Kill Box: RSF Attacks IDP Camps and Razes Dozens of Communities around El-Fasher

5 February 2025

Yale SCHOOL OF PUBLIC HEALTH
Humanitarian Research Lab

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This report was independently produced by the Yale School of Public Health's Humanitarian Research Lab with the support of the Avaaz Foundation. Learn more at https://medicine.yale.edu/lab/khoshnood/ and https://avaaz.org.

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Citation | Caitlin N. Howarth, Kaveh Khoshnood, Nathaniel A. Raymond et al. "Kill Box: RSF Attacks IDP Camps and Razes Dozens of Communities around El-Fasher." 5 February 2025. Humanitarian Research Lab at Yale School of Public Health: New Haven.

I. Key Findings

The Yale School of Public Health's Humanitarian Research Lab corroborates reported Rapid Support Forces (RSF) attacks on Zamzam and Abu Shouk Internally Displaced Persons (IDP) camps on 19, 23, and 29 January 2025. Yale HRL has identified a significant number of newly dug mounds consistent with graves; these are high confidence indicators of likely civilian mortality during the bombardment of Abu Shouk. Yale HRL identified damage located along the critical B-26 road's southern section inside El-Fasher. Yale HRL has corroborated reports of RSF arson attacks on at least 23 communities west of El-Fasher near Golo Reservoir and south of Zamzam IDP Camp near Abu Zereiga between December 2024 through 4 February 2025.

Yale HRL now assesses that a "kill box" formation has emerged through RSF attacks on and maneuvers around vulnerable populations, particularly around IDP encampments. Yale HRL expects continued restriction on freedom of movement for civilians attempting to flee these locations, and the humanitarian situation in these locations continues to deteriorate rapidly. Without immediate international efforts to protect civilians, the situation will lead with near certainty to increased civilian casualties from crossfire and/or direct attack and increased risk of mass atrocities. Fatalities due to the effects of conflict, including starvation and disease, will continue to increase.

RSF Attacks on Zamzam and Abu Shouk IDP Camps

Yale HRL identified damage to structures in the Zamzam IDP camp on satellite imagery between 17 and 30 January 2025. These findings corroborate reports that RSF shelling damaged Zamzam Camp on 19 January 2025.[1] Yale HRL also identified damage to several structures in Abu Shouk IDP camp in El-Fasher, including near the Navaisha Market, between 21 January and 03 February 2025. This damage corroborates news reports that RSF shelled Abu Shouk on 23 January 2025 and again on 29 January 2025.[2]

Through satellite imagery analysis, Yale HRL has identified conflict-related damage to several structures at the former UNAMID Compound in El-Fasher likely from artillery shelling between 21 January and 03 February 2025. Analysis of Visible Infrared Imaging Radiometer Suite (VIIRS) data found that a fire detection occurred at this location on 28 January 2025. Yale HRL confirms damage to a water storage tank at the former UNAMID Compound in El-Fasher, likely due to shelling, on satellite imagery collected between 21 January and 03 February 2025. The former UNAMID compound is a known Joint Forces/Sudan Armed Forces (SAF) installation.[3]

Indicators of Likely Civilian Casualties in Abu Shouk IDP Camp

Yale HRL identified approximately 70 new grave mounds in the Al-Rahma cemetery in Abu Shouk IDP camp through analysis of satellite imagery collected between 21 January and 03 February 2025. Local media reported that shelling on 23 and 29 January together killed at least 13 people and injured at least 25 others.[4]

El-Fasher Damage Assessment

Yale HRL assesses that both SAF and RSF have likely engaged in bombardment on the critical junctures on the B-26 road within El-Fasher. If civilians on the northern side of

El-Fasher, particularly Abu Shouk, attempt to leave El-Fasher, the B-26 road would be their most likely exit from the city; HRL assesses that the road would be a free fire zone.

There is significant damage throughout El-Fasher, North Darfur. This damage includes fire-related damage, damage from munitions, and munition impacts along and near the B-26 road near the airport and the Grand Market (Souq) as well as the eastern, southern, and southeastern areas of El-Fasher. There are clusters of damage inside the city along key bends in the B-26 main road running through El-Fasher, including near the Mawashi livestock market in the center of the city.

Through analysis of video footage and other multimedia content, Yale HRL geolocated videos of RSF forces as present on the B26 road near the Mawashi livestock market and Khatam Al-Anbiya Mosque on 02 February 2025 and corroborated reports of conflict-related damage in the same area.[5] Analysis of satellite imagery collected between 30 January and 03 February 2025 shows structural damage through burning and shelling in south El-Fasher. Damage and munition impacts were assessed along the eastern and northeastern areas inside El-Fasher.

