

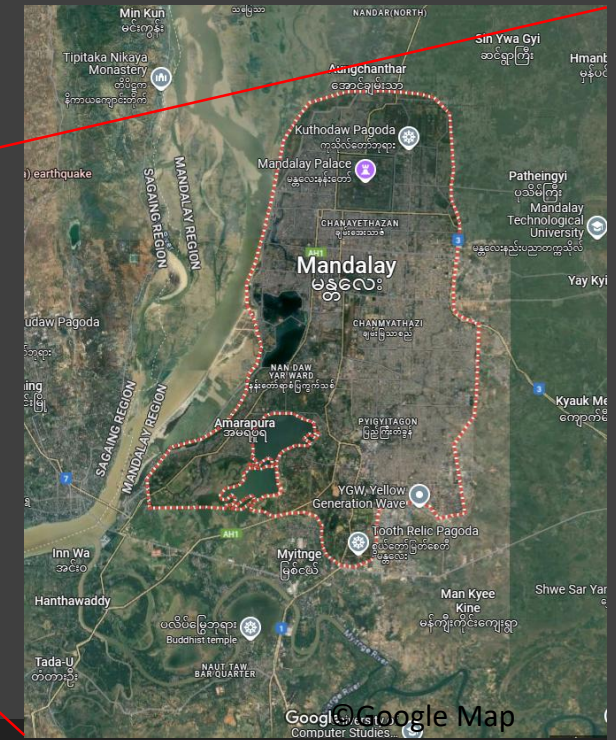
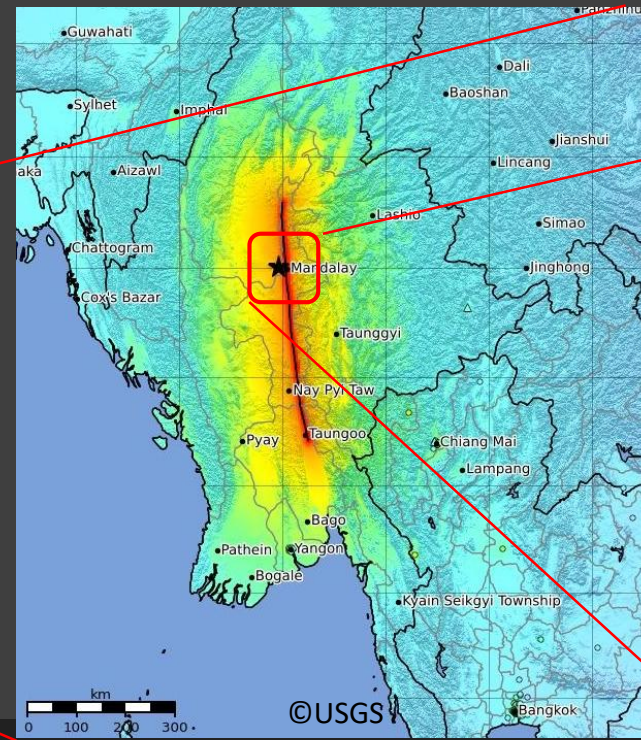


# 2025 Mandalay Earthquake (Myanmar)

## (GLIDE No. EQ-2025-000043-MMR)



日本語版はこちら



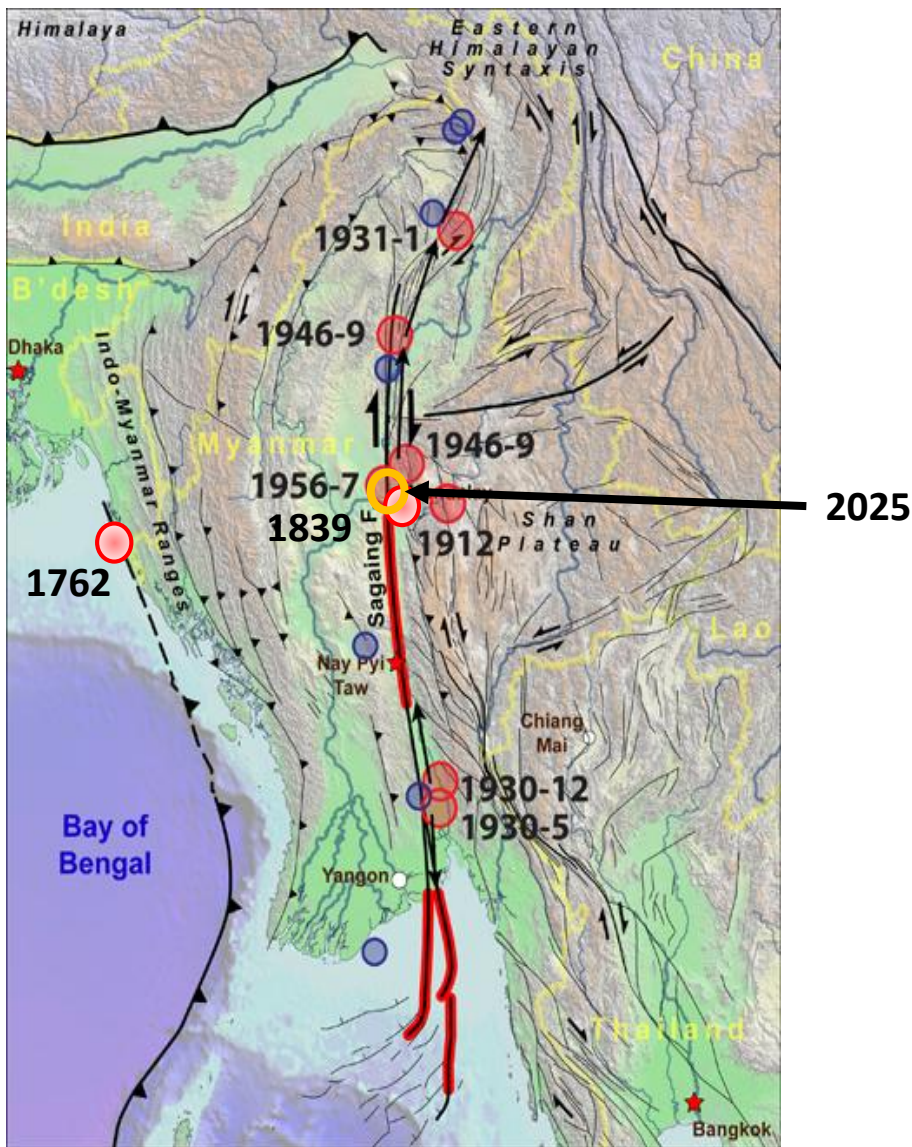
On 28 March 2025, 12:50(MMT, UTC+6:30)(15:20JST), an earthquake with a magnitude of 7.7 occurred in the Sagaing region of central Myanmar (GLIDE No. EQ-2025-000043-MMR). The hypocenter was near Mandalay, the country's second-largest city, and the depth of the epicenter is around 10 km. The maximum seismic intensity was IX on the MMI scale. This is the largest earthquake since the Maymyo earthquake (magnitude 7.9) on 23 May 1912. Significant damage has been reported in both Myanmar and Thailand. In Myanmar, a state of emergency was declared in six states and regions, including Sagaing region. A state of emergency was also declared in Bangkok, where seismic damage tends to be severe due to geological factors. As the secretariat of Sentinel Asia, which promotes the use of satellites for disaster management, ADRC contacted relevant organisations and requested emergency satellite observation.

