Human Security Emergency: RSF Forces Capture and Destroy Zamzam IDP Camp

14 April 2025

Yale SCHOOL OF PUBLIC HEALTH
Humanitarian Research Lab

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I. Key Findings

The Yale School of Public Health's Humanitarian Research Lab (HRL) can confirm with high confidence that Rapid Support Forces (RSF) captured Zamzam Internally Displaced Persons (IDP) Camp on 13 April 2025. Yale HRL assesses that Zamzam Camp is now being systematically destroyed by fire from intentional arson by RSF forces. Analysis of satellite imagery and thermal data from 11-14 April 2025 shows widespread thermal scarring to 1.183 square kilometers in the camp, including at the camp market, a kitchen operated by international aid organization the Sudanese American Physicians Association (SAPA), and a compound with temporary structures consistent with IDPs. Analysis of satellite imagery from 14 April 2025 shows restrictions on civilian freedom of movement from Zamzam amid mass displacement under critical humanitarian conditions of high risk of ongoing mass atrocities, including mass killing.

Upon closer review of satellite imagery from 11 April 2025, Yale HRL can now confirm that RSF encircled the camp from multiple directions, with likely bulk of force coming from the south. Yale HRL identifies large-scale RSF force presence of approximately 200 light-technical vehicles engaged in the 11 April ground assault on Zamzam and highly likely positioned to launch an imminent assault on El-Fasher.

Damage and Force Assessment

RSF announced on 13 April that they had taken control of Zamzam IDP Camp after launching a ground assault on the camp for the third consecutive day.[1] HRL analysts verified footage depicting members of RSF in Zamzam IDP Camp on 13 April 2025.[2] The footage includes a display of RSF insignia and smoke plumes from active fires. Analysis of satellite imagery from 14 April 2025 shows RSF vehicle presence in northern, eastern, and southern access points to the camp. Video footage widely circulated on social media on 12 and 13 April 2025 depicts at least one instance of a field execution and humiliation of Zamzam Camp residents by RSF during these assaults.[3] Yale HRL cannot independently verify these videos at this time.

Yale HRL assesses that Zamzam Camp is now being systematically destroyed by fire from intentional arson by RSF forces. Through analysis of satellite imagery, Yale HRL assesses widespread thermal scarring to 1.183 square kilometers in Zamzam camp, including the camp market, a community kitchen operated by SAPA, and a compound with temporary structures consistent with IDPs. The area of damage is equivalent to 165 standard football pitches.[4] Analysis of Visible Infrared Imaging Radiometer Suite (VIIRS) thermal data shows widespread active fires in Zamzam Camp on 11, 12, and 13 April 2025. These fire detections were concentrated in central and southern Zamzam, including near the camp market and main B-26 road. Verified footage from 12 and 13 April 2025 depicts visible smoke plumes in the camp from active fires.[5]

Upon closer review of satellite imagery from 11 April 2025, Yale HRL identifies significant RSF force presence positioned to attack Zamzam and El-Fasher. Imagery collected on 11 April 2025 shows approximately 200 light technical-type vehicles, most observed mounted with weapons on the back, at Zamzam IDP Camp. Most of the vehicles are observed entering through breaks in the camp's defensive berm and facing

inward towards the center of the camp. The disposition, direction, and vector of these vehicles are consistent with RSF forces. The size of this force indicates the large-scale and coordinated nature of the assault on Zamzam. The proximity of this force to El-Fasher indicates that RSF is positioned to launch an imminent large-scale assault on El-Fasher city itself.

Displacement and Freedom of Movement

Yale HRL identifies likely restrictions on freedom of movement to civilians attempting to flee Zamzam Camp from all three access points from the camp visible on satellite imagery. Analysis of satellite imagery collected between 11 and 14 April 2025 shows vehicles and structures newly present at the northern, southern, and eastern access points of Zamzam, indicating likely RSF checkpointing activity. Yale HRL cannot confirm presence on the western access to the camp due to limitations in satellite imagery coverage. On 13 April 2025, *Darfur24* reported that RSF had prevented some Zamzam residents from leaving the camp.[6]

Zamzam residents able to flee have done so under extremely critical humanitarian conditions. The International Organization for Migration (IOM) reported that approximately 3,190 households were displaced from Zamzam into other areas of El-Fasher and Tawilah localities between 11-12 April 2025 and that an additional 60,000-80,000 households were displaced from Zamzam between 13-14 April 2025.[7] Video footage circulating on social media depicts mass displacement from Zamzam.[8] Credible ground reports received by Yale HRL also indicate that many civilians have died fleeing the camp, including due to armed attacks, starvation, lack of water, and exposure.

II. Special Comment

Yale HRL is currently monitoring Zamzam and the surrounding area in a posture consistent with the expectation that systematic mass killing of civilians by RSF is ongoing at present. Given credible ground reports received by HRL indicating civilian attempting to flee the camp have dropped dead due to weakness from starvation and lack of water, it must be reasonably assumed that unknown thousands of the civilian population of Zamzam, particularly children and the elderly, who have lived in starvation conditions for nearly a year, were too weak to flee. Given the multiple videos available from Zamzam in recent days, showing summary executions of civilians by RSF, it is unlikely that these people will be protected, let alone provided humanitarian assistance, by RSF forces, who have filmed intentional killing of civilians in the camp. HRL is now proceeding with its monitoring of Zamzam and the surrounding area under a “worst-case scenario” posture that assumes remaining civilians are at imminent risk of torture, conflict-related sexual violence (CRSV) and massacre.

Methodology

Yale HRL utilizes data fusion methodologies of open source and remote sensing data analysis. Yale HRL produced this report through the cross-corroboration of open source data, including social media, local news reporting, multimedia, and other reports, and remote sensing data, including satellite imagery and thermal sensor data. Researchers analyzed open source data across social media, news reports, and other publicly available sources to identify, chrono- and geolocate, and verify incidents. Analysts assess the credibility and reliability of open source data based on a source's level of detail, past credibility, and the corroboration of other independent sources. Remote sensing and satellite imagery analysis relies on multi-temporal change detection, which involves the comparison of two or more satellite images of the same area captured at different times to detect differences in coloration, visual properties, and presence, absence, or positional change of objects across the images.

Place names were identified using UN P-codes obtained via the United Nations Humanitarian Data Exchange (HDX) and International Organization for Migration (IOM)'s Displacement Tracking Matrix (DTM) Sudan. This baseline was then verified and informed through open source analysis by Yale HRL's analysts with relevant cultural and linguistic skills.

Limitations

There are significant limitations to the data fusion methodology. The information environment in Sudan does not have the breadth of data available in other locations and there is likely a significant reporting bias for those who provide open source reporting. The tools and techniques present significant challenges to assess activities such as extrajudicial detention, conflict-related sexual violence (CRSV), and conflict-related casualties, particularly in environments with limited data. Satellite imagery analysis is limited by available imagery over time and space. Available nadir angles of satellite imagery can produce challenges to assess structural damage, until multiple angles and ground-level photographic and video materials emerge to help inform the analysis. Image resolution level can also limit the analyst's ability to perceive the full extent of damage present.

