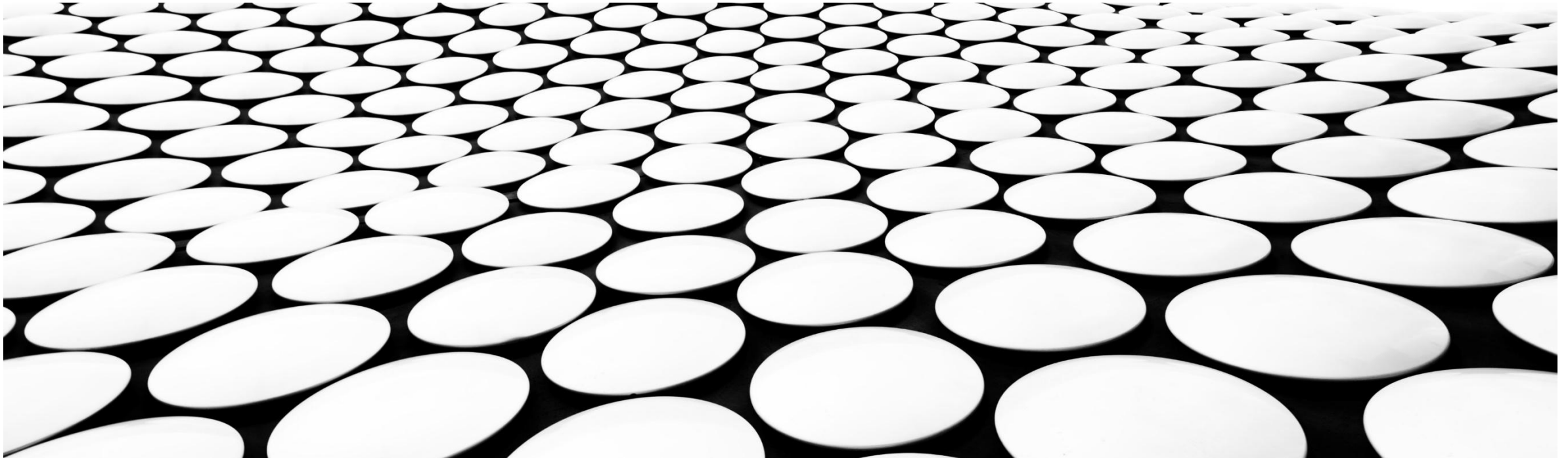
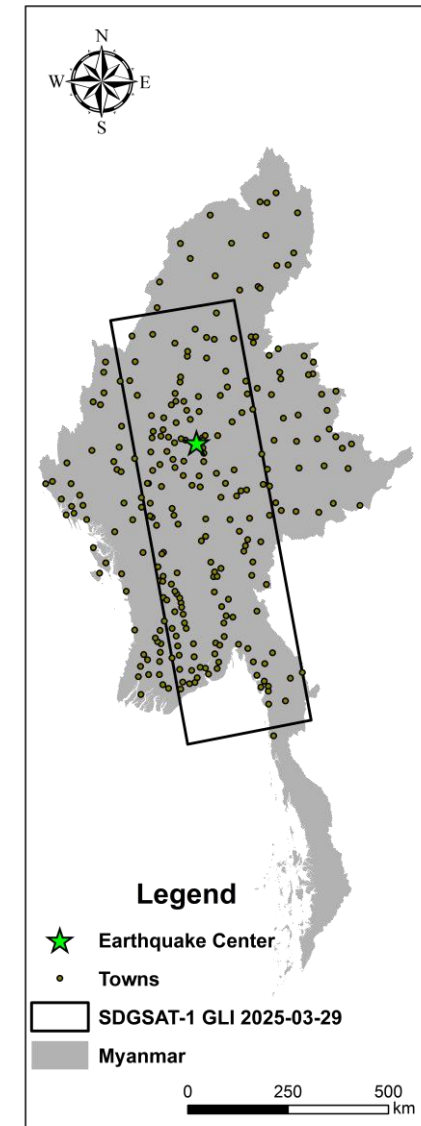