Source: <https://earthquake.usgs.gov/earthquakes/eventpage/us7000pn9s/shakemap/intensity>



# Basic Information

- Located in the west of Indochina Island, Myanmar borders Thailand, Lao, PDR, Bangladesh and India. Land area is about 680,000 km<sup>2</sup>.
- The population is 51.31 million (2024 census). 70% is Burma, while others are various national races. The largest city is Yangon (approximately 2.4 million), followed by Mandalay (about 1.7 million), and then the capital Naypyidaw (about 900,000).
- The Ayeyarwady River runs vertically through the center of the country, and the Sagaing Fault, which marks the boundary between the Indian Plate and the Eurasian Plate, also runs through it. It is a strike-slip fault similar to the San Andreas Fault in the United States.
- The largest earthquake to hit Myanmar was the Chittagong–Rakhine earthquake on 2 April 1762 (estimated 8.8 Mw), with an estimated maximum intensity of XI (MMI), and it also triggered a tsunami.
- The largest recorded earthquake near Mandalay was the Mandalay Earthquake on 23 March 1839 (estimated 8.2 Mw), with an estimated maximum intensity of XI (MMI). Ava, the capital at the time, was almost completely destroyed by the quake and was subsequently abandoned.
- Mapping 100 Years of Earthquakes in Myanmar is available at the MIMU site (<https://themimu.info/news/updated-mapping-100-years-earthquakes-myanmar>)



Location of the Sagaing Fault Zone and Major Historical Earthquakes  
<https://www.facebook.com/photo.php?fbid=1440521199431830>

Source: ADRC <https://www.adrc.asia/nationinformation.php?NationCode=104&Lang=en&NationNum=17>,  
and NOAA <https://www.ngdc.noaa.gov/hazel/view/hazards/earthquake/event-more-info/1814>

# Summary of historical and recent earthquakes in Myanmar

DATE	Location	Magnitude and/or brief description
868	Bago	Shwemawdaw Pagoda fell
875	Bago	Shwemawdaw Pagoda fell
1429	Innwa	Fire-stopping enclosure walls fell
1467	Innwa	Pagodas, solid and hollow, and brick monasteries destroyed
1485/5/24	Sagaing	3 well-known pagodas fell
1501	Innwa	Pagodas, etc. fell
1564/9/13	Bago	Pagodas including Shwemawdaw and Mahazedi fell
1567	Bago	Kyaikko Pagoda fell
1582	Bago	Umbrella of Mahazedi Pagoda fell
1588/2/9	Bago	Pagodas, and other buildings fell
1591/3/30	Bago	The Great Incumbent Buddha destroyed
1620/6/23	Innwa	Ground surface broken, river fishes were killed after quake
1637/8/18	Innwa	River water flush
1646/9/10	Innwa	
1648/6/11	Innwa	
1660/9/1	Innwa	
1690/4/3	Innwa	
1696/9/15	Innwa	4 well-known pagodas destroyed
1714/8/8	Innwa	Pagodas, etc. fell; the water from the river gushed into the city
1757/6/4	Bago	Shwemawdaw Pagoda damaged
1762/4/2	Sittwe	M=7 RS; very destructive violent earthquake felt over Bengal, Rakhine up to Calcutta.