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[1] Sudan Tribune, "الدعم السريع تعلن السيطرة على مخيم زمزم وفرار الآلاف الى الفاشر" April 13, 2025, https://sudantribune.net/article299664/, archived at https://perma.cc/PS56-3UZS; https://www.darfur24.com/2025/04/13/%d8%a7%d9%84%d8%af%d8%b9%d9%85-%d8%a7%d9%84%d8%b3%d8%b1%d9%8a%d8%b9-%d9%8a%d8%b9%d9%84%d9%86-%d8%b3%d9%8a%d8%b7%d8%b1%d8%aa%d9%87-%d8%b9%d9%84%d9%89-%d9%85%d8%ae%d9%8a%d9%85-%d8%b2%d9%85%d8%b2%d9%85/, archived at https://perma.cc/LT8F-STR8

[2] HRL_MMC_088 has been redacted for security reasons

[3] HRL_MMC_089 and HRL_MMC_090 have been redacted for security reasons

[4] The definition of football pitches aligns with the FIFA standard football pitches. FIFA recommends a dimension of 105 meters x 68 meters, an area equivalent to 0.071 kilometers squared. FIFA, "5.3: Pitch Dimensions and Surrounding Areas," 2021, https://publications.fifa.com/de/football-stadiums-guidelines/technical-

guideline/stadium-guidelines/pitch-dimensions-and-surrounding-areas/, archived at https://perma.cc/CD4C-GSHV

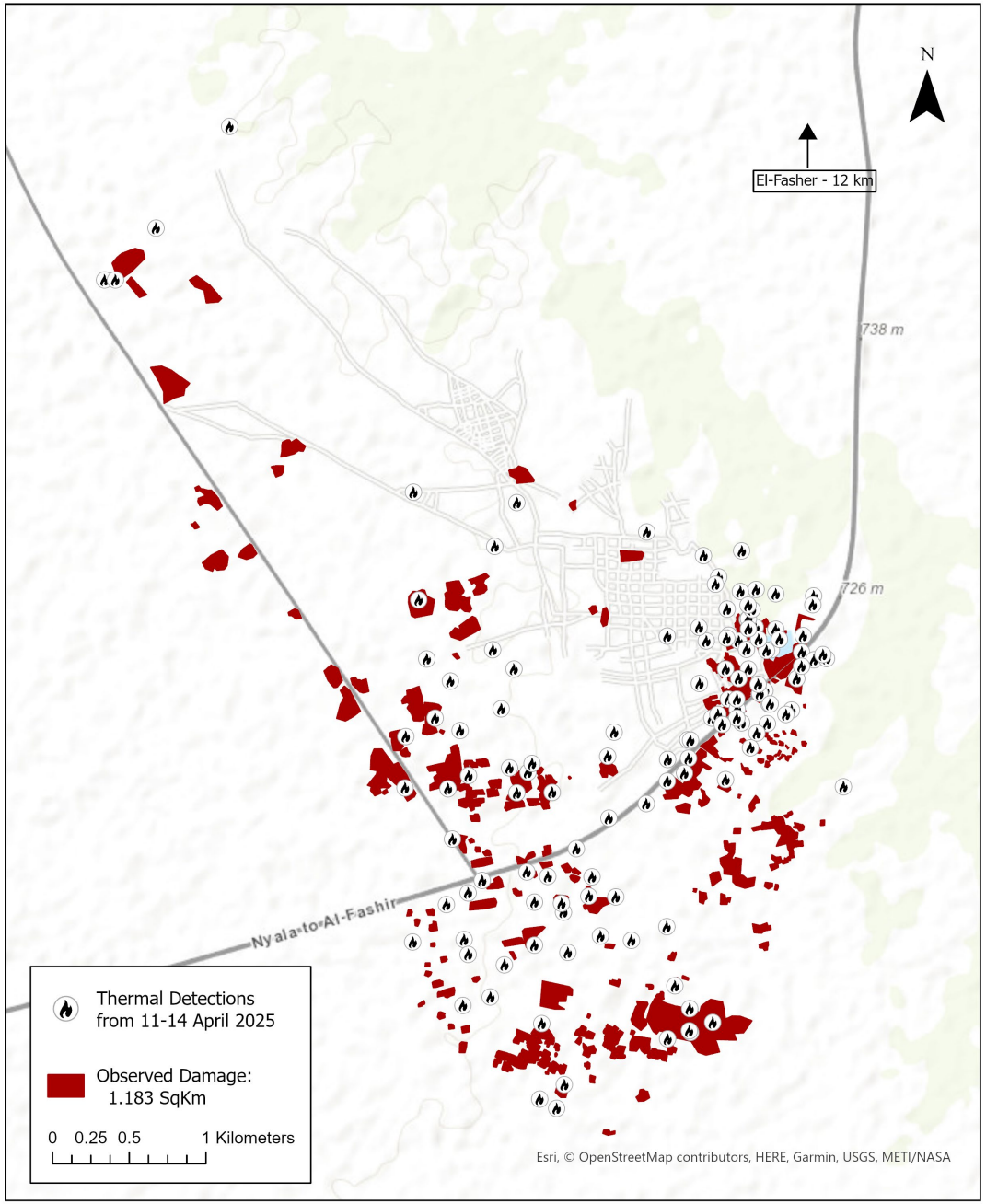
[3] HRL_MMC_091 and HRL_MMC_092 have been redacted for security reasons

[6] Darfur24, "الدعم السريع يعلن سيطرته على مخيم زمزم قرب الفاشر" April 13, 2025, https://www.darfur24.com/2025/04/13/%d8%a7%d9%84%d8%af%d8%b9%d9%85-%d8%a7%d9%84%d8%b3%d8%b1%d9%8a%d8%b9-%d9%8a%d8%b9%d9%84%d9%86-%d8%b3%d9%8a%d8%b7%d8%b1%d8%aa%d9%87-%d8%b9%d9%84%d9%89-%d9%85%d8%ae%d9%8a%d9%85-%d8%b2%d9%85%d8%b2%d9%85/, archived at https://perma.cc/LT8F-STR8