Arson attacks on at Least 23 Communities near Golo Reservoir and South of Zamzam

Yale HRL identified thermal scarring consistent with intentional razing to structures in a total of at least 23 communities in El-Fasher, Dar as Salaam, and Tawilah localities between 11 December 2024 and 4 February 2025. At least six communities in the Golo Reservoir area along the A-5 road west of El-Fasher and two communities south of Zamzam in the Dar As Salaam locality were attacked by RSF between 25 January and 4 February 2025. The majority of small communities attacked since December 2024 are located near Abu Zereiga in the Dar As Salaam locality, approximately 18-30 kilometers south of Zamzam IDP camp. Newly visible thermal scarring indicates that RSF started attacking communities in and around Shagara at the end of January 2025. At least ten of the communities in the Dar As Salaam locality have been attacked multiple times, including “Dar As Salaam Community 7,” which was attacked at least seven individual times. Temporary structures consistent with IDP shelters have been present in Shagara Musa and Shagara Humaida since at least July 2024 through at least January 2025.

The International Organization for Migration (IOM) reported that RSF arson attacks in El-Fasher and Dar As Salaam localities have displaced thousands of households since 18 December 2024. Yale HRL has corroborated attacks reported by IOM in the Golo and Shagara area, Abu Zeriga area, Karwa, and Tebeldiyat.[6]

As of 4 February 2025, Yale HRL has corroborated attacks on 105 communities since 31 March 2024 across North Darfur in El-Fasher, Dar As Salaam, Tawilah, and Kutum localities. At least 70 of these communities are within 70 km of El-Fasher.

Table 1: Arson Attacks on Communities near El-Fasher, 11 December 2024 - 4 February 2025

Name	Locality	VIIRS Detection Dates*	Visible Thermal Scarring in Satellite Imagery
Shagara Musa	El-Fasher	2 Feb 2025 31 Jan 2025	25 Jan to 04 Feb 2025
Shagara Humaida	El-Fasher	2 Feb 2025 31 Jan 2025	25 Jan to 04 Feb 2025
Kheir Khanaqa	El-Fasher	03 Feb 2025	25 Jan to 04 Feb 2025
Umm Hegalig	El-Fasher	03 Feb 2025	25 Jan to 04 Feb 2025
Muqrin	El-Fasher		25-30 Jan 2025
Community 32	El-Fasher		25 Jan to 03 Feb 2025
Karwa	Dar As Salaam	31 Jan 2025	30 Jan to 04 Feb 2025
Tebeldiyat	Dar As Salaam	31 Jan 2025 27 Jan 2025,	30 Jan to 04 Feb 2025 25 Jan to 30 Jan 2025,
Dar As Salaam Community 1	Dar As Salaam	14 Jan 2025 23 Dec 2024 20 Dec 2024 18 Dec 2024	11 Dec 2024 to 04 Feb 2025
Dar As Salaam Community 2	Dar As Salaam	14 Jan 2025 23 Dec 2024 20 Dec 2024 18 Dec 2024	11 Dec 2024 to 04 Feb 2025
Dar As Salaam Community 3	Dar As Salaam	25 Dec 2024 23 Dec 2024	11-21 Dec 2024
Dar As Salaam Community 4	Dar As Salaam	15 Jan 2025 25 Dec 2024 21 Dec 2024 19 Dec 2024	10-15 Jan 2025 11-26 Dec 2024
Damm Sillik	Dar As Salaam	20 Dec 2024	25-30 Jan 2025 10-20 Jan 2025 11-21 Dec 2024
Tamad Deheish	Dar As Salaam	20 Dec 2024 19 Dec 2025	11-21 Dec 2024
Dar As Salaam Community 7	Dar As Salaam	28 Dec 2024 27 Dec 2024 21 Dec 2024 20 Dec 2024 19 Dec 2024	30 Jan 2025 -4 Feb 2025; 25-30 Jan 2025; 20-25 Jan 2025; 15-20 Jan 2025; 26-31 Dec 2024 21-26 Dec 2024 11-21 Dec 2024
Dar As Salaam Community 8	Dar As Salaam	5 Jan 2025 30 Dec 2024 28 Dec 2024 23 Dec 2024 22 Dec 2024 21 Dec 2024	25 - 30 Jan 2025; 5-10 Jan 2025; 31-26 Dec 2024; 26-31 Dec 2024 11-21 Dec 2024
Kurgala	Dar As Salaam	21, 22, 26, 28 Dec 2024	11 Dec 2024 to 20 Jan 2025; 30 Jan to 04 Feb 2025
Kibga	Dar As Salaam	16 Jan 2025 31 Dec 2024	31 Dec 2024 to 20 Jan 2025
Dar As Salaam Community 11	Dar As Salaam	08 Jan 2025	30 Jan 2025 to 4 Feb 2025 05-10 January 2025; 11-21 December 2024;
Dar As Salaam Community 13	Dar As Salaam	31 Dec 2024	5 – 10 Jan 2025 31 Dec 2024 - 10 Jan 2025

Dar As Salaam Community 14	Dar As Salaam		15-20 Jan 2025 1 – 6 Dec 2025 27 Oct – 16 Nov 2024
Dar As Salaam Community 15	Dar As Salaam		20-25 Jan 2025
Tawilah Community 6	Tawilah		Between 27 October and 06 November 2024; 11-16 November 2024; 01-06 December 2024; 15-20 January 2025
Dar As Salaam Community 12†	*Dar As Salaam*	*05 Jan 2025 18 Dec 2025*	*11-21 Dec 2024*

*Visible Infrared Imaging Radiometer Suite (VIIRS) data, when available, can narrow down the time period that communities were attacked.