DATE	Location	Magnitude and/or brief description
1768/12/27	Bago	Ponnyayadana Pagoda fell
1771/7/15	Innwa	
1776/6/9	Innwa	A well known pagoda fell
1830/4/26	Innwa	
1839/3/21	Innwa	Old palace and many buildings demolished;
1839/3/23	Innwa	8.2Mw. Pagodas and city walls fell; ground surface broken; the river's flow was reversed for sometime; Mingun Pagoda shattered; about 300 to 400 persons killed
1843/2/6	Kyaukpyu	Eruption of mud volcanoes at the Rambye (Ramree) Island
1848/1/3	Kyaukpyu	The civil line and other buildings were damaged
1858/8/24	Pyay	Collapsed houses and tops of pagodas at Pyay, Henzada, and Thayetmyo and felt with some damages in Innwa, Sittwe, Kyaukpyu and Yangon
1888/10/8	Bago	Mahazedi Pagoda collapsed
1912/5/23	Taunggyi	M=7.6-7.9, the largest earthquake in Myanmar's recorded history, with tremors felt in neighboring Thailand, Yunnan (China), and northeastern India (Maymyo earthquake).
1913/3/6	Bago	Shwemawdaw Pagoda lost its finial
1917/7/5	Bago	Shwemawdaw Pagoda fell
1927/9/10	Yangon	
1927/12/17	Yangon	M=7 RS; extended to Dedaye

DATE	Location	Magnitude and/or brief description
1929/8/8	Near Taungoo	Bent railroad tracks, bridges and culverts collapsed, and loaded trucks overturned (Swa Earthquake)
1930/5/5	Near Khayan	M=7.3 RS, I <sub>max</sub> =IX; in a zone trending north-south for 37 km south of Bago (on the Sagaing Fault line); about 500 persons in Bago and about 50 persons in Yangon killed
1930/12/3	Nyaunglebin	M=7.3 RS; railroad tracks twisted (Pyu Earthquake); about 30 persons killed
1931/1/27	East of Indawgyi	M=7.6 RS, I <sub>max</sub> =IX; numerous fissures and cracks (Myitkyina Earthquake)
1931/8/10	Pyinmana	
1931/3/27	Yangon	
1931/3/16	Yangon	
1931/3/21	Yangon	
1946/9/12	Tagaung	M=7.5 RS
1956/7/16	Sagaing	M=7.0 RS; Several pagodas severely damaged (40 to 50 persons killed)
1976/7/8	Bagan	M=6.8 RS; Several pagodas in Bagan Ancient City were severely damaged (1 person killed)
2003/9/22	Taungdwingyi	M=6.8; RS Severe damaged to rural houses and religious buildings (7 persons killed)
2012/11/11	Thabeikkyin	M=6, 6 persons killed, 231 injured, and many buildings collapsed.

Source:  
<https://reliefweb.int/report/myanmar/hazard-profile-myanmar>

# Overview of the Earthquake and Response Measures

On 28 March 2025, at 12:50 (MMT) (06:20UTC, 15:20JST), a magnitude 7.7 earthquake struck the Sagaing Region in central Myanmar.

At 13:02, the largest aftershock occurred with a magnitude of 6.7.

The United States Geological Survey (USGS) released earthquake information at 13:17, and the ADRC issued a GLIDE number.

Shortly after 14:00, the International Charter on Space and Major Disasters and the Sentinel Asia were activated.

Damage reports also emerged from Thailand and China, and the extent of destruction in various areas gradually became clear.

DATE	Universal Time (UTC)	Myanmar (MMT)	Earthquake Occurrence and Response
3月28日	6:20	12:50	Magnitude 7.7 earthquake strikes Sagaing Region, central Myanmar
	6:32	13:02	Magnitude 6.7 aftershock strikes Sagaing Region
	6:47	13:17	USGS issues email alert on Myanmar earthquake
	7:20	13:50	ADRC issues GLIDE number (EQ-2025-000043-MMR)
	7:28	13:58	The Guardian reports the first news of the earthquake as AFP news
	8:08	14:38	ADRC contacts relevant agencies to discuss the need to activate Sentinel Asia
	8:15	14:45	UNOCHA activates the Disaster Charter
	8:22	14:52	AHA Centre requests Sentinel Asia emergency observation
	10:06	16:36	UNDP's Myanmar Information Management Unit (MIMU) requests Sentinel Asia emergency observation
	10:09	16:39	GLIDE number (EQ-2025-000043-THA) issued for damage in Thailand
	13:47	20:17	A GLIDE number (EQ-2025-000043-CHN) was issued for the damage in China
3月29日	16:35	23:05	JAXA notified that ALOS-2 would observe on 3/30.
	20:05	2:35	JAXA started providing archive images.
	21:15	3:45	Synspective observed that Inwa Bridge in Mandalay was damaged using his SAR satellite.
	6:57	13:27	GISTDA requests Sentinel Asia emergency observation
3月31日	7:33	14:03	JAXA has uploaded ALOS-2 Emergency Observation image

Source: USGS <https://earthquake.usgs.gov/earthquakes/map/>, Sentinel Asia <https://sentinel-asia.org/>, and Disaster Charter <https://earthquake.usgs.gov/earthquakes/map/>