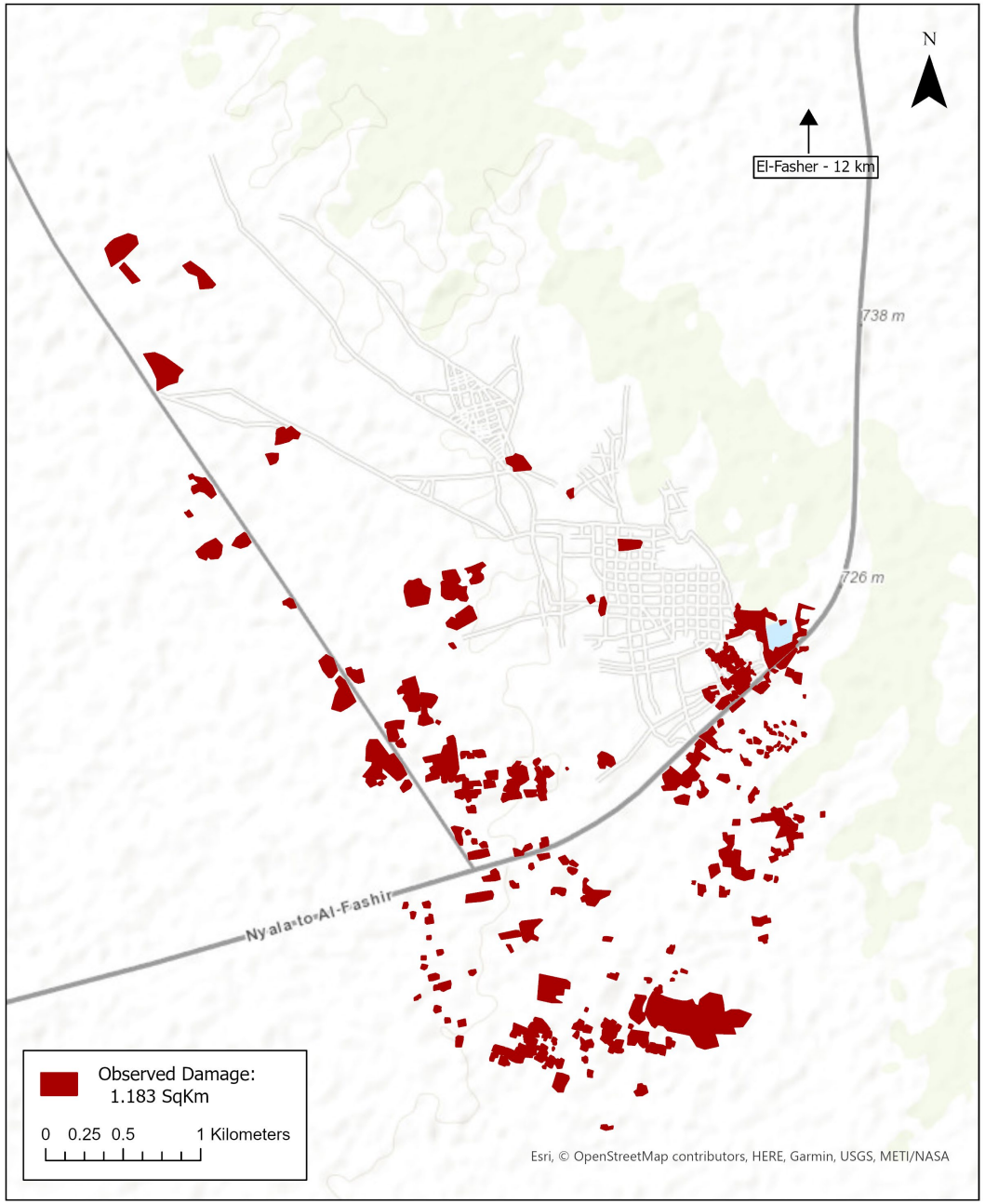
[7] International Organization for Migration, "DTM Sudan Flash Alert: Al Fasher (Zamzam IDP camp), North Darfur," Update 76, April 13, 2025, https://mailchi.mp/iom/dtm-sudan-flash-alert-al-fasher-zamzam-idp-camp-north-darfur-update-076, archived at https://perma.cc/T686-CJJ6; International Organization for Migration, "DTM Sudan Flash Alert: Al Fasher (Zamzam IDP camp), North Darfur," Update 77, April 14, 2025, https://mailchi.mp/iom/dtm-sudan-flash-alert-al-fasher-zamzam-idp-camp-north-darfur-update-077, archived at https://perma.cc/VB4F-K69Y

[8] Sudan Tribune, "الدعم السريع تعلن السيطرة على مخيم زمزم وفرار الآلاف الى الفاشر" April 13, 2025, https://sudantribune.net/article299664/, archived at https://perma.cc/PS56-3UZS; Adam Rojal ادم رجال (@rojaladam), "تُظهر هذه الفيديوهات توافد نازحين من الفاشر ومعسكراتها والمناطق المحيطة" April 12, 2025, https://x.com/rojaladam/status/1911111691103772737, archived at https://perma.cc/W4ZF-2QA9; HRL_MMC_093 has been redacted for security reasons

Observed Damage at Zamzam IDP Camp from 11 to 14 April 2025



Observed Damage at Zamzam IDP Camp from 11 to 14 April 2025



Zamzam, El-Fasher

THERMAL SCARRING OBSERVED BETWEEN 11-14 APRIL 2025

Analysis of satellite imagery collected between 11 and 14 April 2025 of the Zamzam IDP Camp shows thermal scarring and damage to structures in an IDP tent location and market within the camp.

11 April 2025 © 2025 Maxar Technologies

14 April 2025 © 2025 Planet Labs

SAPA Kitchen, Zamzam

THERMAL SCARRING OBSERVED BETWEEN 11-14 APRIL 2025

Analysis of satellite imagery collected between 11 and 14 April 2025 over Zamzam shows thermal scarring of temporary structures at the Sudanese American Physicians Association (SAPA) Kitchen compound.

A VIIRS fire detection was registered at this location on 13 April 2025.

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Zamzam IDP Camp

RSF Force Presence, Zamzam IDP Camp, 13 April 2025

Footage of RSF forces on 13 April 2025 was taken along the B26 Road in Zamzam IDP Camp.

Source | HRL_MMC_088 has been redacted for security reasons

Zamzam, El-Fasher

THERMAL SCARRING AND VEHICLE PRESENCE OBSERVED BETWEEN 11-14 APRIL 2025

Analysis of satellite imagery collected between 11 and 14 April 2025 of the Zamzam IDP Camp shows approximately 10 vehicles positioned at the southwestern access point of the camp on the road towards Nyala.

Also visible in the imagery is recent thermal scarring consistent with that of razing to structures, also occurring between 11 and 14 April 2025.

