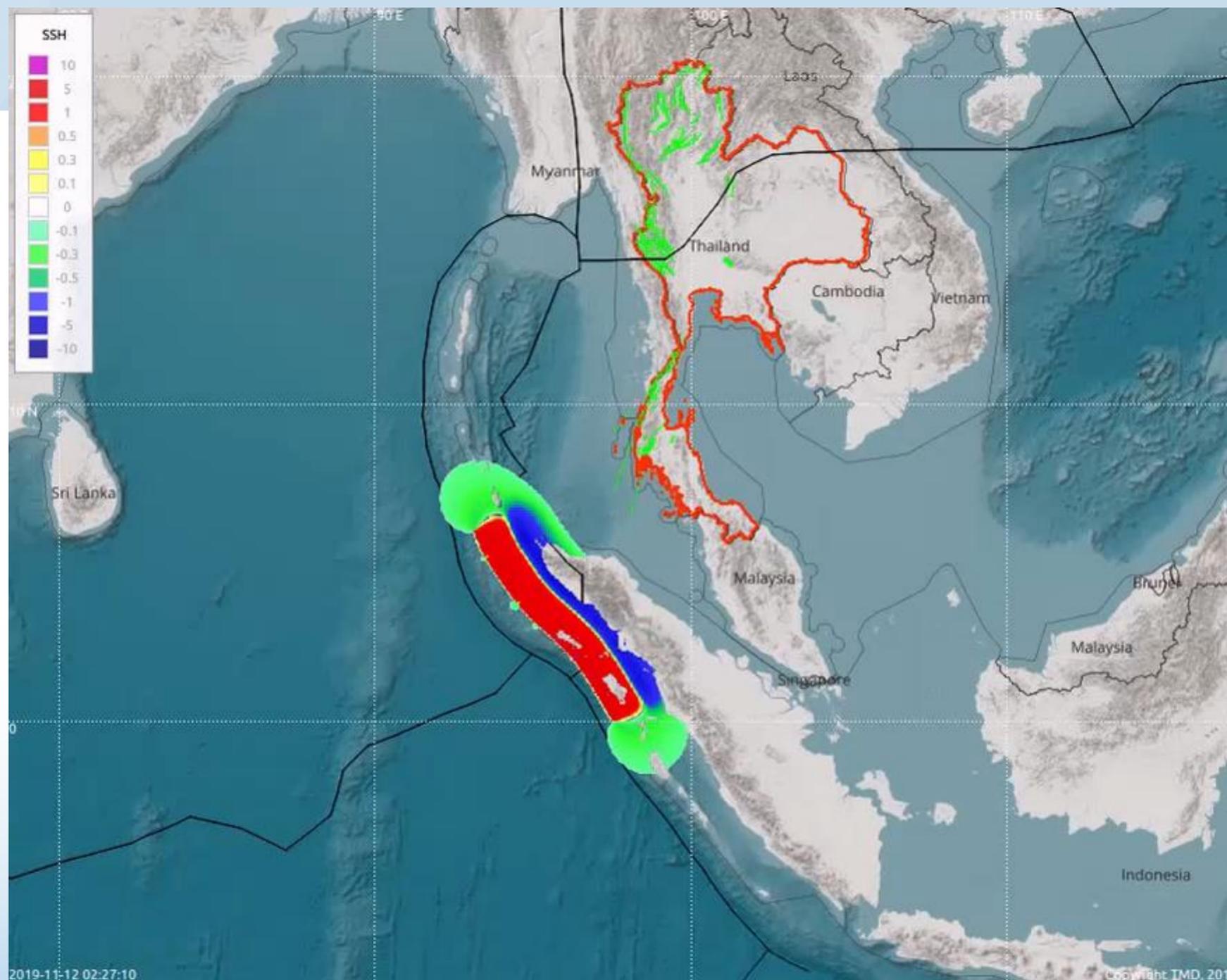


EarthquakeTMD



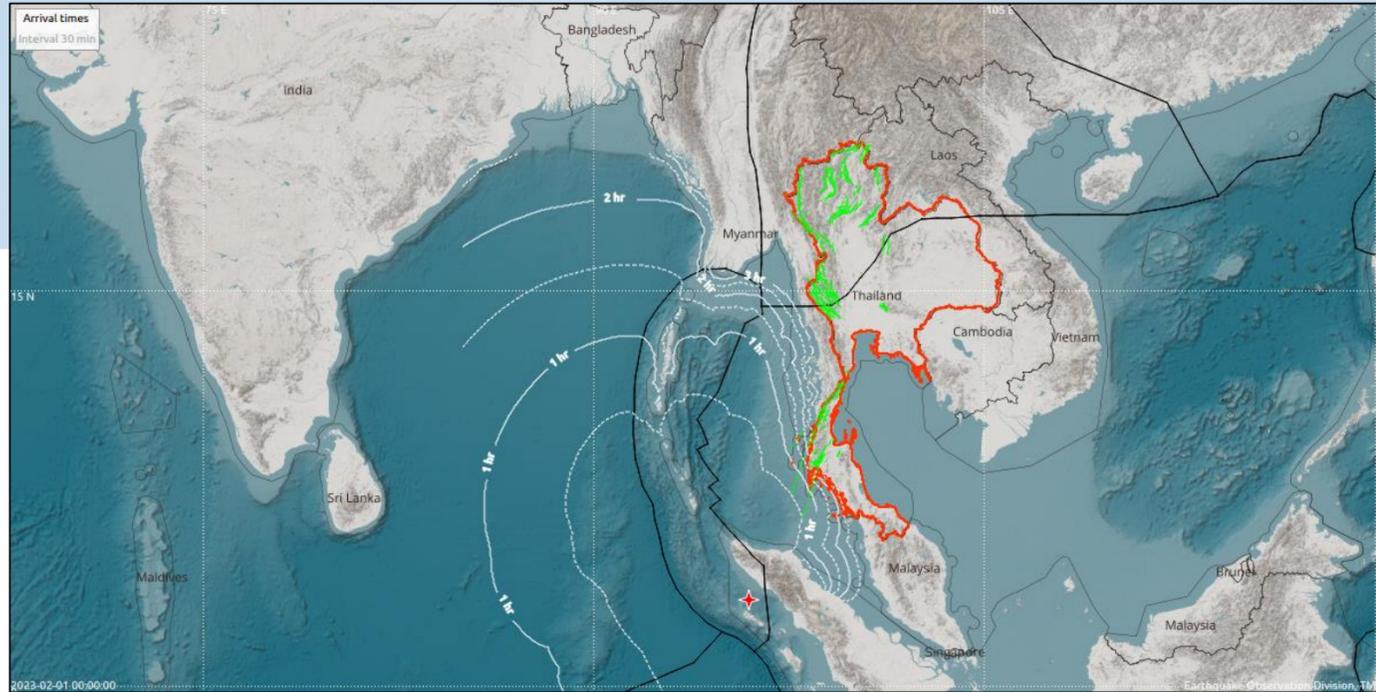


2004 INDIAN OCEAN EARTHQUAKE AND TSUNAMI

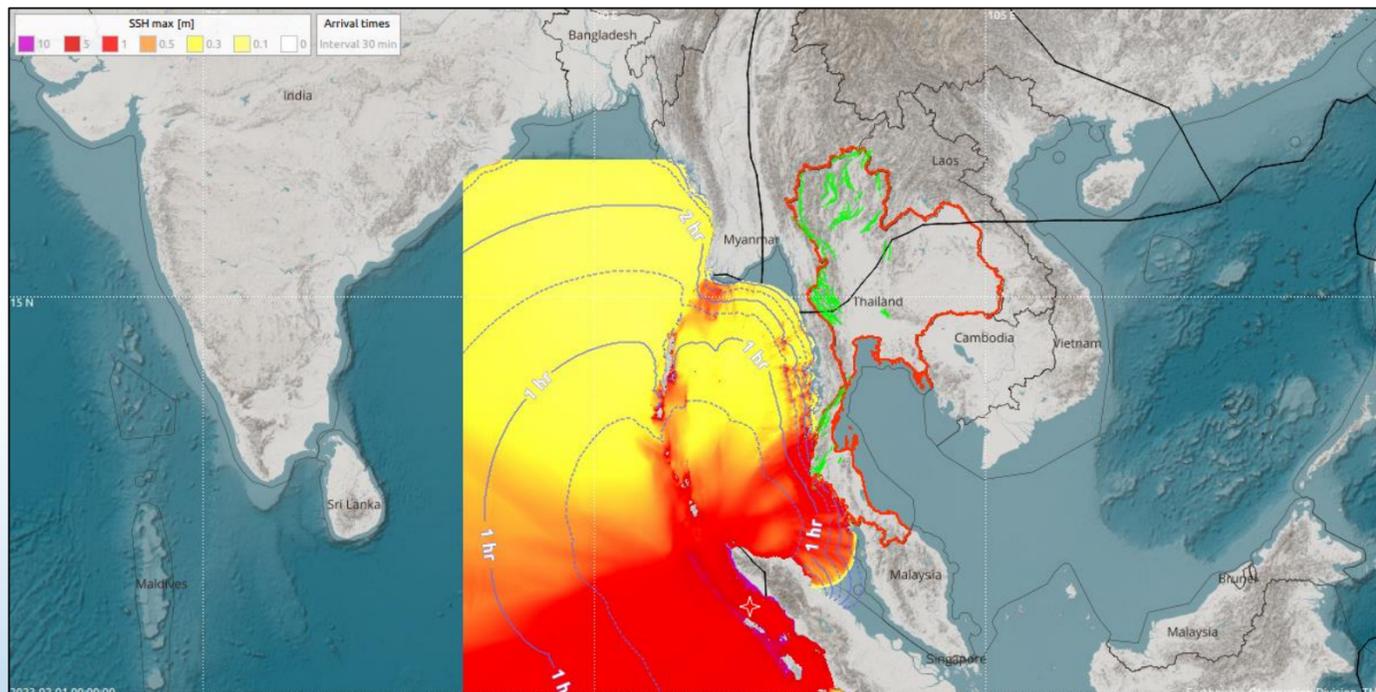