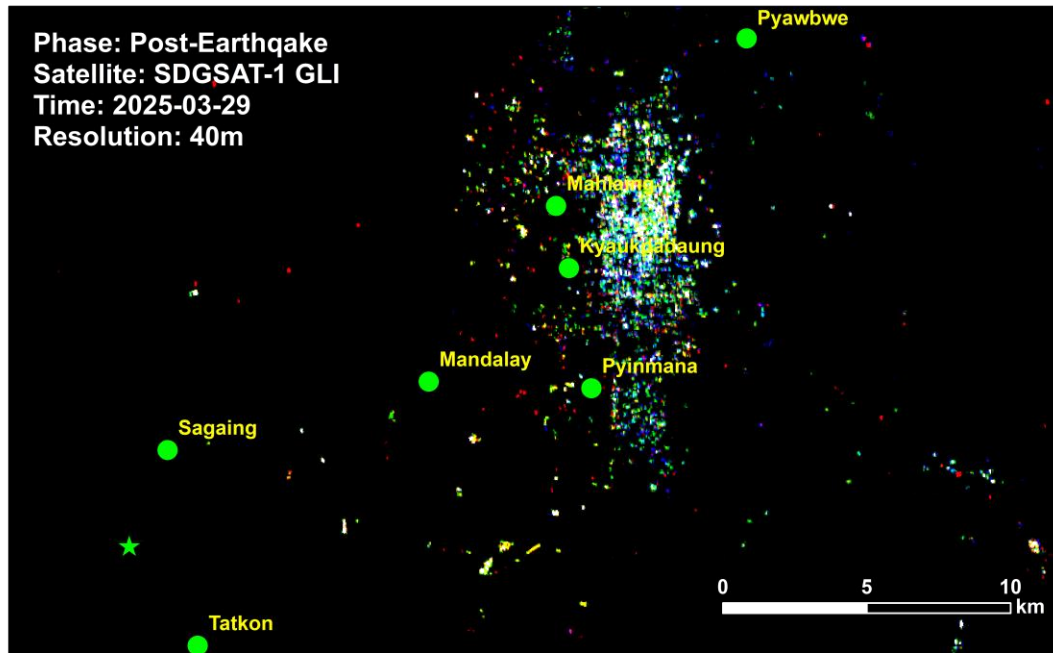
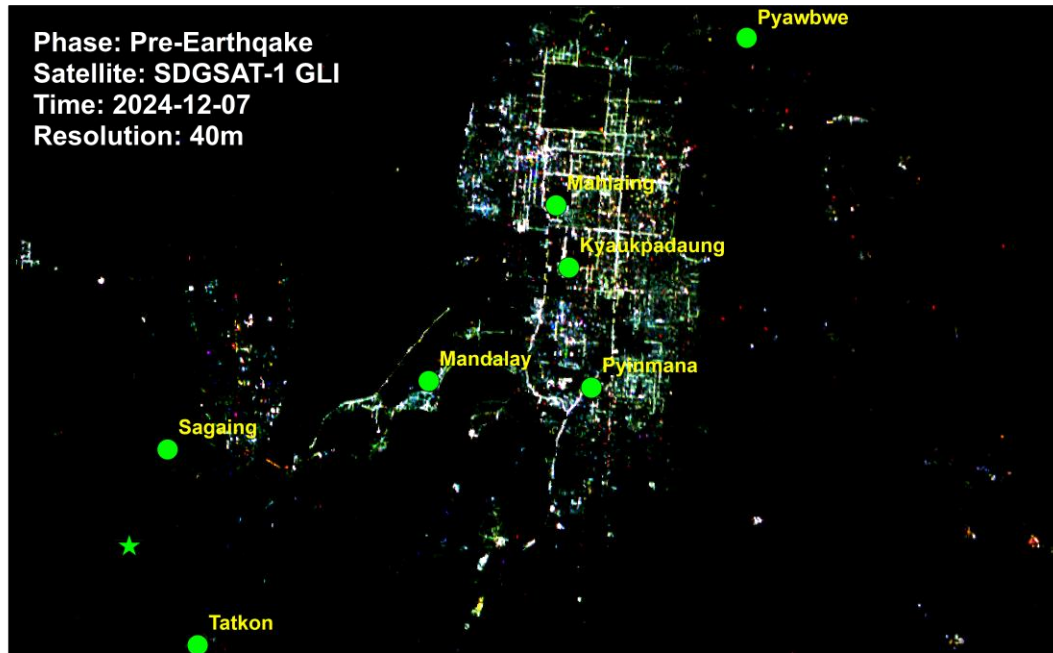
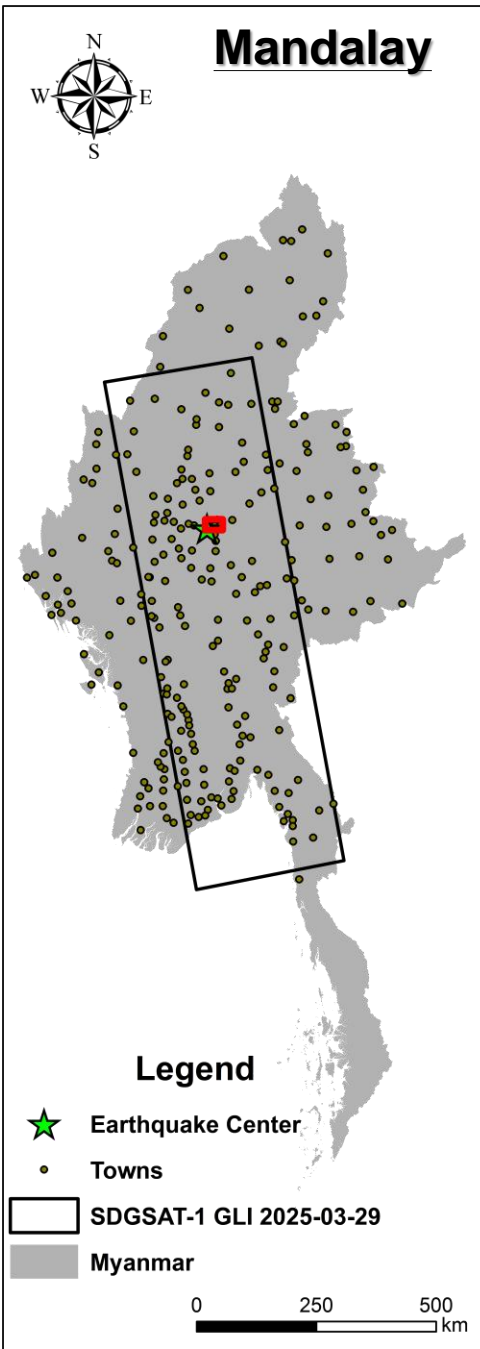
ASSESSMENT OF MYANMAR EARTHQUAKE BASED ON HIGH SPATIAL NIGHTTIME LIGHT DATA FROM SDGSAT-1 GLI