# Damage Situation (as of 06:00 on 02 April 2025)

*Damage in Myanmar, Thailand, China, Vietnam, etc.*

	Myanmar	Thailand	China etc.
<b>Killed</b>	1,659	20	
<b>Missing</b>	284	78	
<b>Injured</b>	3,534	34	
<b>Evacuee</b>			
<b>House/ Building /Road</b>	5,460 houses, 512 buildings, 168 schools, and 722 offices collapsed. 47 roads and 25 bridges, 10 dams and 150 brick walls damaged. 544 religious buildings and 463 pagodas damaged.	A high-rise building under construction collapsed. 593 houses, 72 temples, 108 hospitals, 12 buildings, 58 schools and 33 government offices damaged	
<b>Fire</b>			
<b>Lifeline</b>			
<b>International Relief</b>	Russia sent rescue teams, and China sent a rescue medical team. India, the USA, ASEAN, the EU and the UN have all expressed their support. Japanese Foreign Minister Iwaya sent a message of sympathy.	Japanese Prime Minister Ishiba and Foreign Minister Iwaya have sent messages of condolence.	The China Earthquake Administration has activated its overseas earthquake emergency response mechanism and dispatched a survey team from the Yunnan Earthquake Administration to Ruili City.
<b>Source</b>	AHA Centre <a href="https://ahacentre.org/situation-update/situation-update-no-2-m7-7-earthquake-in-myanmar-and-thailand-31-march-2025/">https://ahacentre.org/situation-update/situation-update-no-2-m7-7-earthquake-in-myanmar-and-thailand-31-march-2025/</a> MOFA <a href="https://www.mofa.go.jp/mofaj/area/asia.html">https://www.mofa.go.jp/mofaj/area/asia.html</a>	DDPM <a href="https://www.disaster.go.th/contents/disaster_news">https://www.disaster.go.th/contents/disaster_news</a>	CEA <a href="https://www.cea.gov.cn/cea/xwzx/fzjzyw/5807447/index.html">https://www.cea.gov.cn/cea/xwzx/fzjzyw/5807447/index.html</a>



# Status of international community support (as of 12:00 on 31 March 2025)

Many countries and international organisations have announced their support, and are beginning to provide aid to Myanmar.

In addition to the countries listed in the table on the right, Singapore, Malaysia and the Philippines have also decided to send rescue and humanitarian aid teams.

Ireland has announced a 6 million euro (approximately 6.49 million dollar) aid package.

The Japanese Red Cross Society is also in close contact with the local authorities and will provide support as necessary.

Country/Organization	Type of Support	Support Amount/Details
China	Rescue teams, medical supplies, shelters	約1380万ドル
India	Field hospitals, medical personnel, supplies	Multiple aircraft and ships
Russia	Rescue teams, medical staff, mobile hospitals	3 aircraft
UK	Financial aid	£10 million
USA	Financial aid, emergency response teams	Up to \$2 million
EU	Financial aid	€2.5 million
IFRC	Emergency assistance request	Over \$100 million requested
UN	Financial aid	\$5 million (Central Emergency Response Fund)
Rep. Korea	Financial aid	\$2 million
New Zealand	Financial aid	\$1.14 million
Cambodia	Financial aid	\$100,000 (Initial aid)
Vietnam	Taskforce of Relief supplies, medica	80 people, 60 tons of supplies,
Hongkong	Rescue teams, financial aid	51 people, 9 tons of equipment, emergency relief supplies, HK\$30 million (~\$3.8 million)
Japan	Inspection Team	Relief supplies, and Japan Disaster Relief Team

# Useful Links

Situation Report	
DDPM, Thailand	<a href="https://www.facebook.com/DDPMNews">https://www.facebook.com/DDPMNews</a>
MOSWRR, Myanmar	<a href="https://www.moswrr.gov.mm/">https://www.moswrr.gov.mm/</a>
China Earthquake Networks Center	<a href="https://www.cenc.ac.cn/">https://www.cenc.ac.cn/</a>
China Earthquake Administration	<a href="https://www.cea.gov.cn/">https://www.cea.gov.cn/</a>
Geographical Data	
Sentinel Asia: Emergency Observation	<a href="https://sentinel-asia.org/EO/2025/article20250328MM.html">https://sentinel-asia.org/EO/2025/article20250328MM.html</a>
Disaster Charter	<a href="https://disasterscharter.org/activations/earthquake-in-myanmar-activation-956-">https://disasterscharter.org/activations/earthquake-in-myanmar-activation-956-</a>
USGS	<a href="https://earthquake.usgs.gov/earthquakes/eventpage/us7000pn9s/executive">https://earthquake.usgs.gov/earthquakes/eventpage/us7000pn9s/executive</a>
International Organisations	
ADRC	<a href="https://www.adrc.asia/view_disaster_jp.php?Lang=jp&amp;Key=2742">https://www.adrc.asia/view_disaster_jp.php?Lang=jp&amp;Key=2742</a>
GDACS	<a href="https://www.gdacs.org/Earthquakes/report.aspx?eventtype=EQ&amp;eventid=1474479&amp;episodeid=1630569">https://www.gdacs.org/Earthquakes/report.aspx?eventtype=EQ&amp;eventid=1474479&amp;episodeid=1630569</a>
Relief Web	<a href="https://reliefweb.int/disaster/eq-2025-000043-mmr">https://reliefweb.int/disaster/eq-2025-000043-mmr</a>
MIMU (Myanmar Information Management Unit)	<a href="https://themimu.info/">https://themimu.info/</a>
Study Report	
Yangon Region Earthquake Preparedness and Response Plan	<a href="https://www.undp.org/sites/g/files/zskgke326/files/migration/mm/undp-mm-yangon-region-earthquake-preparedness-and-response-plan-eng.pdf">https://www.undp.org/sites/g/files/zskgke326/files/migration/mm/undp-mm-yangon-region-earthquake-preparedness-and-response-plan-eng.pdf</a>
Mandalay Earthquake Scenario Planning Summary, 26 February 2015	<a href="https://sheltercluster.s3.eu-central-1.amazonaws.com/public/docs/annex_3b_-_mandalay_earthquake_scenario_planning_summary.pdf">https://sheltercluster.s3.eu-central-1.amazonaws.com/public/docs/annex_3b_-_mandalay_earthquake_scenario_planning_summary.pdf</a>

# Emergency Observation by Space Satellites

The ADRC, the Sentinel Asia Secretariat, started coordinating with relevant organisations on the same day following the earthquake reports, and AHA Centre and UNDP requested the activation of Sentinel Asia. The International Disaster Charter (IDC), which covers the entire world, was likewise activated.



