

RAPID REPORT: Earthquake Damage to the Tinnel Mosque, Morocco

On 8 September 2023, a magnitude 6.8 earthquake caused extensive damage to the Tinnel Mosque in Morocco.¹ On 13 September 2023, satellite imagery analysis conducted by the Smithsonian Cultural Rescue Initiative (SCRI), Penn Cultural Heritage Center (PennCHC), and Cultural Heritage Monitoring Lab at the Virginia Museum of Natural History (CHML) confirmed this damage to the Tinnel Mosque.

Analysis of available high-resolution satellite imagery indicates that the four exterior walls and the interior of the Mosque were severely damaged by the earthquake. Significant collapse debris are visible. The Tinnel Mosque was established in the 12th century AD in the Tizi-n-Test region of the High Atlas Mountains, south of Marrakech, and served as a key example of the Almohad architectural style.² The Mosque has played a significant role in the cultural identity of the region and was added to the list of Tentative UNESCO World Heritage Sites in 1995.³

Satellite Imagery

Images 1–2. Left: A satellite image of the Tinnel Mosque on 10 March 2023. Right: A satellite image showing earthquake damage to the Tinnel Mosque on 10 September 2023. Source: © 2023 MAXAR, used with permission.



¹ Kottasová, I. (2023). "Earthquake damages centuries-old sites in Marrakech but spares modern city," CNN, 11 September. Available at: <https://www.cnn.com/2023/09/10/africa/mosque-earthquake-damage-marrakech-intl/index.html> (Accessed: 13 September 2023).

² Crisp, J. (2023). "Earthquake strikes Morocco's historic sites," The Telegraph, 9 September. Available at: <https://www.telegraph.co.uk/world-news/2023/09/09/earthquake-strikes-morocco-historic-tourist-sites/> (Accessed: 13 September 2023).

³ Ditmars, H. (2023). "Morocco earthquake leaves key heritage sites severely damaged," *The Art Newspaper*, 11 September. Available at: <https://www.theartnewspaper.com/2023/09/11/morocco-earthquake-leaves-key-heritage-sites-severely-damaged> (Accessed: 13 September 2023).

Image 3. A satellite image of the Tinmel Mosque showing earthquake damage on 12 September 2023. Source: © 2023 MAXAR, used with permission.



Visit <https://culturalrescue.si.edu/> for information on SCRI, <https://www.vmnh.net/research-collections/chml> for information on CHML, and <https://www.penn.museum/sites/chc/> for information on the PennCHC.

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