† The thermal damage at "Dar As Salaam Community 12" is not individuated and does not clearly exhibit a pattern of selection. As a result, the damage cannot be assessed to be an intentional arson attack at this time based on the available data. It is included in due to the humanitarian impact of this community's destruction, but the pattern of damage does not currently corroborate an intentional attack. The other 23 communities in this table all exhibit a pattern of damage consistent with intentional targeting and arson attacks.

These arson attacks not only cause civilian casualties and displacement but also devastate livelihoods, exacerbate famine conditions and extreme food insecurity, and force vulnerable communities to rebuild, entrenching long-term instability. These communities are along the A-5 road between Zamzam IDP camp and Tawilah, North Darfur as well as south of Zamzam IDP Camp. Many of these communities played a critical role in supporting safe passage for civilians fleeing El-Fasher and Zamzam. The attacks on these communities further isolate people in El-Fasher and Zamzam and increase the humanitarian needs for communities receiving survivors.

II. 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.

Arson Attack Analysis: Analysts used remote sensing thermal anomaly data, Visible Infrared Imaging Radiometer Suite (VIIRS) to identify thermal anomalies that were co-located at settlements to assess possible destruction. Additionally, VIIRS thermal anomaly data was used to narrow down the possible dates that an event may have occurred. Sentinel-2 low resolution satellite imagery was used in conjunction with high

resolution imagery for baseline comparison to observe thermal scarring patterns and their effect on communities in the areas of observation. Analysts used Sentinel-2 false color composite, which uses near-infrared data to better assess damage and thermal scarring. Visual indicators of intentional damage include discoloration to the analyzed structures, including indicators of possible burning or charring; observable difference in structural texture compared to pre-event dates. Analysts assess burning intent, versus incidental burning or wildfire, using indicators such as unaffected ground between observed burned structures, and lack of thermal scarring on ground outside individual community areas.[7]

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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Abu Shouk IDP Camp, El-Fasher

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 21 JANUARY-03 FEBRUARY 2025

Analysis of satellite imagery collected between 21 January and 03 February 2025 shows destruction of several structures in the Abu Shouk IDP Camp in El-Fasher.

21 January 2025 © 2025 Maxar Technologies
Image enhanced with MGP Pro HD image enhancement

03 February 2025 © 2025 Maxar Technologies
Image enhanced with MGP Pro HD image enhancement

Zamzam IDP Camp

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 17-30 JANUARY 2025

Analysis of satellite imagery collected between 17 and 30 January 2025 shows damage to structures in the Zamzam IDP camp.

17 January 2025 © 2025 Maxar Technologies
Image enhanced with MGP Pro HD image enhancement

30 January 2025 © 2025 Maxar Technologies
Image enhanced with MGP Pro HD image enhancement

Abu Shouk IDP Camp, El-Fasher

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 21 JANUARY-03 FEBRUARY 2025

Analysis of satellite imagery collected between 21 January and 03 February 2025 shows destruction of structures in the Abu Shouk IDP Camp in El-Fasher.

21 January 2025 © 2025 Maxar, USG-Plus

03 February 2025 © 2025 Maxar, USG-Plus

Navaisha Market, Abu Shouk IDP Camp, El-Fasher

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 21 JANUARY-03 FEBRUARY 2025

Analysis of satellite imagery collected between 21 January and 03 February 2025 shows destruction of several structures near the Navaisha Market of the Abu Shouk IDP Camp in El-Fasher.