INTRODUCTION

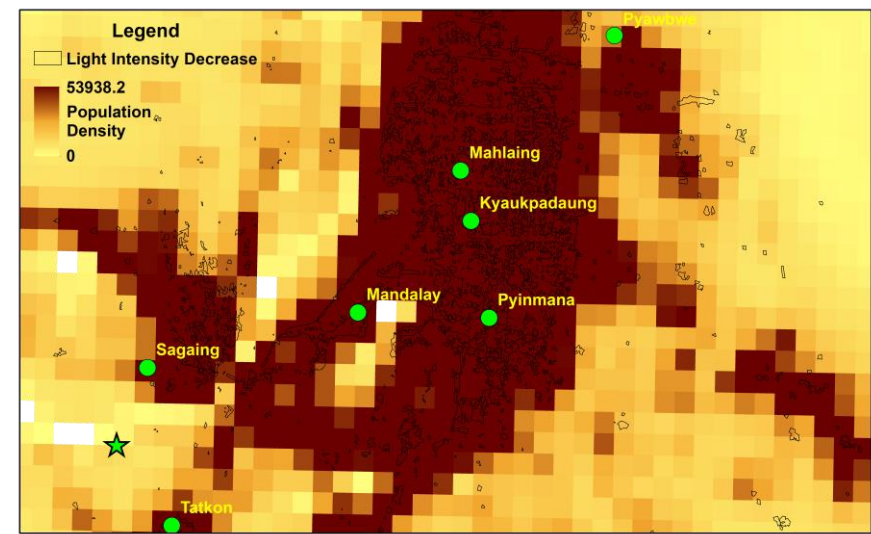
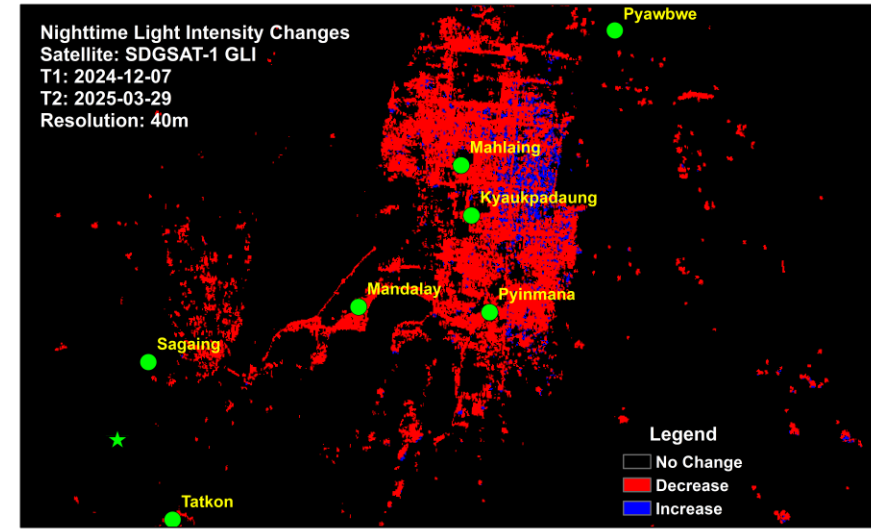
- A powerful 7.7 magnitude earthquake (Center: 21.85°N, 95.95°E) struck Myanmar on Friday at 12:50 am (local time). The quake struck near Mandalay, Myanmar's second-largest city of more than a million people. An aftershock of magnitude 6.4 (21.60°N, 95.95°E) was registered at 13:02 (local time).
- To that end, CBAS and IRDR initiated emergency mapping activities in the affected areas and planned the overpass of SDGSAT-1 satellite GLI and TIS payloads to support the humanitarian response.
- On 29 Mar., 2025, the 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.