- Emergency Observation
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- Interviews
- Communications
- Contact
- OPTEMIS



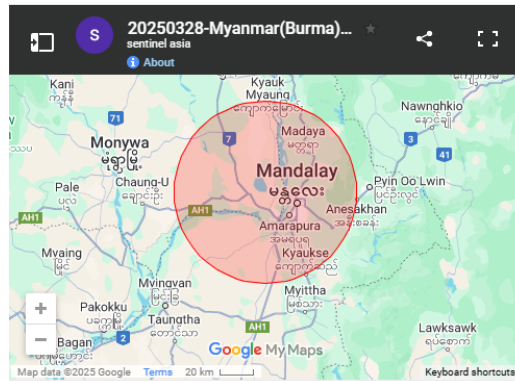
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2025-03-28

## Earthquake in Mandalay, Myanmar on 28 March, 2025

### Emergency Obs. Request Information



Disaster Type: Earthquake  
Country: Myanmar  
Occurrence Date (UTC): 28 March, 2025  
SA activation Date(UTC): 28 March, 2025  
Requester: Myanmar Information Management Unit (MIMU)  
Escalation to the International Charter: No  
GLIDE Number: EQ-2025-000043-MMR

### Disaster Situation

- [USGS] <https://earthquake.usgs.gov/earthquakes/eventpage/us7000pn9s/executive>
- [Local Social Media] <https://myanmar-now.org/en/news/breaking-7-7-magnitude-earthquake-hits-sagaing-and-mandalay/>
- <https://www.ndtv.com/world-news/7-7-magnitude-earthquake-hits-myanmar-strong-tremors-felt-in-bangkok-news-agency-afp-8030256>

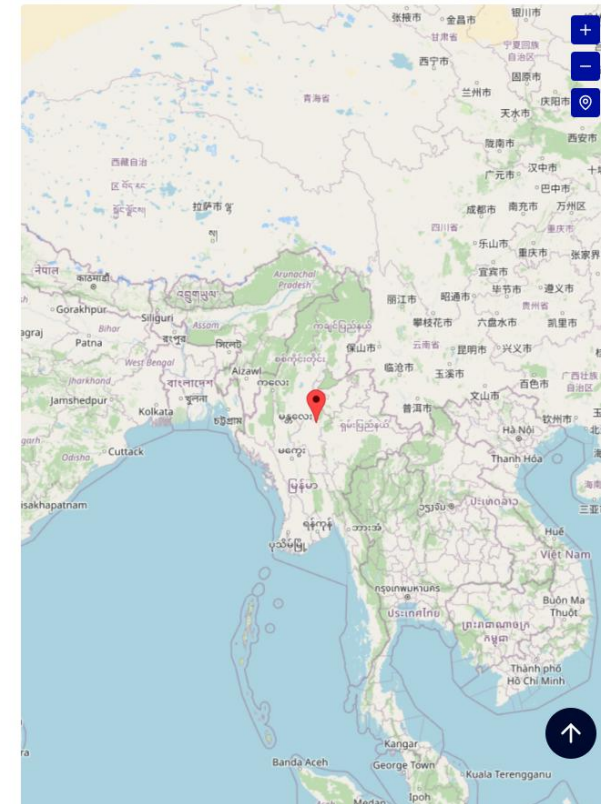
Sentinel Asia (<https://sentinel-asia.org/EO/2025/article20250328MM.html>)

## Earthquake in Myanmar

On 28 March an earthquake with a magnitude of 7.7 has struck central Myanmar. The epicentre was located 10 miles northwest of the city of Sagaing. Many buildings have been left with extensive damage. Road surfaces in the capital city, Naypyidaw, were reported to have warped and become uneven. Seventy construction workers are missing after a high-rise building under construction collapsed. Travelers at Mandalay Airport were evacuated to the tarmac landing areas as airplanes shook around them. The death toll is yet to be confirmed. Strong tremors were felt in nearby countries, including Thailand and China.

Type of event	Earthquake
Location of event	Myanmar
Date of Charter Activation	2025-03-28
Time of Charter Activation	09:28
Time zone of Charter Activation	UTC+07:00
Charter Requestor	UNOSAT on behalf of United Nations Office for the Coordination of Humanitarian Affairs (OCHA)
Activation ID	956
Project Management	Jakrapong Tawala (UNITAR)
Value Adding	NRSC/ISRO

IDC (<https://disasterscharter.org/activations/earthquake-in-myanmar-activation-956->)





# Comparison of the Inwa Bridge in Mandalay, before and after the disaster

Satellite imagery from Strix Satellite of Synspective, showed the collapsed Inwa (Ava) bridge in Mandalay.



©Synspective  
( <https://x.com/synspective/status/1905927311096193196> )



On March 28th, 2025, a 7.7-magnitude earthquake struck the Sagaing Region of Myanmar. Synspective StriX Satellite captured the Collapsed Ava Bridge in Mandalay.