First arrival



Highest wave



TMD TSUNAMI BULLETIN

Magnitude : 9.1
Date : 01/02/2023
Time : 00:00:00 UTC
Latitude : 3.295 N
Longitude : 95.982 E
Depth : 30 km

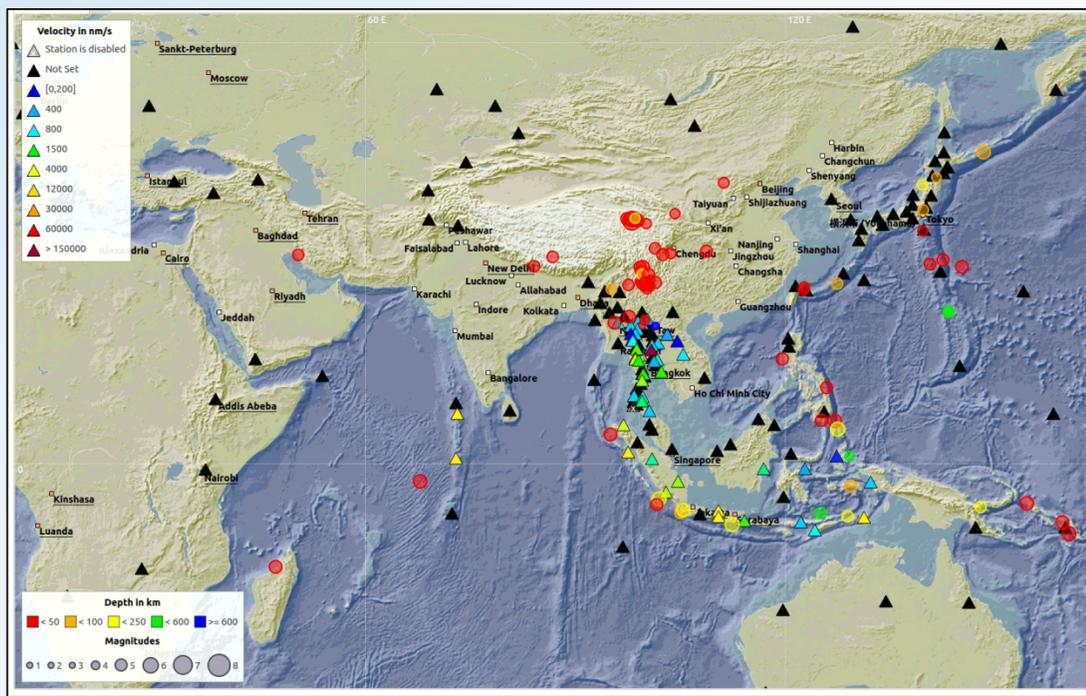
Location : Off West Coast of Northern Sumatra

Evaluation: THERE IS THE POSSIBILITY OF A TSUNAMI IN THE FOLLOWING AREAS:

| T1 | T3 | Status | Height | Province | Location |
|---------------------|---------------------|--------|--------|----------|----------------|
| 2023-02-01 01:54:40 | 2023-02-01 02:44:00 | Threat | 10.92 | Phangnga | Thung Maphrao |
| 2023-02-01 02:00:22 | 2023-02-01 02:45:30 | Threat | 8.11 | Phangnga | Ko Kho Khao |
| 2023-02-01 02:23:55 | 2023-02-01 03:10:00 | Threat | 7.86 | Phangnga | Bang Nai Si |
| 2023-02-01 01:26:33 | 2023-02-01 02:16:00 | Threat | 7.85 | Phuket | Mai Khao |
| 2023-02-01 01:57:16 | 2023-02-01 02:43:30 | Threat | 7.82 | Phangnga | Bang Muang |
| 2023-02-01 01:47:55 | 2023-02-01 02:33:00 | Threat | 7.33 | Phangnga | Khuekkhak |
| 2023-02-01 01:26:43 | 2023-02-01 02:18:30 | Threat | 6.68 | Phuket | Chalong |
| 2023-02-01 02:28:40 | 2023-02-01 03:30:30 | Threat | 6.48 | Krabi | Sai Thai |
| 2023-02-01 02:33:16 | 2023-02-01 03:26:00 | Threat | 6.42 | Krabi | Khlong Prasong |
| 2023-02-01 02:04:58 | 2023-02-01 02:50:00 | Threat | 6.17 | Phangnga | Ko Phra Thong |
| 2023-02-01 01:14:25 | 2023-02-01 02:05:00 | Threat | 6.13 | Phuket | Choeng Tale |
| 2023-02-01 02:17:16 | 2023-02-01 03:25:00 | Threat | 6.08 | Phangnga | Bang Wan |
| 2023-02-01 02:27:10 | 2023-02-01 03:12:00 | Threat | 6.00 | Phangnga | Khura |
| 2023-02-01 01:10:30 | 2023-02-01 01:59:00 | Threat | 5.97 | Phuket | Pa Tong |
| 2023-02-01 02:09:46 | 2023-02-01 03:03:00 | Threat | 5.89 | Krabi | Ko Klang |
| 2023-02-01 02:15:10 | 2023-02-01 03:08:00 | Threat | 5.66 | Krabi | Ko Siboya |
| 2023-02-01 01:27:28 | 2023-02-01 02:16:00 | Threat | 5.49 | Phangnga | Khok Kloi |
| 2023-02-01 02:40:19 | 2023-02-01 03:30:30 | Threat | 5.14 | Ranong | Nakha |
| 2023-02-01 01:11:03 | 2023-02-01 02:00:00 | Threat | 5.14 | Phuket | Kanala |
| 2023-02-01 02:40:13 | 2023-02-01 03:29:00 | Threat | 5.03 | Krabi | Khao Khram |
| 2023-02-01 01:17:31 | 2023-02-01 02:06:30 | Threat | 4.75 | Phuket | Sakhu |
| 2023-02-01 01:56:40 | 2023-02-01 02:50:00 | Threat | 4.71 | Krabi | Sala Dan |
| 2023-02-01 01:32:40 | 2023-02-01 02:21:30 | Threat | 4.70 | Phangnga | Thai Mueang |
| 2023-02-01 01:30:40 | 2023-02-01 02:18:30 | Threat | 4.67 | Phangnga | Na Toei |
| 2023-02-01 02:27:40 | 2023-02-01 03:30:00 | Threat | 4.55 | Ranong | Kamphan |
| 2023-02-01 01:55:39 | 2023-02-01 02:48:30 | Threat | 4.53 | Krabi | Ko Lanta Yai |
| 2023-02-01 02:31:55 | 2023-02-01 03:34:30 | Threat | 4.46 | Phuket | Thep Krasatti |
| 2023-02-01 02:30:39 | 2023-02-01 03:29:00 | Threat | 4.34 | Ranong | Muang Klang |
| 2023-02-01 01:10:10 | 2023-02-01 01:59:30 | Threat | 4.23 | Phuket | Ka Ron |
| 2023-02-01 02:30:34 | 2023-02-01 03:35:00 | Threat | 4.07 | Krabi | Taling Chan |
| 2023-02-01 02:01:58 | 2023-02-01 03:00:30 | Threat | 4.02 | Phuket | Si Sunthon |
| 2023-02-01 02:12:37 | 2023-02-01 03:07:00 | Threat | 3.94 | Trang | Ko Libong |
| 2023-02-01 02:42:42 | 2023-02-01 03:33:00 | Threat | 3.89 | Ranong | Bang Hin |



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NATIONAL ORGANIZATIONS AND INSTITUTIONS RELATED TO SEISMOLOGICAL OBSERVATION AND RESEARCH

- **Earthquake Observations Division, Thai Meteorological Department (TMD)**

For: Detect, identify and locate earthquakes, monitor seismic activities and Tsunami and disseminate information to the public.

- **National Disaster Warning Center (NDWC)**
- **Department of Disaster Prevention and Mitigation (DDPM)**
- **Department of Mineral Resources (DMR)**
- **Royal Irrigation Department (RID)**
- **Electrical Generation Authority of Thailand (EGAT)**

For: Electric generating dam safety





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THANK YOU