11 April 2025 © 2025 Maxar Technologies

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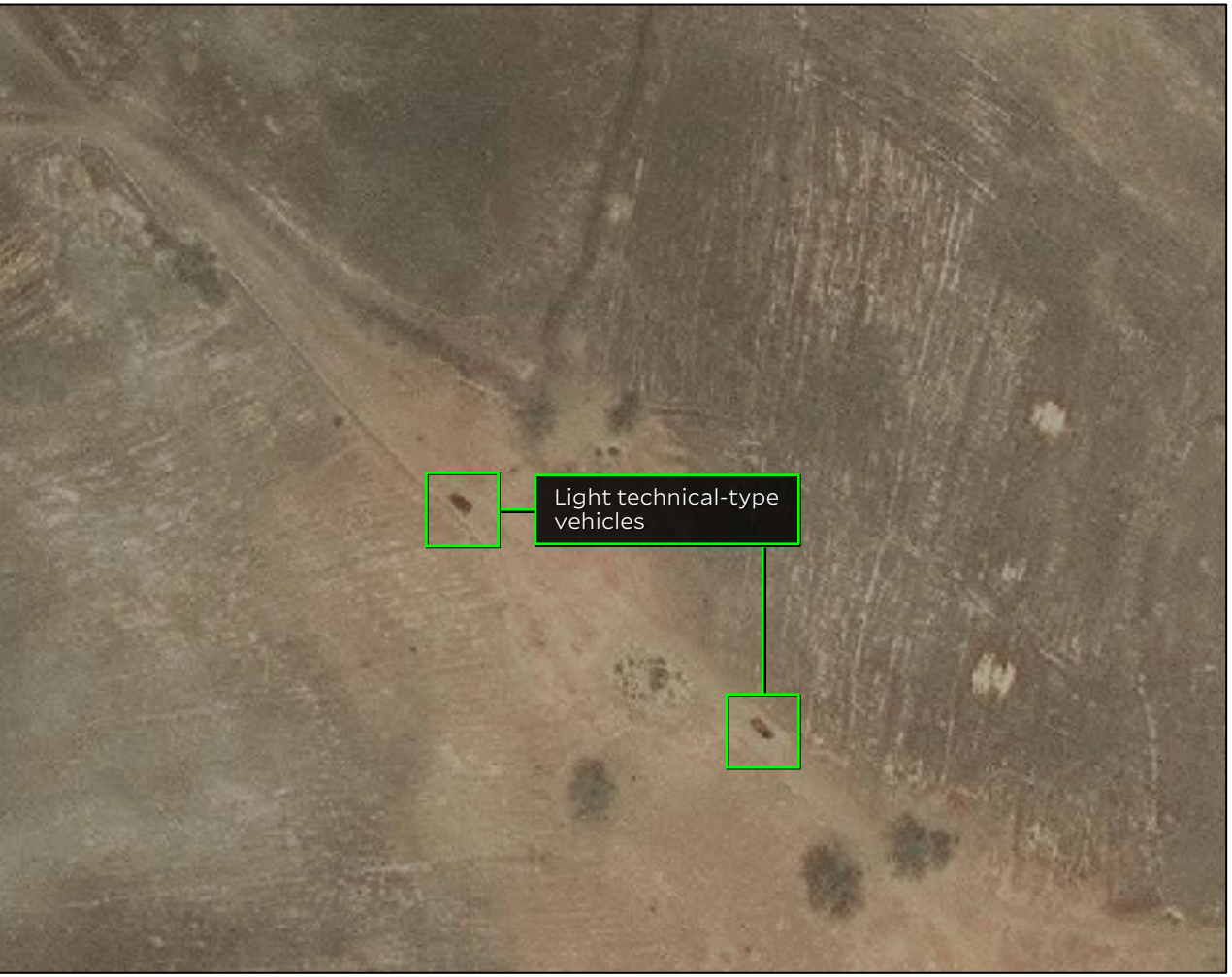
Zamzam, El-Fasher

LIKELY CHECKPOINT ESTABLISHED BETWEEN 11-14 APRIL 2025

Analysis of satellite imagery collected between 11 and 14 April 2025 of the Zamzam IDP Camp shows approximately six vehicles and smaller structures newly present at one of the eastern access points of the camp.

Imagery collected on 11 April 2025 shows two light-technical type vehicles travel westward towards the direction of the camp, but the apparent checkpoint had been established.



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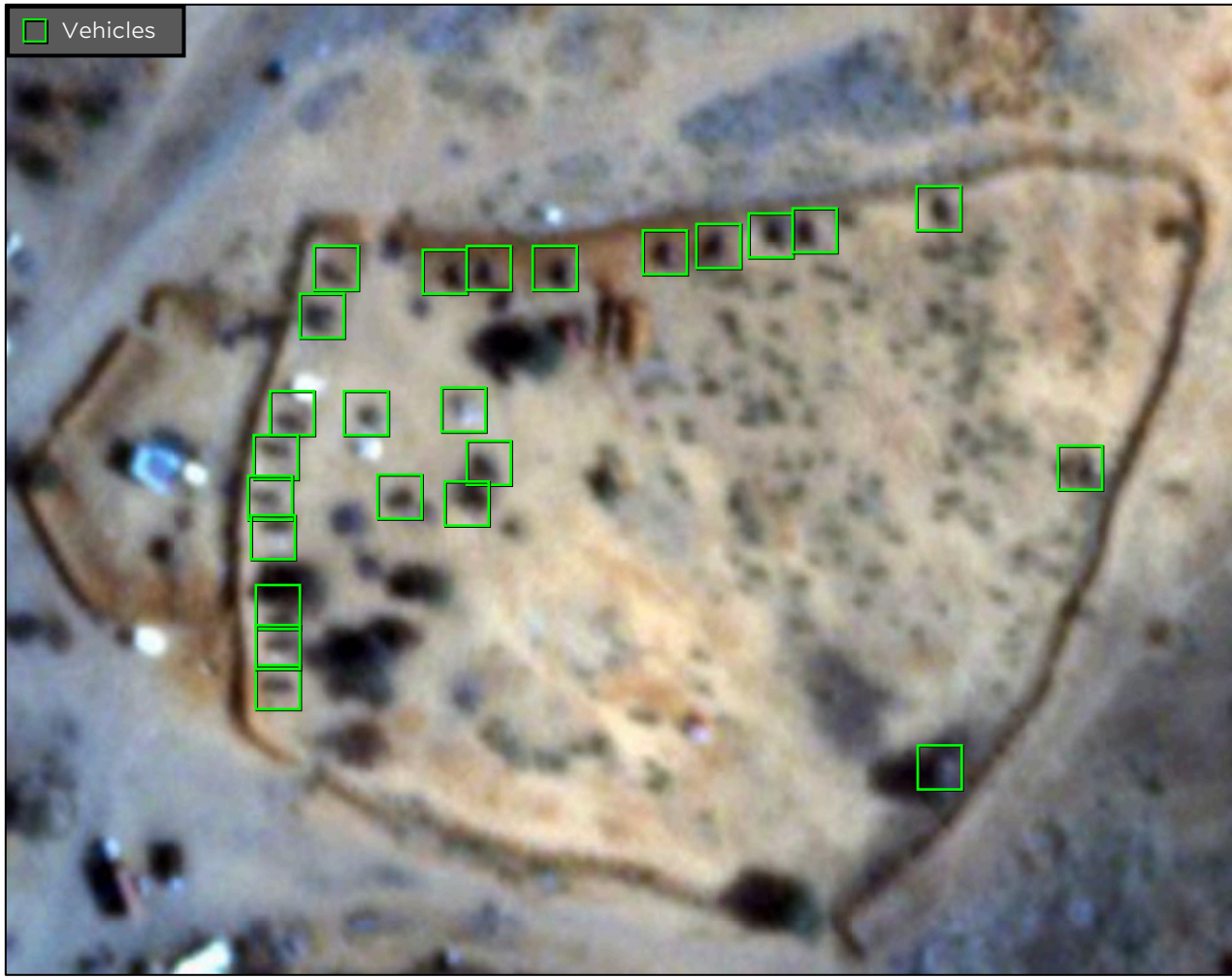
Zamzam, El-Fasher