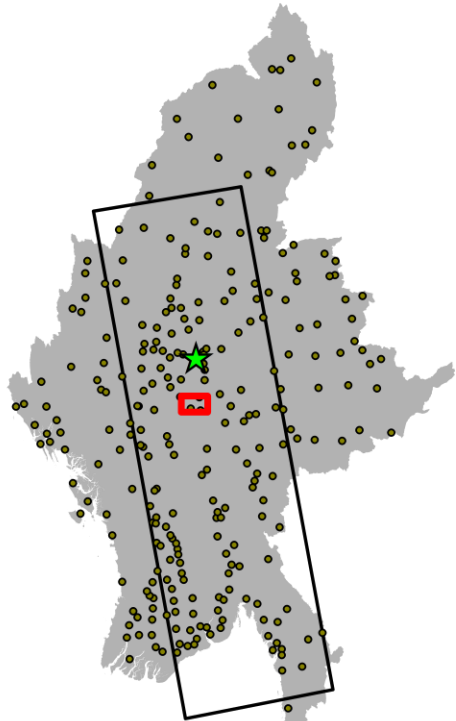


  **Total Light Intensity: 82.88%**

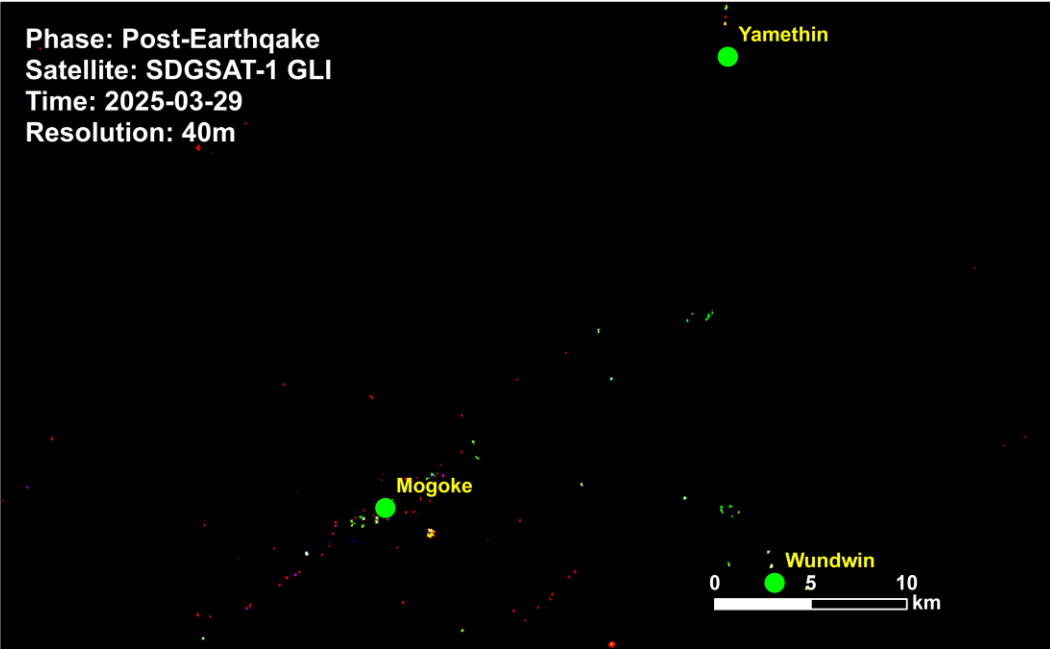
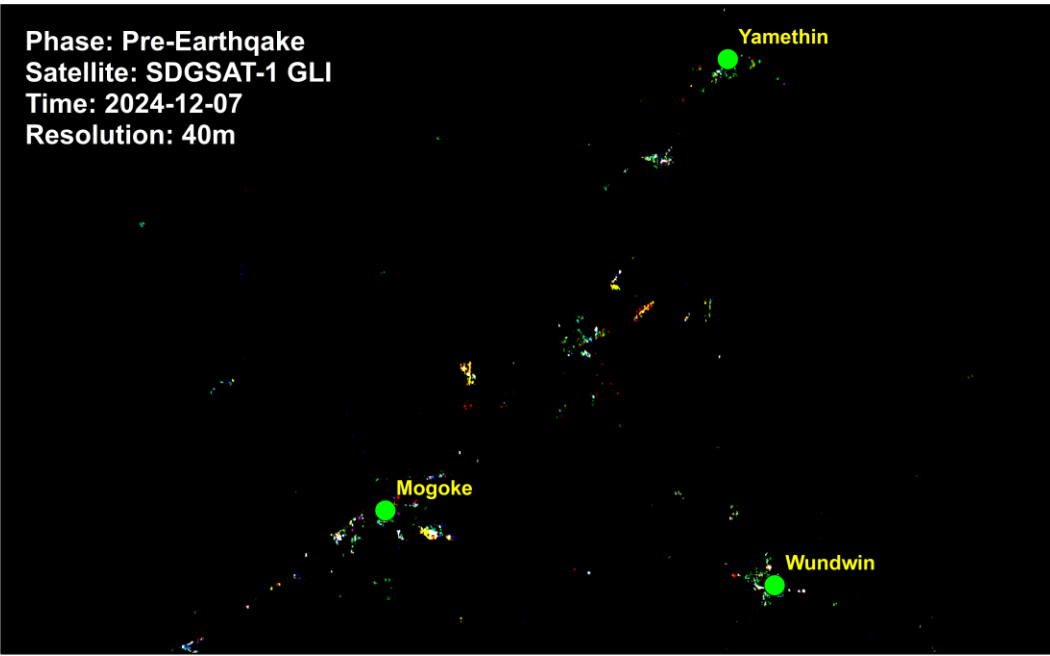
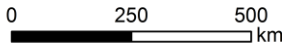
Area with Light Decrease: 73.79 km²
Area with Light Increase: 7.30 km²
Influenced Population: 1002000 (around)



Mogoke

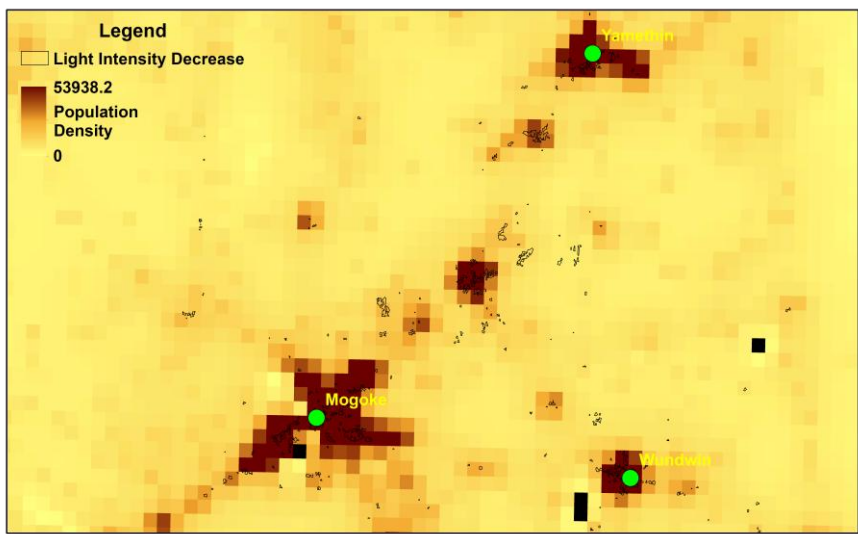
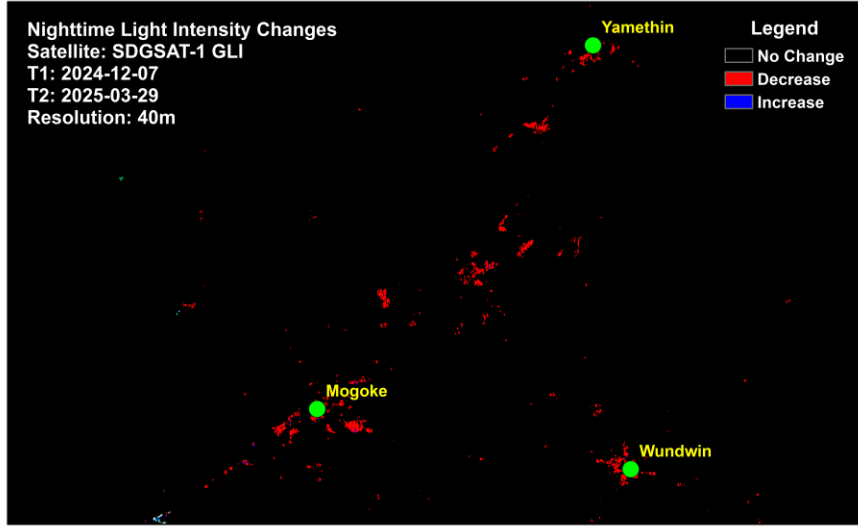