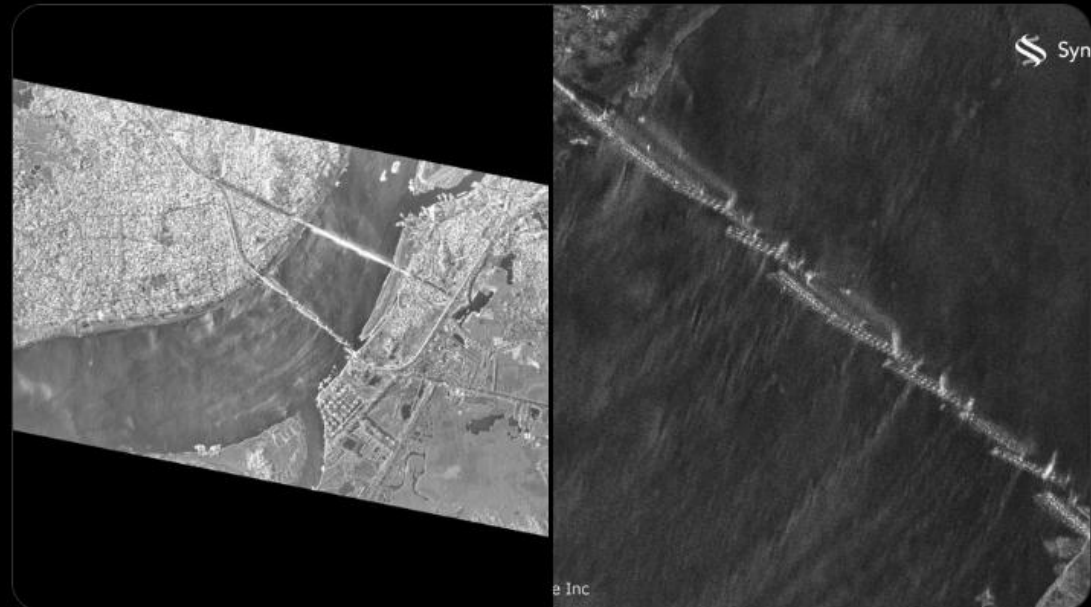
This earthquake caused significant damage to buildings and infrastructure within Myanmar and neighboring countries. Our heartfelt sympathies go out to all those affected by this disaster.

Observation Date: 2025-03-28 21:15:55 UTC

Observation Mode: Staring Spotlight Mode (0.9m x 0.25m resolution)

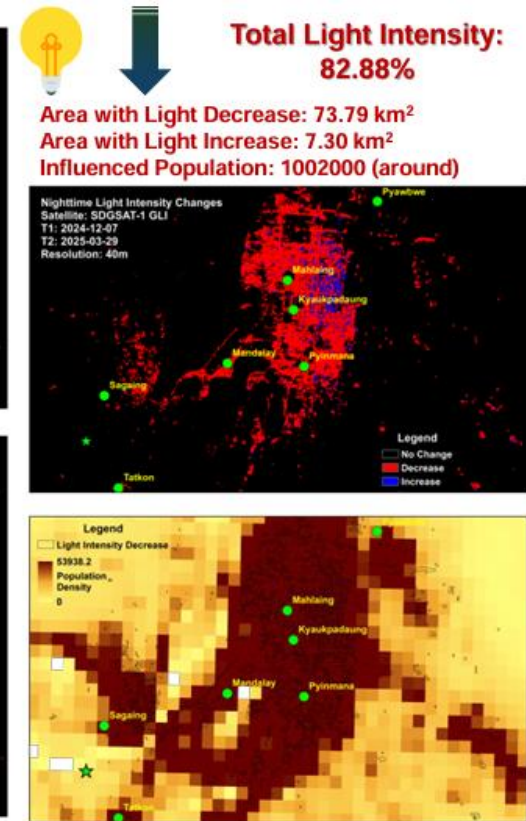
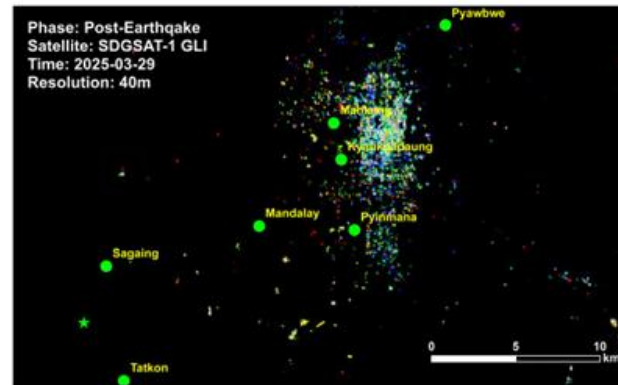
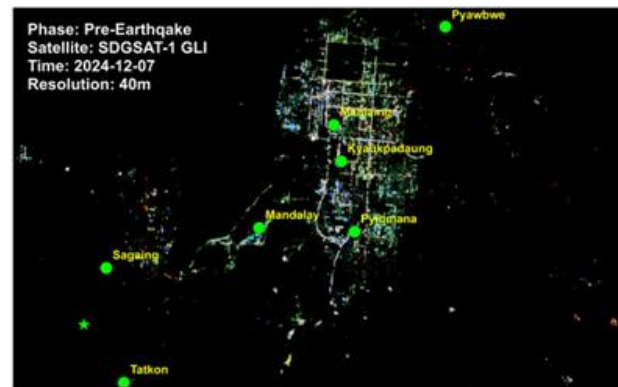
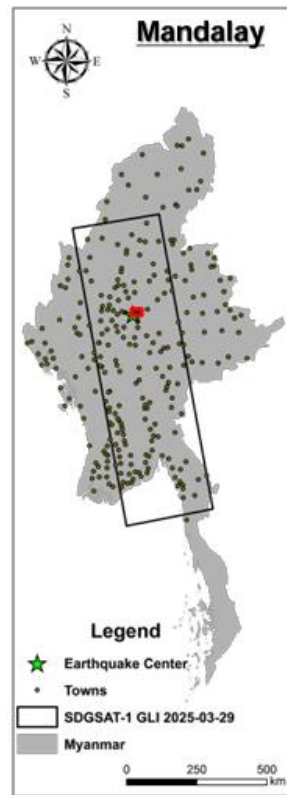
#DisasterResponse #EarthObservation #SatelliteData #StriX #SAR  
#earthquake #Myanmar