VEHICLE PRESENCE OBSERVED BETWEEN 11-14 APRIL 2025

Analysis of satellite imagery collected between 11 and 14 April 2025 of the Zamzam IDP Camp shows the new presence approximately 25 vehicles consistent with light technical vehicles within a compound on the B26 road at the northern access point of the camp.

11 April 2025 © 2025 Maxar Technologies



14 April 2025 © 2025 Planet Labs

Zamzam, El-Fasher

VEHICLE PRESENCE OBSERVED BETWEEN 11-14 APRIL 2025

Analysis of satellite imagery collected between 11 and 14 April 2025 of the Zamzam IDP Camp shows the new presence approximately 10 vehicles consistent with light technical vehicles, and approximately 15 tents, within a compound on the B26 road at the northern access point of the camp.

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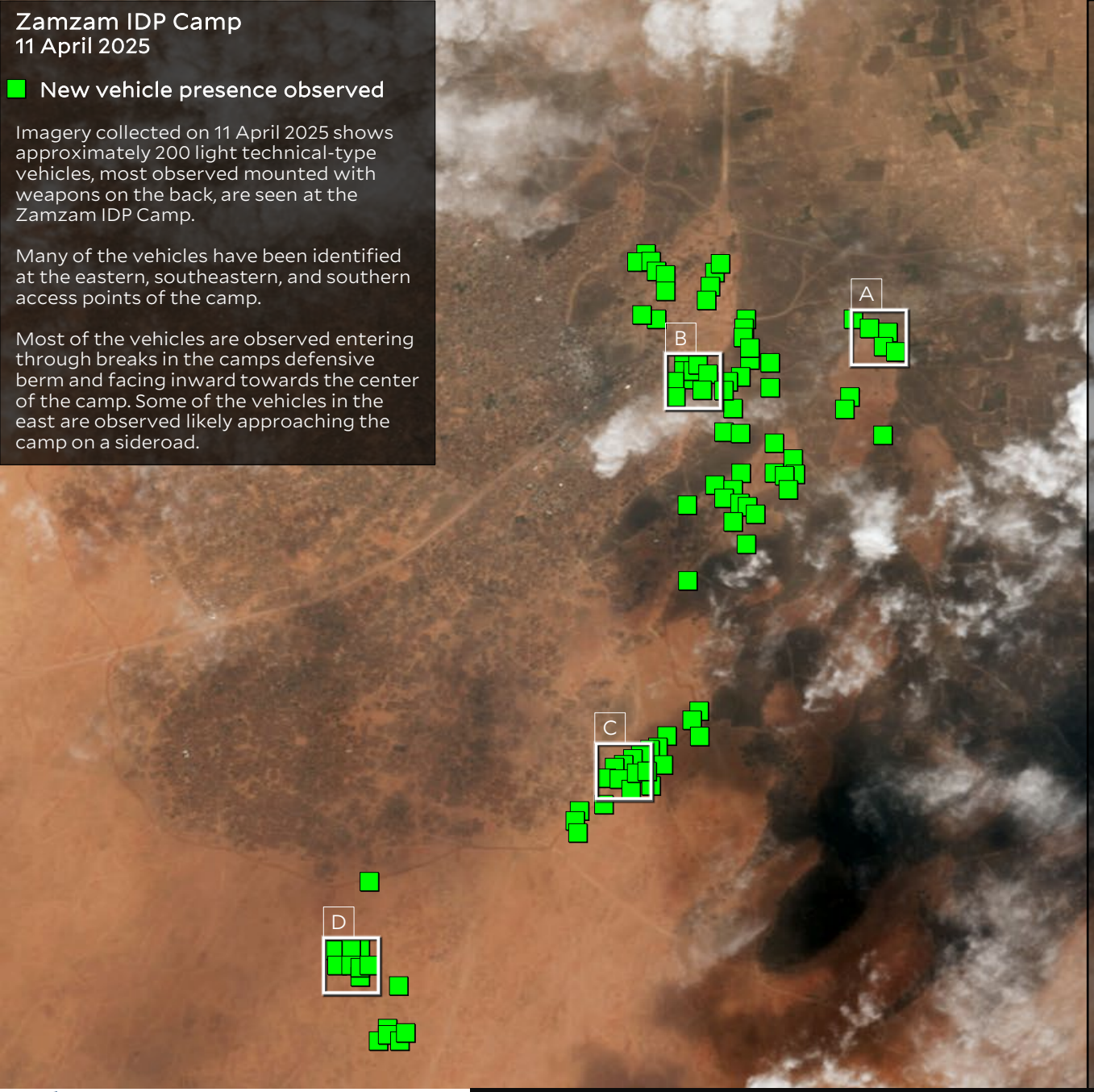
Zamzam IDP Camp
11 April 2025

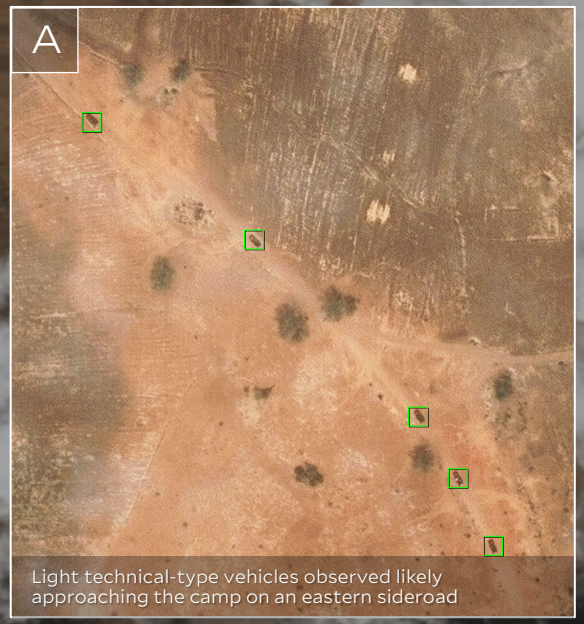
New vehicle presence observed

Imagery collected on 11 April 2025 shows approximately 200 light technical-type vehicles, most observed mounted with weapons on the back, are seen at the Zamzam IDP Camp.