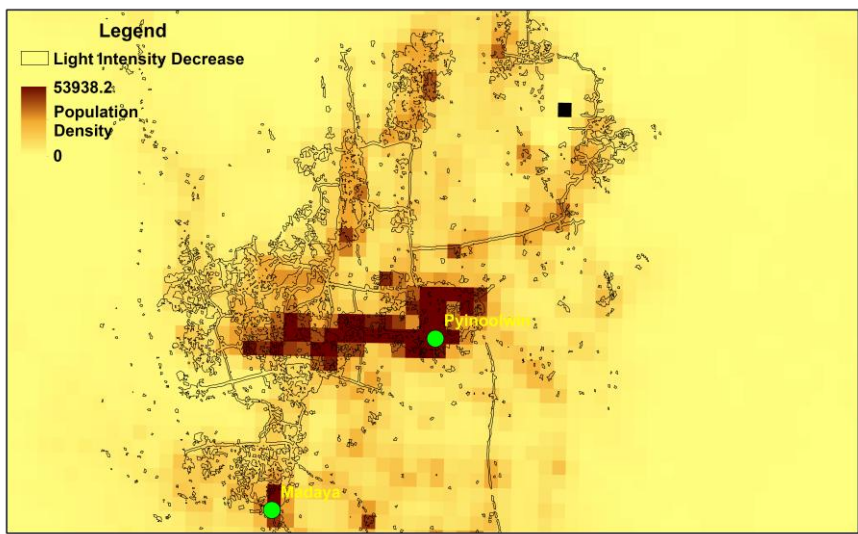
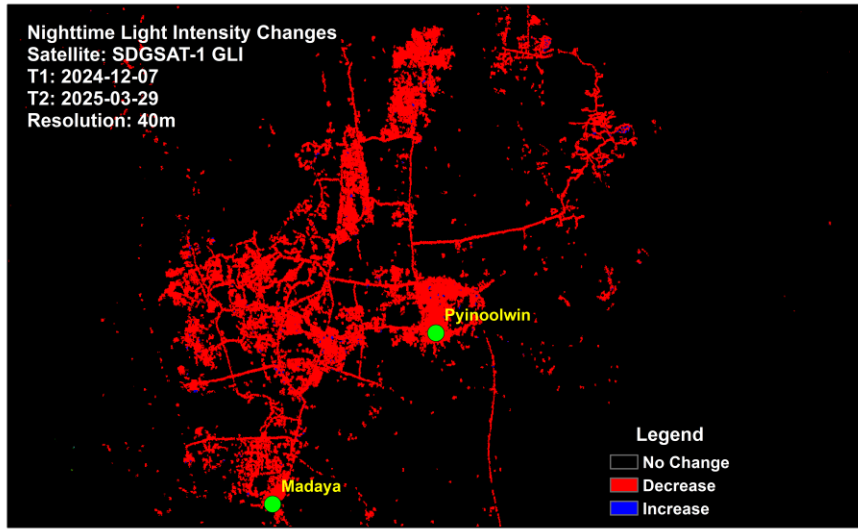
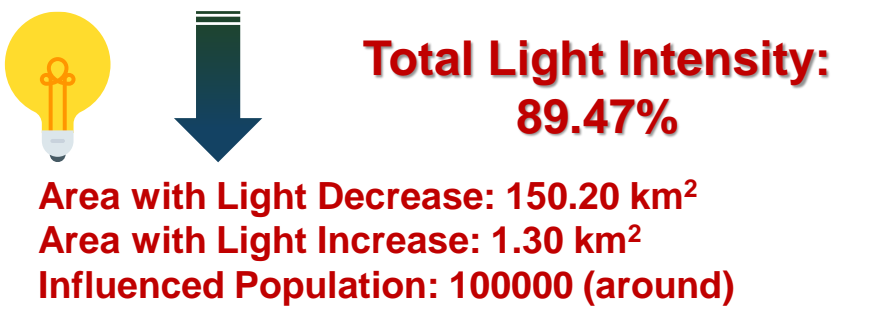
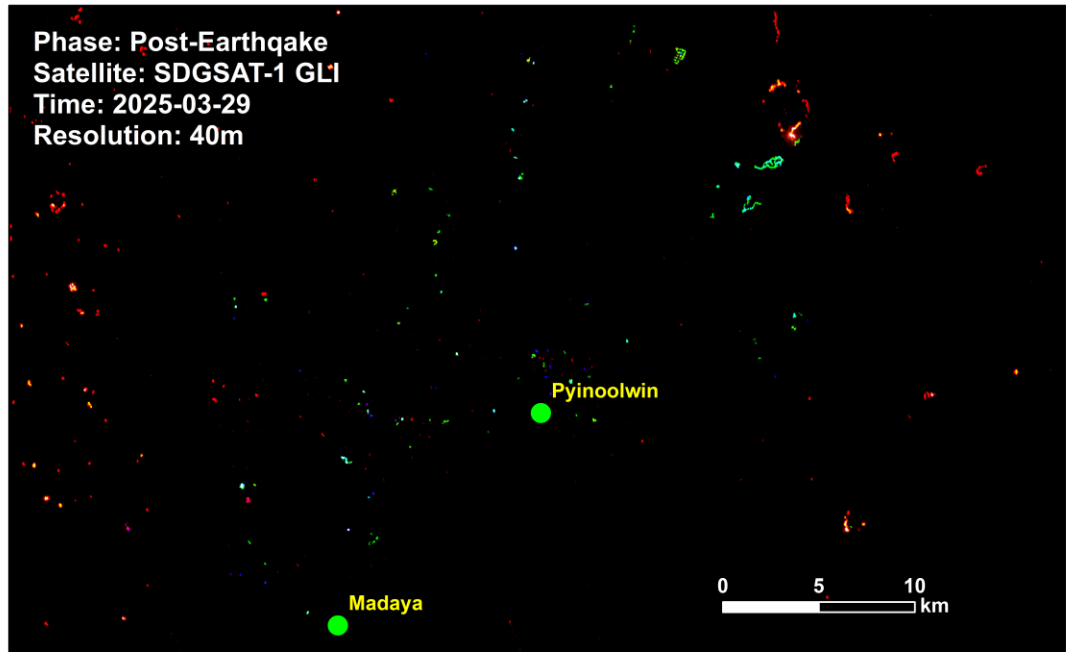