21 January 2025 © 2025 Maxar, USG-Plus

03 February 2025 © 2025 Maxar, USG-Plus

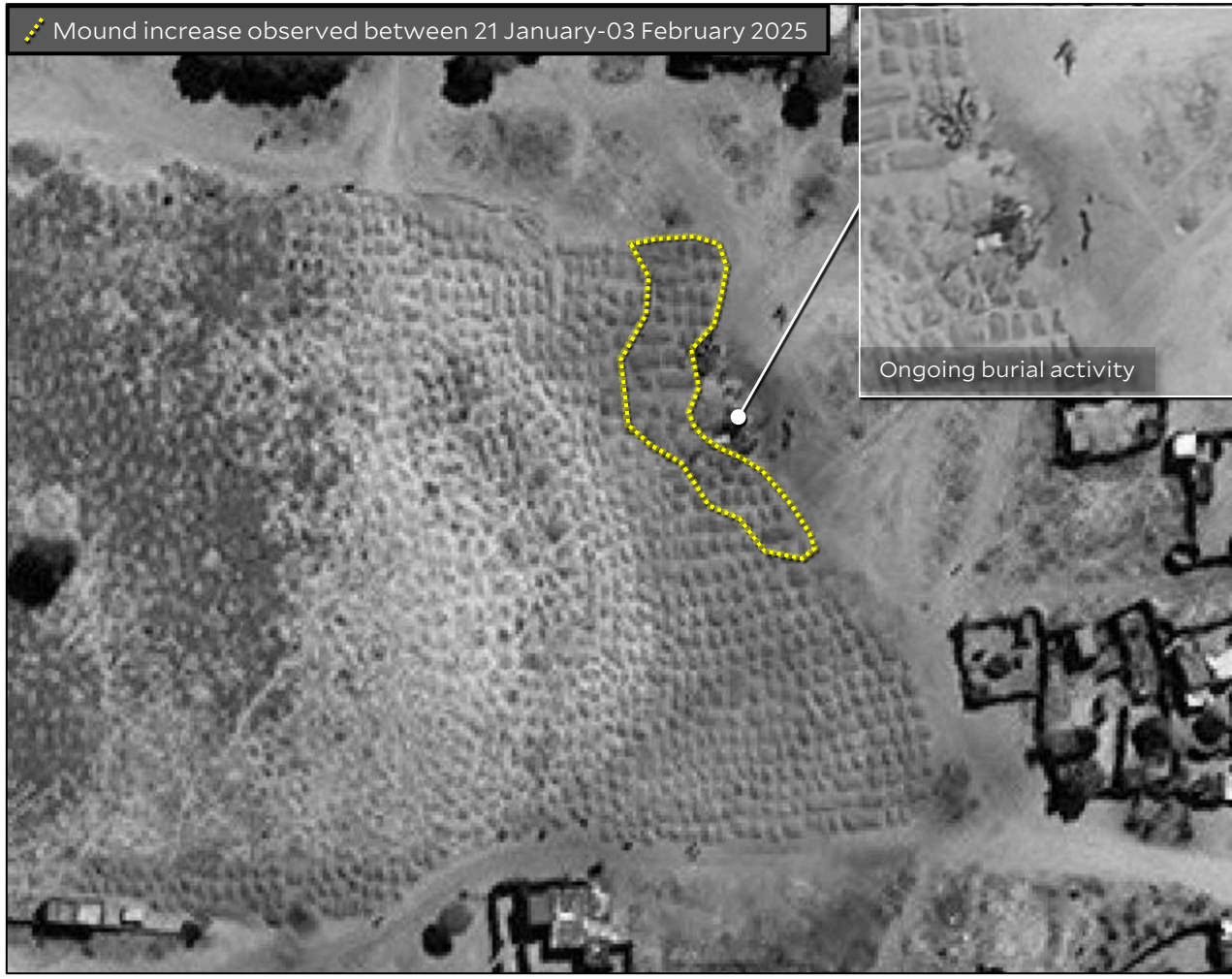
Al-Rahma Cemetery, Abu Shouk IDP Camp, El-Fasher

GRAVE INCREASE AND BURIAL ACTIVITY OBSERVED BETWEEN 21 JANUARY-03 FEBRUARY 2025

Analysis of satellite imagery collected between 21 January and 03 February 2025 of the Al-Rahma cemetery in the Abu Shouk IDP camp shows the increase of approximately 70 grave mounds during that timeframe.

Multiple ongoing burials are also visible at the cemetery on 03 February 2025.

21 January 2025 © 2025 Maxar, USG-Plus



03 February 2025 © 2025 Maxar, USG-Plus
Close-up image enhanced with MGP Pro HD image enhancement


Former UNAMID Compound, El-Fasher
38 munition impacts observed between 21 JAN-03 FEB 2025
03 February 2025 © 2025 Maxar, USG-Plus

Former UNAMID Compound, El-Fasher

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 21 JANUARY-03 FEBRUARY 2025

Analysis of satellite imagery collected between 21 January and 03 February 2025 shows damage to several structures from likely shelling of the former UNAMID Compound in El-Fasher.

According to analysis of VIIRS data, a fire event occurred at this location on 28 January 2025.

21 January 2025 © 2025 Maxar Technologies
Image enhanced with MGP Pro HD image enhancement

03 February 2025 © 2025 Maxar Technologies
Image enhanced with MGP Pro HD image enhancement

El-Fasher

Analysis of satellite imagery collected between 30 January and 03 February 2025 shows structural damage through burning in south El-Fasher.