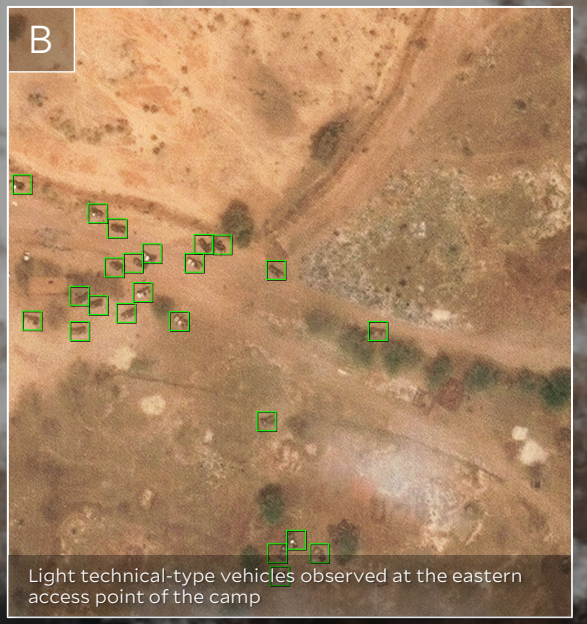
Many of the vehicles have been identified at the eastern, southeastern, and southern access points of the camp.

Most of the vehicles are observed entering through breaks in the camps defensive berm and facing inward towards the center of the camp. Some of the vehicles in the east are observed likely approaching the camp on a sideroad.

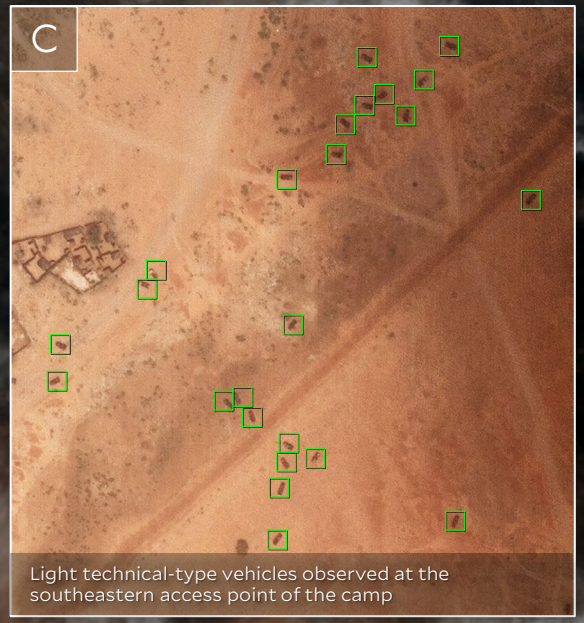




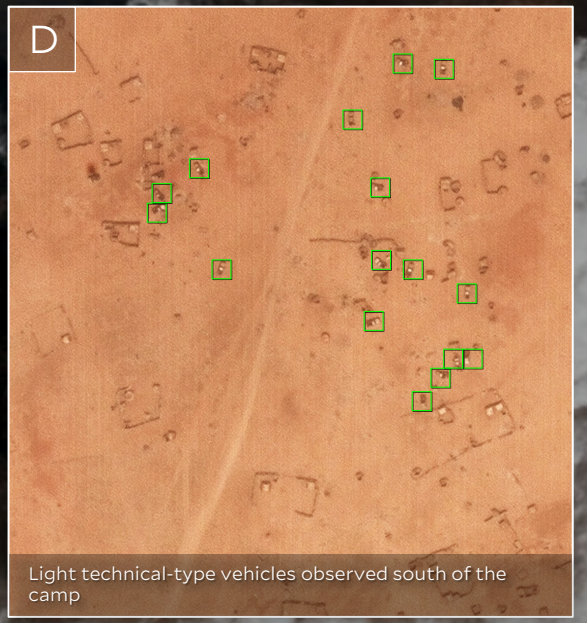
Light technical-type vehicles observed likely approaching the camp on an eastern sideroad



Light technical-type vehicles observed at the eastern access point of the camp



Light technical-type vehicles observed at the southeastern access point of the camp



Light technical-type vehicles observed south of the camp

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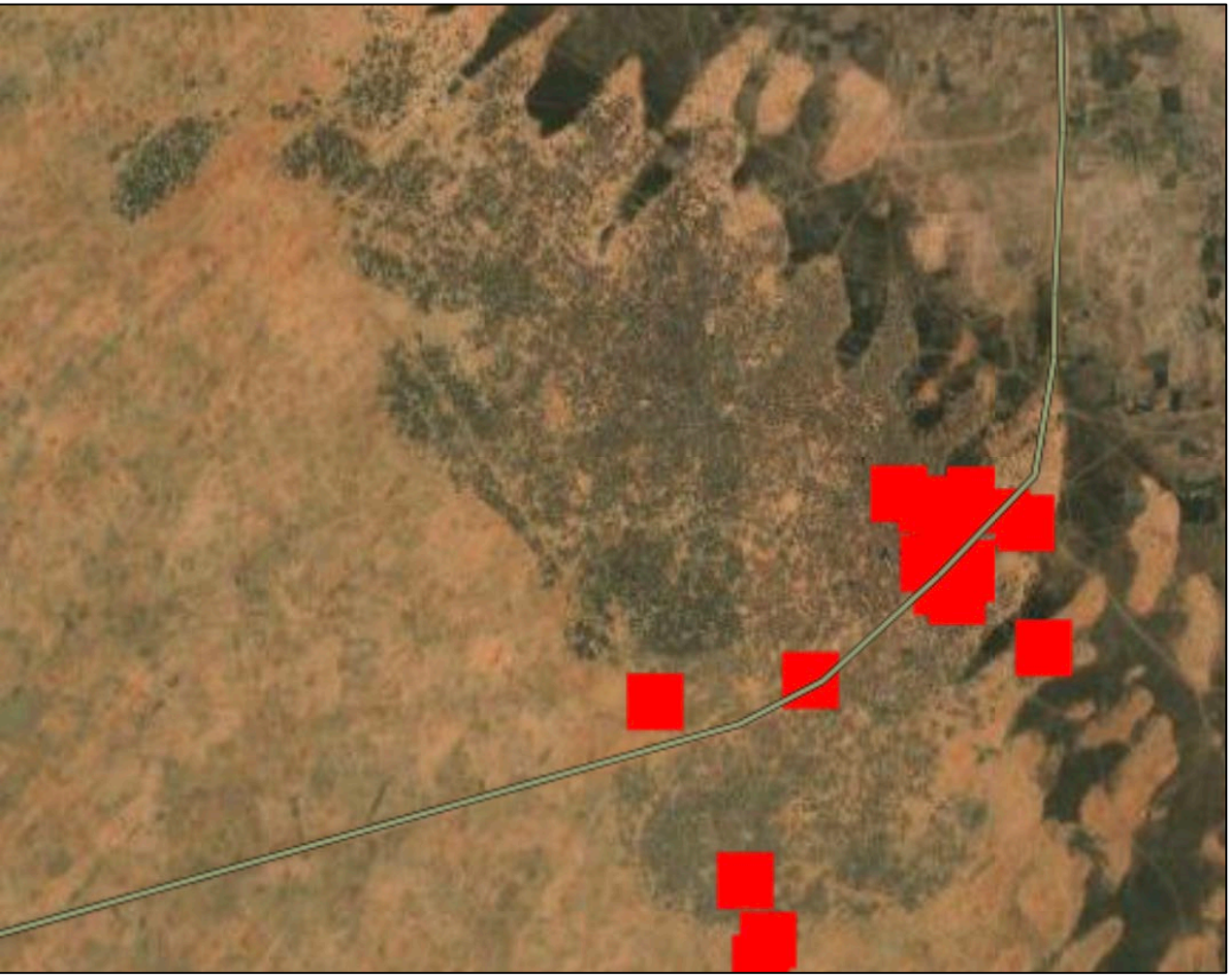
 | Close-up images enhanced with MGP Pro HD image enhancement