ポストを翻訳



# Monitoring Light Reduction and Population Impact After the Earthquake

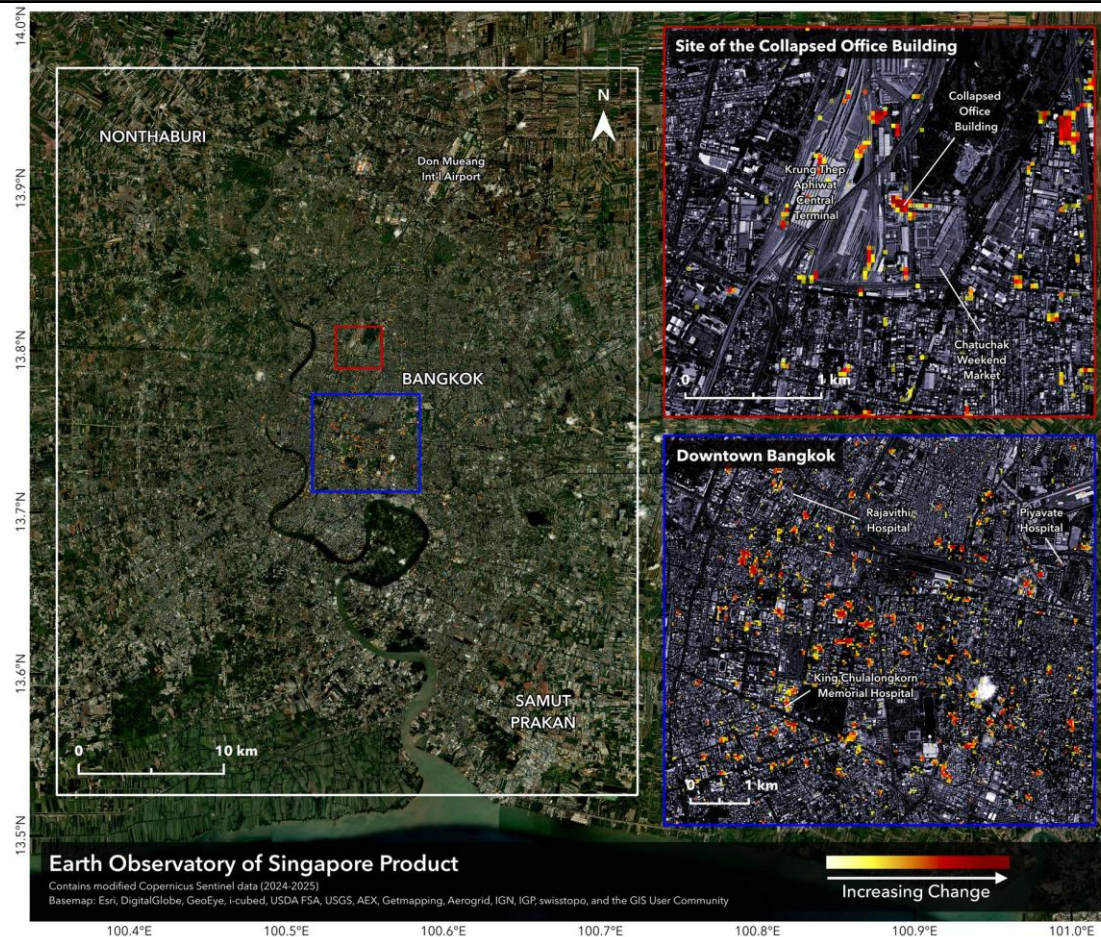
SDGSAT-1 acquired GLI and TIS data successfully. The images were analyzed to calculate the light decrease, which can reflect the change of human activities and the impact of the population.





Extraction of damage through comparative analysis of SAR data before and after the earthquake.

Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS) created some preliminary Damage Proxy Map (DPM). Yellow to red indicates increasingly significant ground surface change before and after the event.



EOS-RS Damage Proxy Map:  
 Bangkok, Thailand,  
 Earthquakes,  
 29 Mar 2025, v0.9

The Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS) created this preliminary Damage Proxy Map (DPM) depicting areas that are likely damaged in Bangkok, Thailand, due to a Mw7.7 earthquake in Sagging, Myanmar on 28 Mar 2025. This map was derived from synthetic aperture radar (SAR) images acquired by the Copernicus Sentinel-1 satellite operated by the European Space Agency (ESA) before (17 Nov 2024 to 17 Mar 2025) and after (29 Mar 2025) the event.

The map covers an area indicated by the white polygon. Damage is shown by colored pixels of 30m in size, where yellow to red indicates increasingly significant ground surface change before and after the event. Preliminary validation was conducted using news reports and ground-level imagery and videos in selected areas. This map should be used as a guidance to identify damaged areas, and may be less reliable over vegetated or mountainous areas. Scattered pixels over vegetated or mountainous areas may be false positives, and a lack of colored pixels over such areas may not mean no damage.

The product contains modified Copernicus Sentinel data (2024-2025), processed by ESA and analyzed by the Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS).