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 30 JANUARY-03 FEBRUARY 2025

30 January 2025 © 2025 Maxar, USG-Plus

03 February 2025 © 2025 Maxar, USG-Plus

El-Fasher

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 30 JANUARY-03 FEBRUARY 2025

Analysis of satellite imagery collected between 30 January and 03 February 2025 shows structural damage through burning in south El-Fasher.

30 January 2025 © 2025 Maxar, USG-Plus

03 February 2025 © 2025 Maxar, USG-Plus

El-Fasher

Analysis of satellite imagery collected between 30 January and 03 February 2025 shows structural damage through burning in south El-Fasher.

CONFLICT-RELATED DAMAGE OBSERVED BETWEEN 30 JANUARY-03 FEBRUARY 2025

30 January 2025 © 2025 Maxar, USG-Plus

03 February 2025 © 2025 Maxar, USG-Plus

B-26 Road Near Mawashi Livestock Market

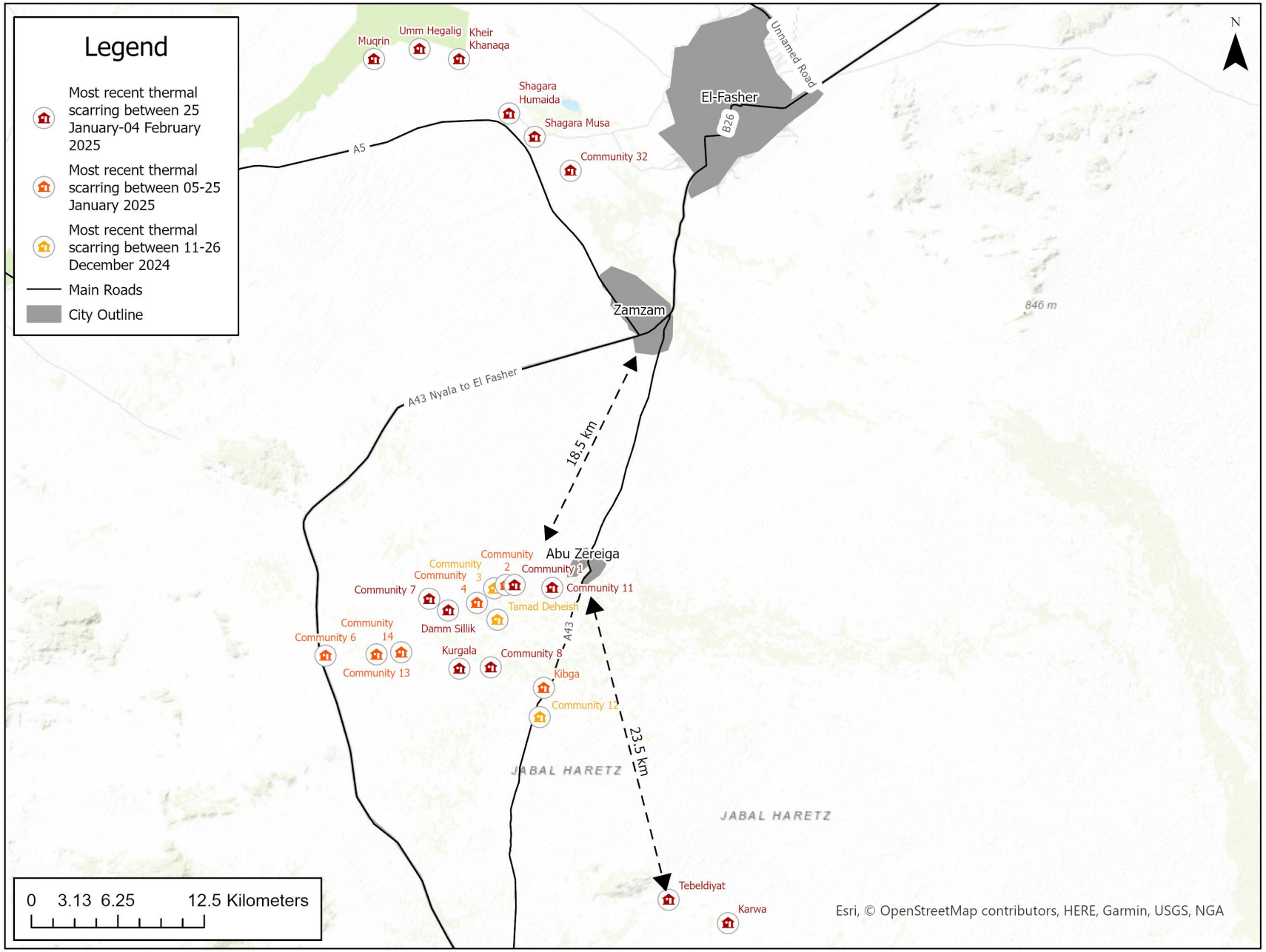
Yale HRL has assessed and geolocated videos from RSF posted on 03 February 2025 to the road near the Mawashi Livestock Market in El-Fasher, North Darfur.