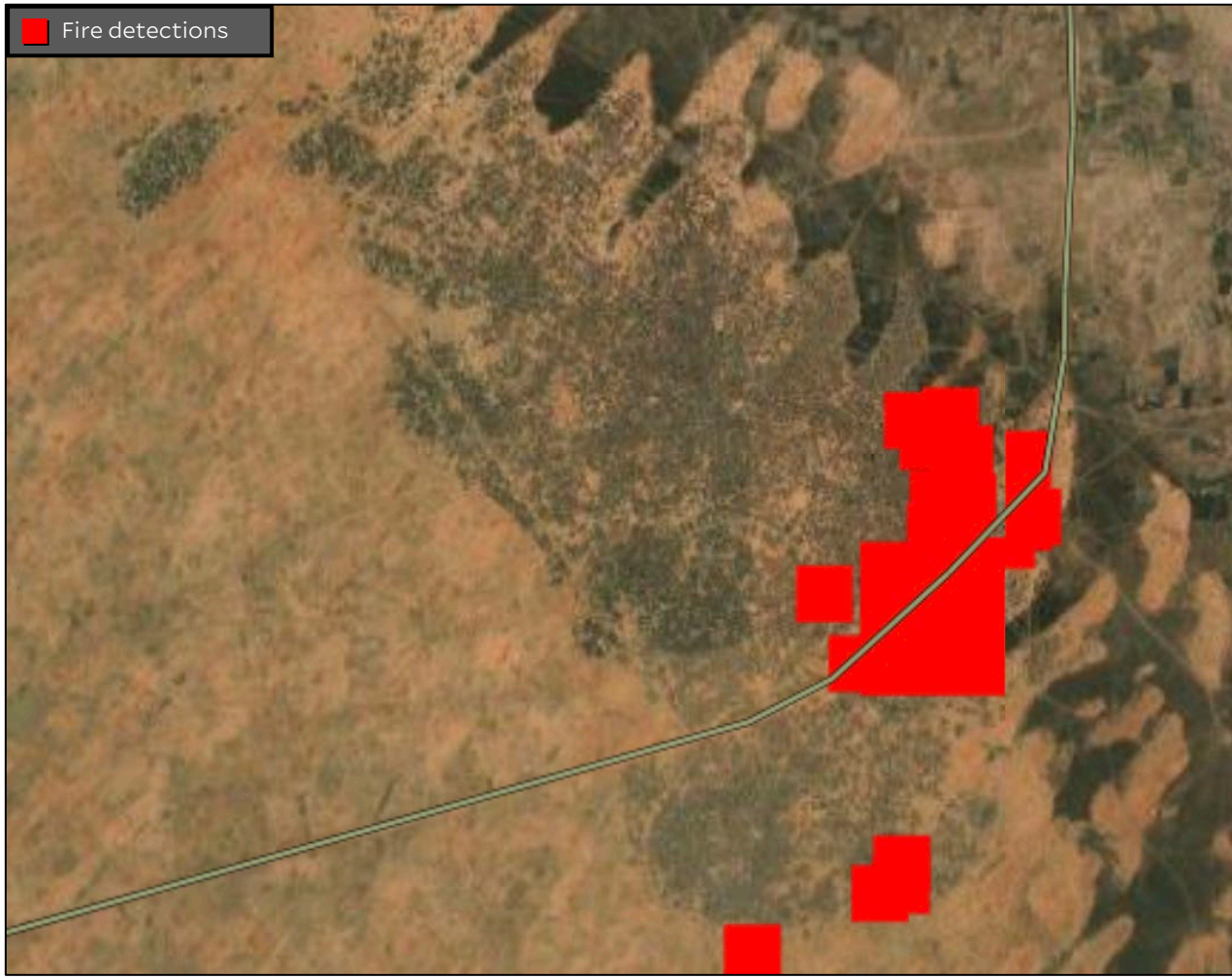
Zamzam, El-Fasher

FIRE DETECTIONS OBSERVED ON 11 AND 12 APRIL 2025

Analysis of VIIRS (Visible Infrared Imaging Radiometer Suite) Fire layer shows active fire events at central and south Zamzam on the 11 and 12 April 2025.