More map details and files at:  
[https://eos-rs-products.earthobservatory.sg/EOS-RS\\_202503\\_Thailand\\_Earthquakes/](https://eos-rs-products.earthobservatory.sg/EOS-RS_202503_Thailand_Earthquakes/)

Legal Disclaimer:  
<https://products.earthobservatory.sg/#/faq/>

Credits: Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS), Contains modified Copernicus Sentinel data (2024-2025)

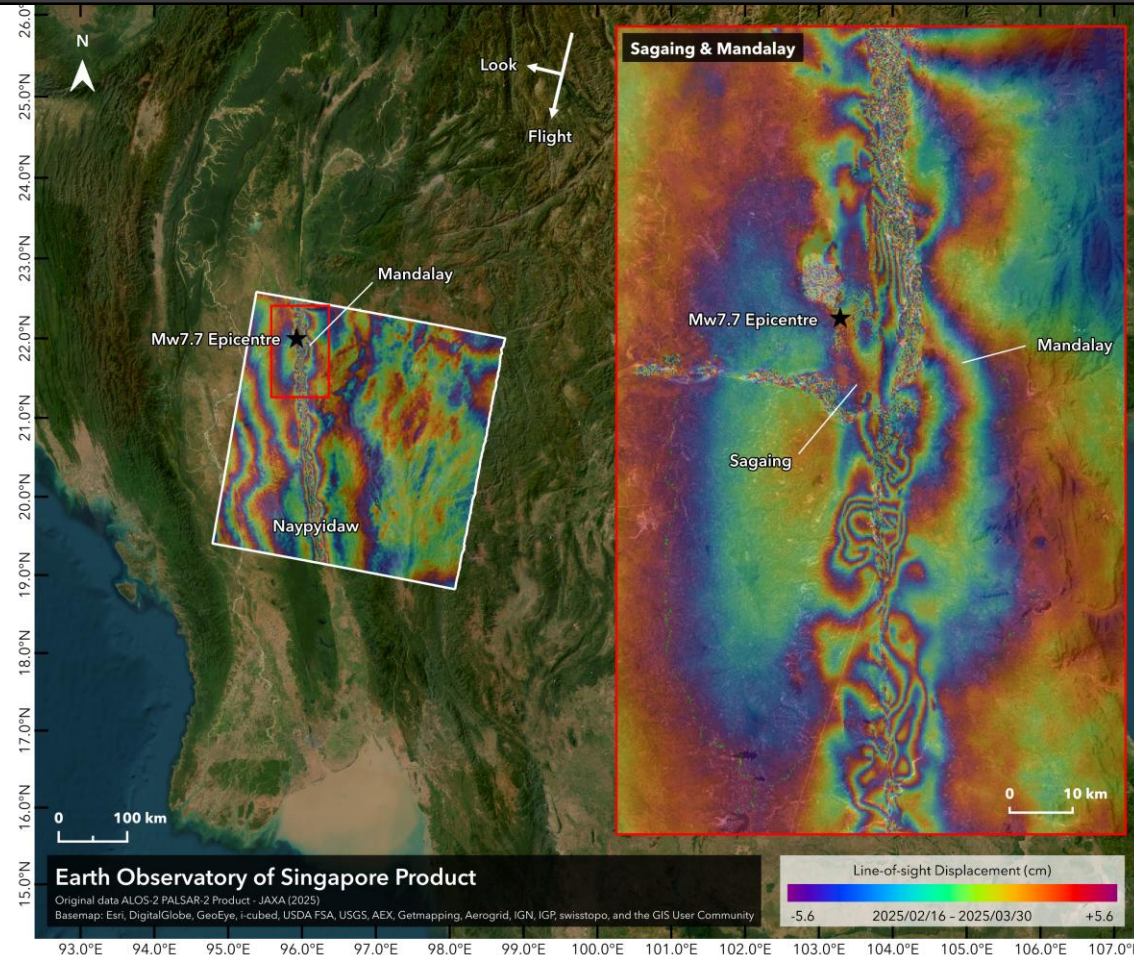
EOS Remote Sensing  
 LinkedIn





# InSAR (interferometric SAR) analysis of ALOS-2 satellite imagery

Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS) created Interferometric Synthetic Aperture Radar (InSAR) map that shows the surface displacement (wrapped interferogram) of the Mw7.7 earthquake and its aftershocks along the Sagaing Fault



EOS-RS Interferogram (Wrapped): Myanmar, Earthquakes, 2025/02/16-2025/03/30, v0.1

The Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS) created this Interferometric Synthetic Aperture Radar (InSAR) map that shows the surface displacement (wrapped interferogram) of the Mw7.7 earthquake and its aftershocks along the Sagaing Fault in Myanmar on 28 Mar 2025. This map was derived from SAR images acquired by the ALOS-2 satellite operated by the Japan Aerospace Exploration Agency (JAXA) before (16 Feb 2025) and after (30 Mar 2025) the event.

Each color cycle represents 11.2 cm of ground displacement in the radar line-of-sight. Ionospheric delay variation was mitigated, but tropospheric delay variation was not.

Data were provided by JAXA and analyzed by the Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS).

More map details and files at: [http://eos-rs-products.earthobservatory.sg/EOS-RS\\_202503\\_Myanmar\\_Earthquakes/](http://eos-rs-products.earthobservatory.sg/EOS-RS_202503_Myanmar_Earthquakes/)

Credits: Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS), Original data ALOS-2 PALSAR-2 Product - JAXA (2025)

EOS Remote Sensing  
LinkedIn



# Interactive Map: Sagaing Earthquake Reports (March 2025) is sharing at MIMU site

Interactive web map documenting reported damage from the Sagaing Earthquake on March 28, 2025. The map aims to visualize available reports to support awareness and response operations.

Disclaimer:

The data presented in this web map is compiled from publicly available social media posts and news reports. Location and other related information have been estimated based on the best available data; however, accuracy cannot be guaranteed. All content remains the property of the original content creators and publishers.