RSF GEOLOCATED TO SOUTHWESTERN AREA OF EL-FASHER

04 February 2025 © Maxar, USG-Plus

Source: HRL_MMC_074, HRL_MMC_076 have been withheld for protection reasons

Thermal Scarring at Communities in Dar As Salaam, Tawilah and El-Fasher Locality between 11 December 2024 and 04 February 2025



Community 32, El-Fasher Locality

THERMAL SCARRING, DAMAGE TO STRUCTURES OBSERVED BETWEEN 25 JANUARY 2025-03 FEBRUARY 2025

Analysis of satellite imagery collected between 25 January and 03 February 2025 of a community, referred to as "Community 32," located 2km south of Shagara Musa shows thermal scarring and damage to structures consistent with intentional razing.

25 January 2025 © 2025 Maxar, USG-Plus

03 February 2025 © 2025 Maxar, USG-Plus

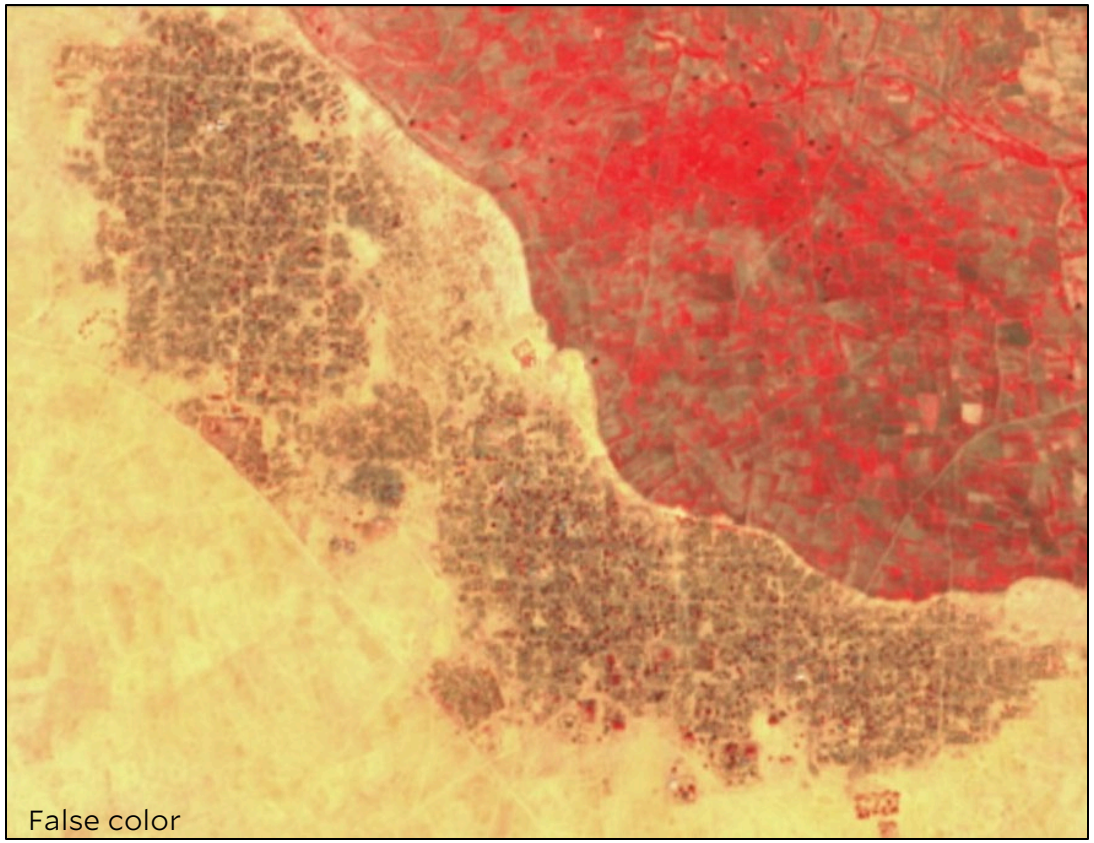