11 April 2025



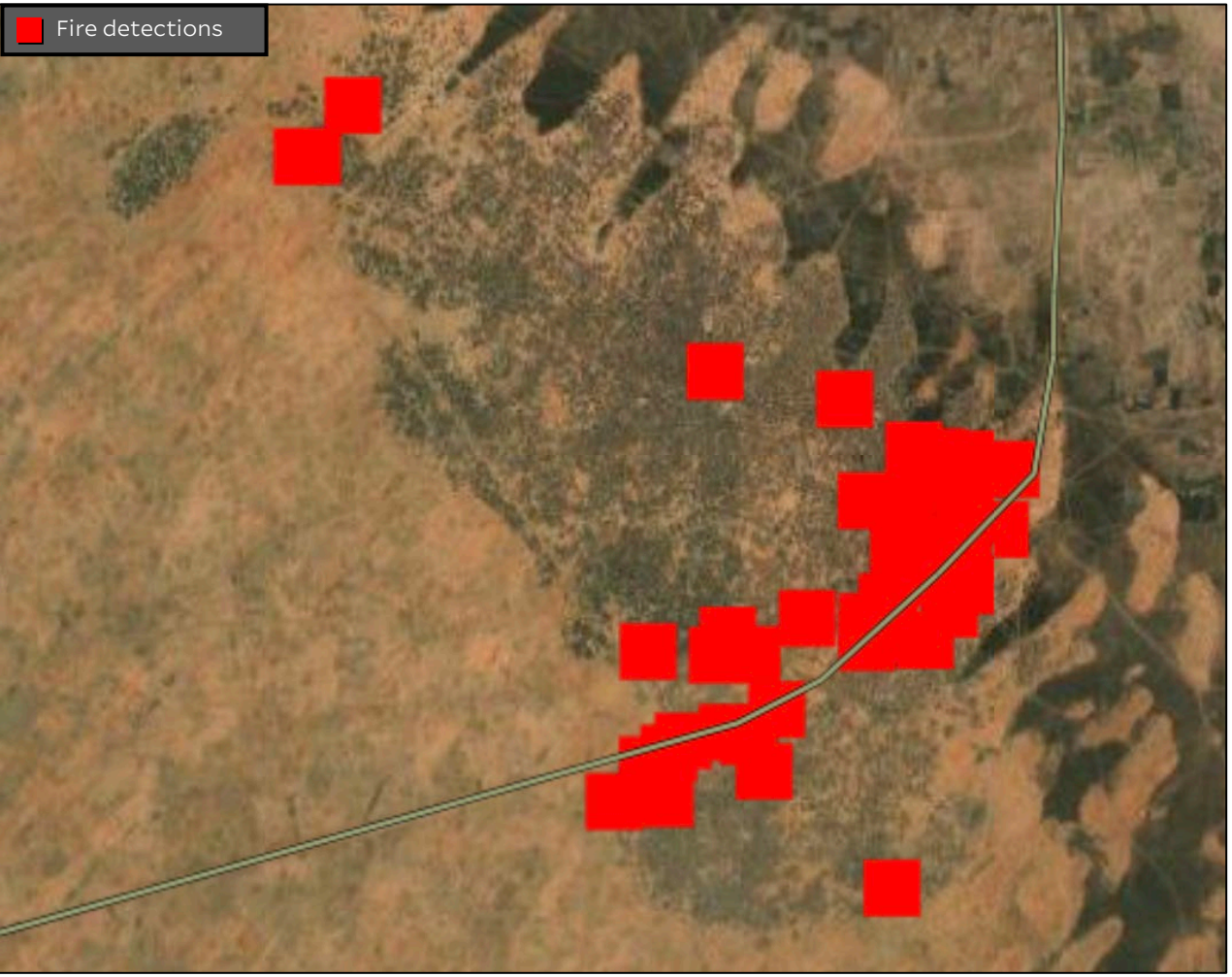
12 April 2025

Source: https://firms.modaps.eosdis.nasa.gov

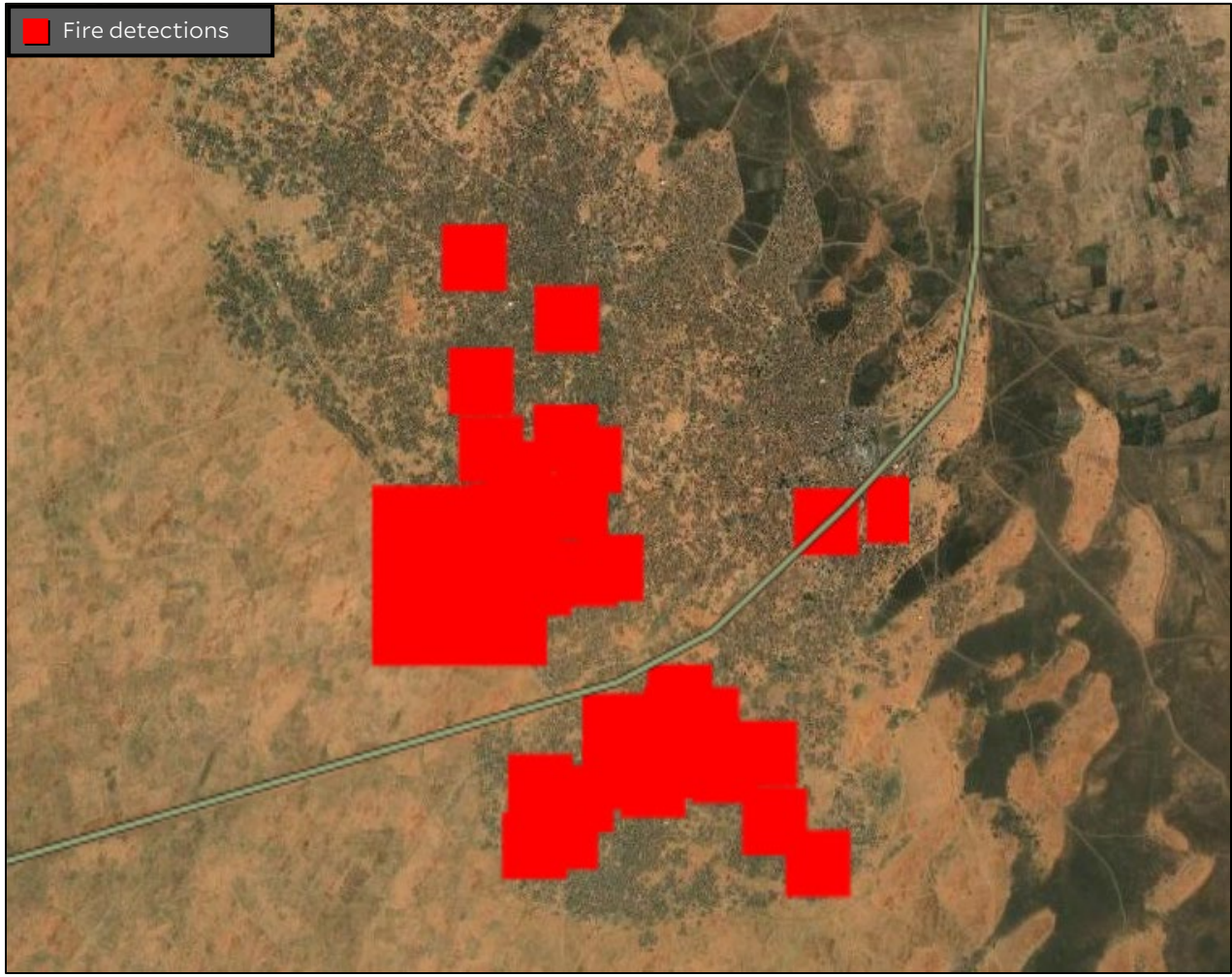
Zamzam, El-Fasher

FIRE DETECTIONS OBSERVED ON 13 AND 14 APRIL 2025

Analysis of VIIRS (Visible Infrared Imaging Radiometer Suite) Fire layer shows active fire events at central and south Zamzam on the 13 and 14 April 2025.



13 April 2025



14 April 2025

Source: https://firms.modaps.eosdis.nasa.gov

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