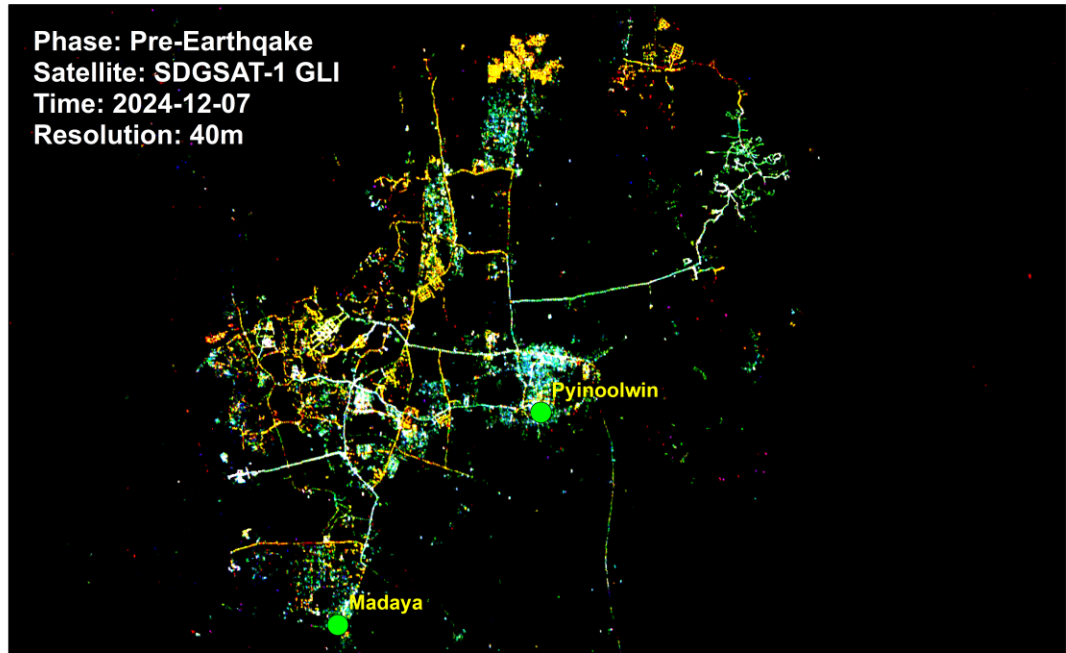
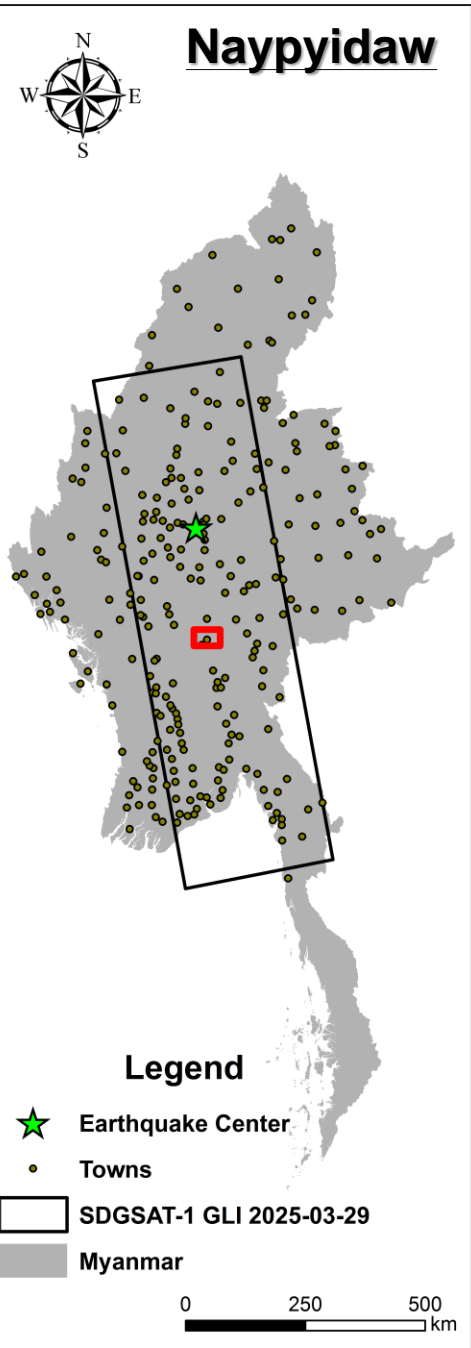
- Legend**
- ★ Earthquake Center
 - Towns
 - SDGSAT-1 GLI 2025-03-29
 - Myanmar