Shagara Musa and Shagara Humaida

THERMAL SCARRING OBSERVED BETWEEN 25 JANUARY AND 04 FEBRUARY 2025

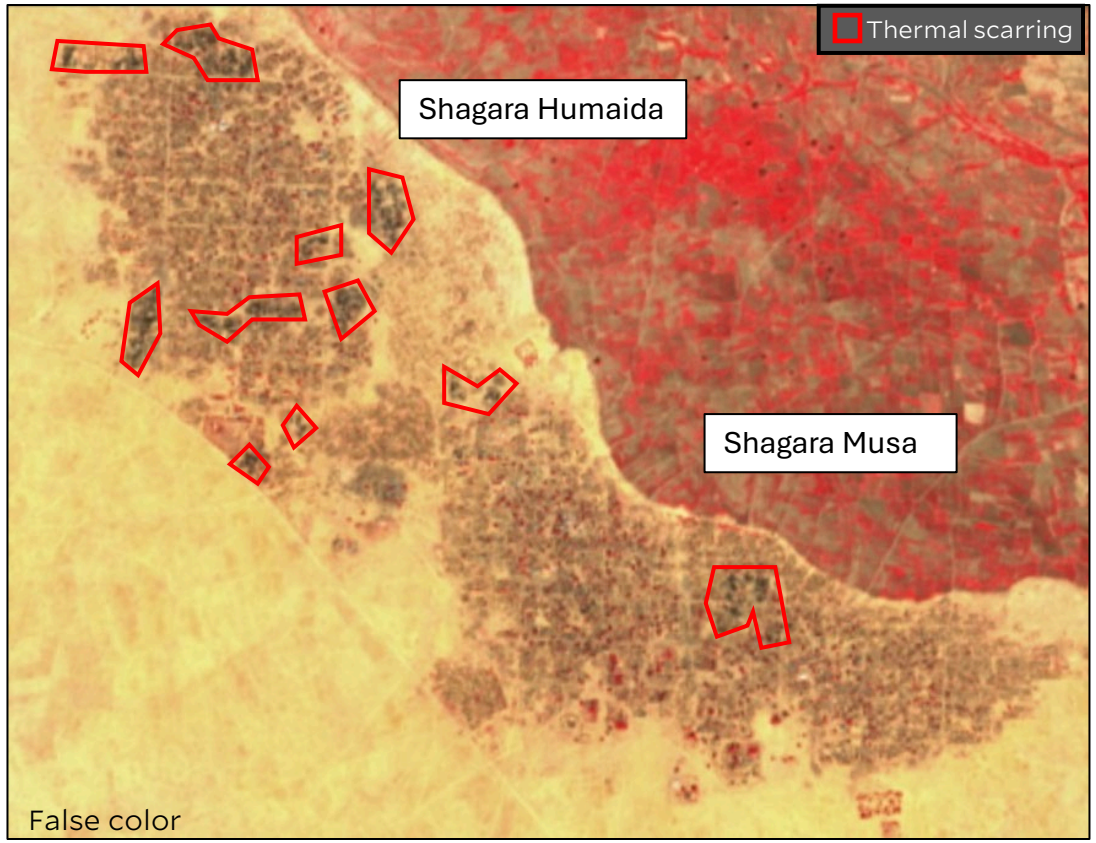
According to analysis of satellite imagery, thermal scarring was observed at Shagara Musa and Shagara Humaida between 25 January 2025 and 04 February 2025. According to analysis of VIIRS data, fire event detections occurred on 31 January and 02 February 2025.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.

Shagara Musa and Shagara Humaida are off the A-5 road between Zamzam and Tawilah, North Darfur



25 January 2025 © 2025 Copernicus Sentinel



04 February 2025 © 2025 Copernicus Sentinel

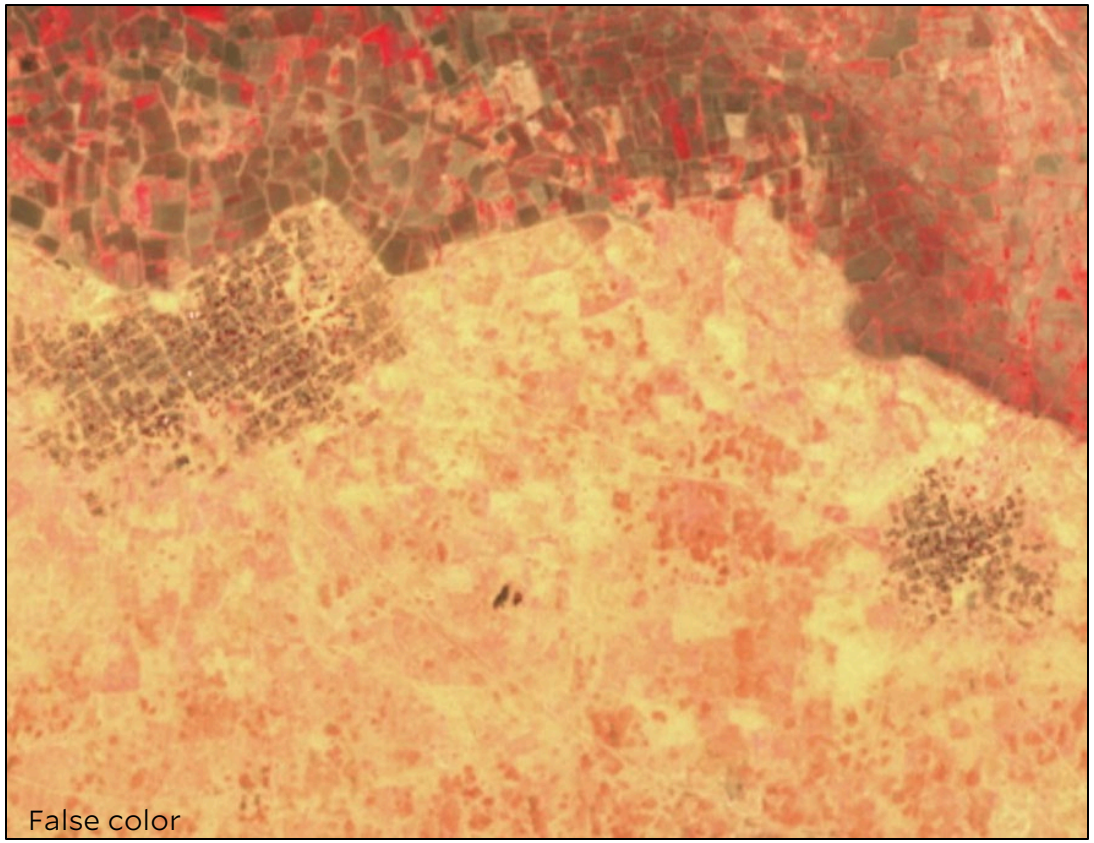
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Kheir Khanaqa and Umm Hegalig