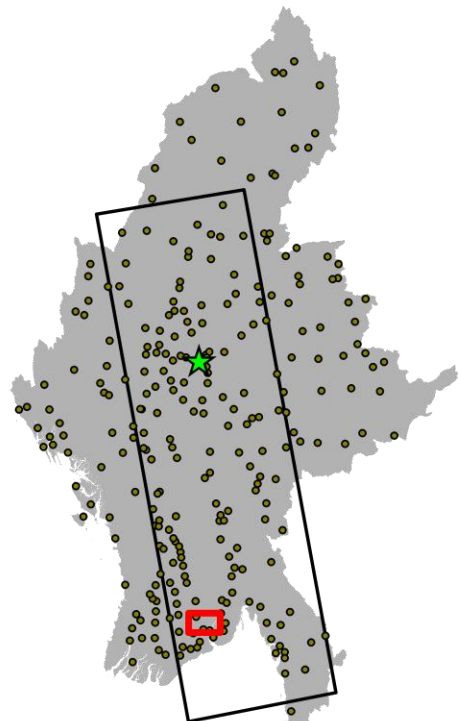
**Total Light Intensity:
85.81%**

**Area with Light Decrease: 9.21 km²
Area with Light Increase: 0.16 km²
Influenced Population: 19000 (around)**



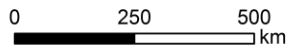


Yangon

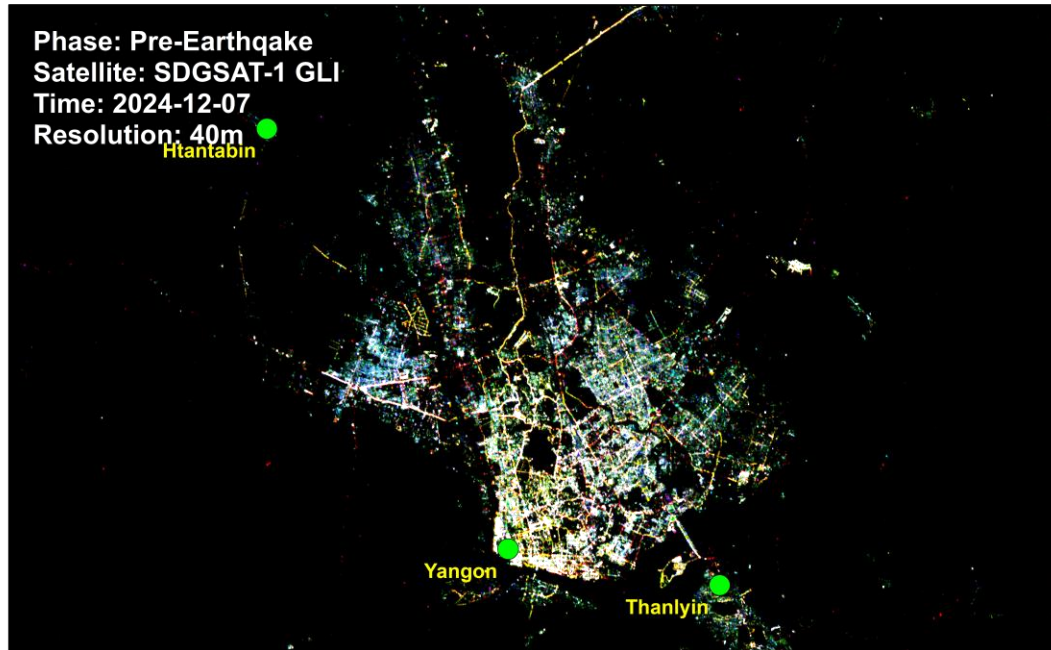


Legend

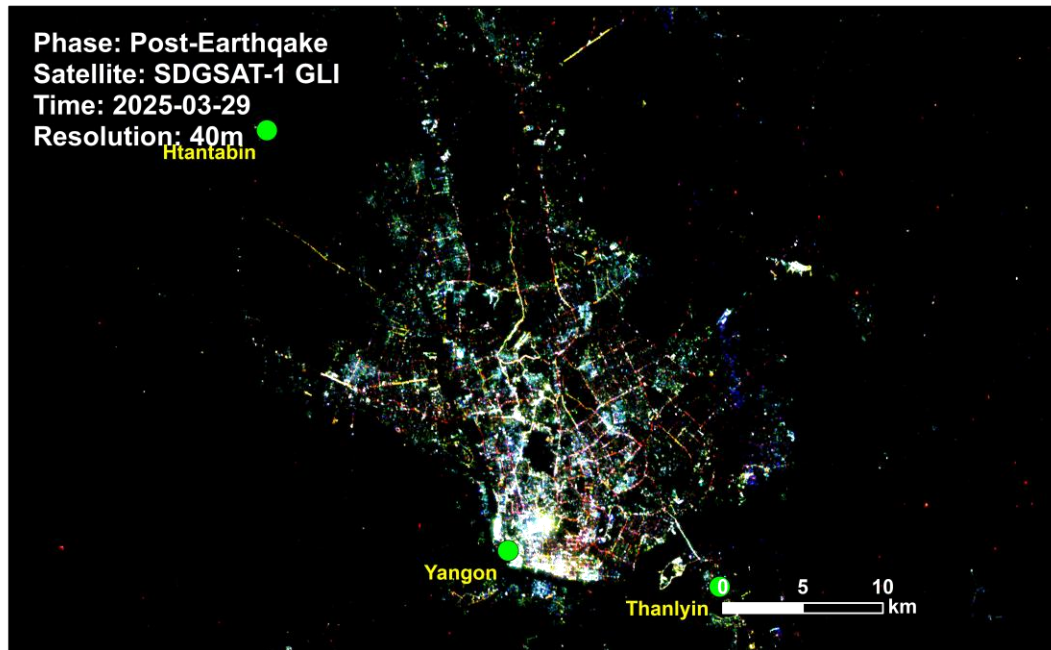
- ★ Earthquake Center
- Towns
- SDGSAT-1 GLI 2025-03-29
- Myanmar



Phase: Pre-Earthquake
Satellite: SDGSAT-1 GLI
Time: 2024-12-07
Resolution: 40m

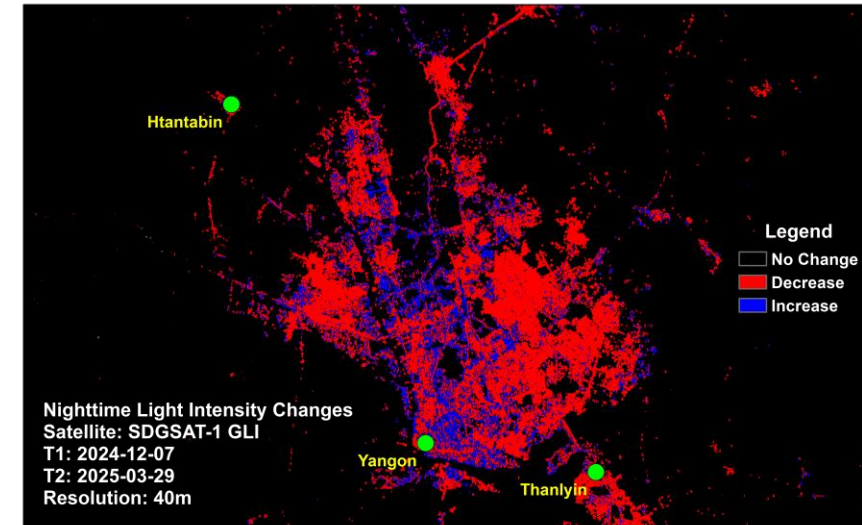


Phase: Post-Earthquake
Satellite: SDGSAT-1 GLI
Time: 2025-03-29
Resolution: 40m



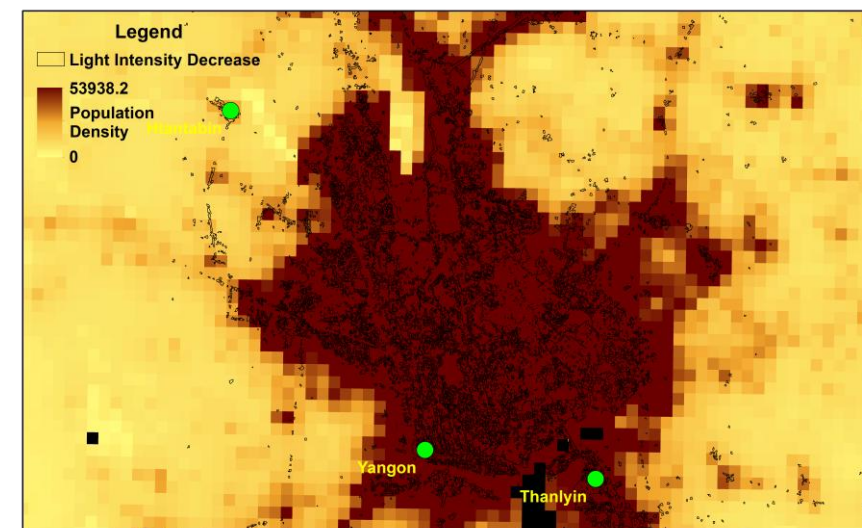
**Total Light Intensity:
38.42%**

**Area with Light Decrease: 291.60 km²
Area with Light Increase: 84.98 km²
Influenced Population: 3770000 (around)**



Nighttime Light Intensity Changes
Satellite: SDGSAT-1 GLI
T1: 2024-12-07
T2: 2025-03-29
Resolution: 40m

Legend
No Change
Decrease
Increase



Legend
Light Intensity Decrease
Population Density
0

PRELIMINARY RESULTS

- As a result of the earthquake, the total light intensity on 29 Mar., 2025 decreased more than **82.88%** in Mandalay area, with **73.79 km²** has less power supply than that on 07 Dec., 2024, which affected more than **1,002,000** population.
- The total light intensity on 29 Mar., 2025 decreased more than **85.81%** in Mogoke, Wundwin, and Yamethin area, with **9.21 km²** has less power supply than that on 07 Dec., 2024, which affected more than **19,000** population.
- The total light intensity on 29 Mar., 2025 decreased more than **89.47%** in Naypyidaw area, with **150.20 km²** has less power supply than that on 07 Dec., 2024, which affected more than **100,000** population.
- The total light intensity on 29 Mar., 2025 decreased more than **38.42%** in Yangon area, with **291.60 km²** has less power supply than that on 07 Dec., 2024, which affected more than **3,770,000** population.
- The results are for reference only due to the influence of clouds and fog and the shimmering angle of view.
- Observation of the affected area will continue.

SOURCES



(1) Satellite Images

Satellite Data: SDGSAT-1 GLI

Imagery Date: 7 Dec., 2024 and 29 Mar. 2025

Resolution: 10/40 m

Copyright: International Research Center of Big Data for Sustainable Development Goals (CBAS)

Source: International Research Center of Big Data for Sustainable Development Goals (CBAS)

(2) Ancillary Data

Administrative boundaries: Database of Global

Administrative Areas Version: 4.10

Towns: National Tibetan Plateau / Third Pole

Environment Data Center.

Population: World Bank.

(3) Analysis & Production

Analysis: International Research Center of Big Data for Sustainable Development Goals (CBAS)

Production: International Research Center of Big Data for Sustainable Development Goals (CBAS) & Integrated Research on Disaster Risk (IRDR)

(4) Contact us

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