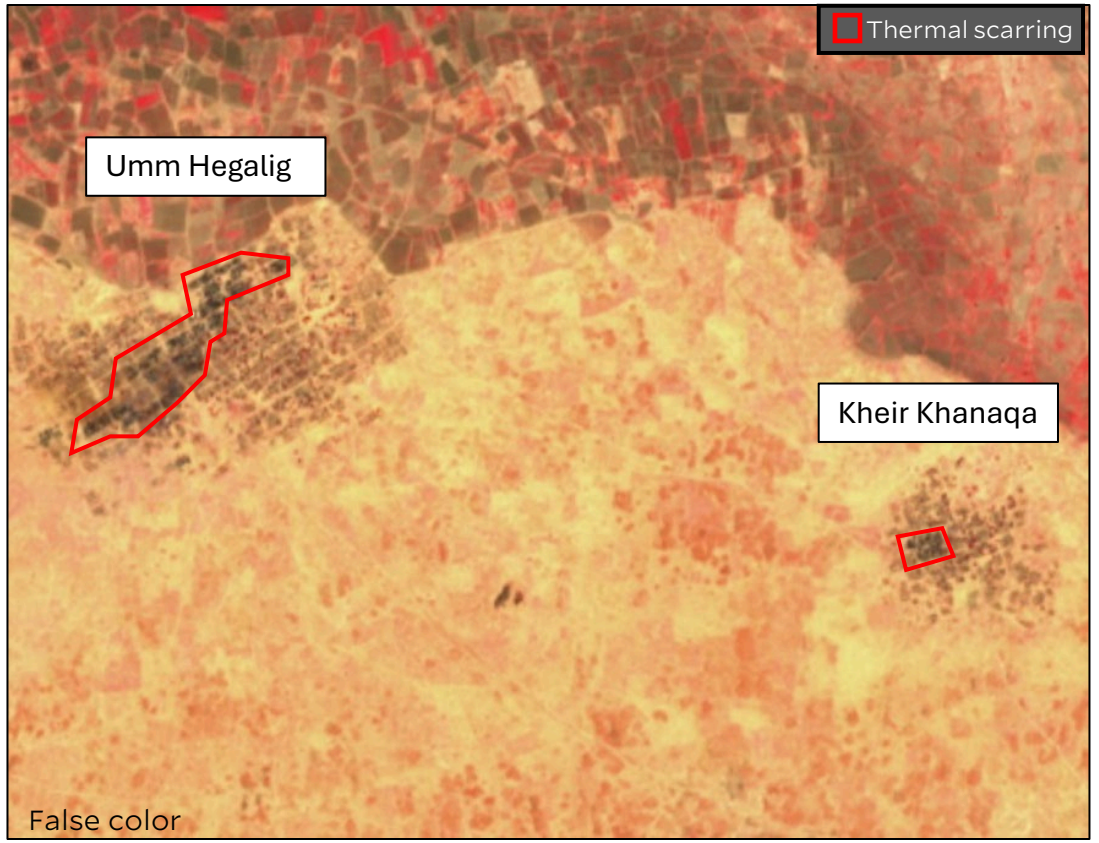
THERMAL SCARRING OBSERVED BETWEEN 25 JANUARY AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at Kheir Khanaqa and Umm Hegalig between 25 January 2025 and 04 February 2025. According to analysis of VIIRS data, fire event detections occurred on 03 February 2025 at Umm Hegalig.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



25 January 2025 © 2025 Copernicus Sentinel



04 February 2025 © 2025 Copernicus Sentinel

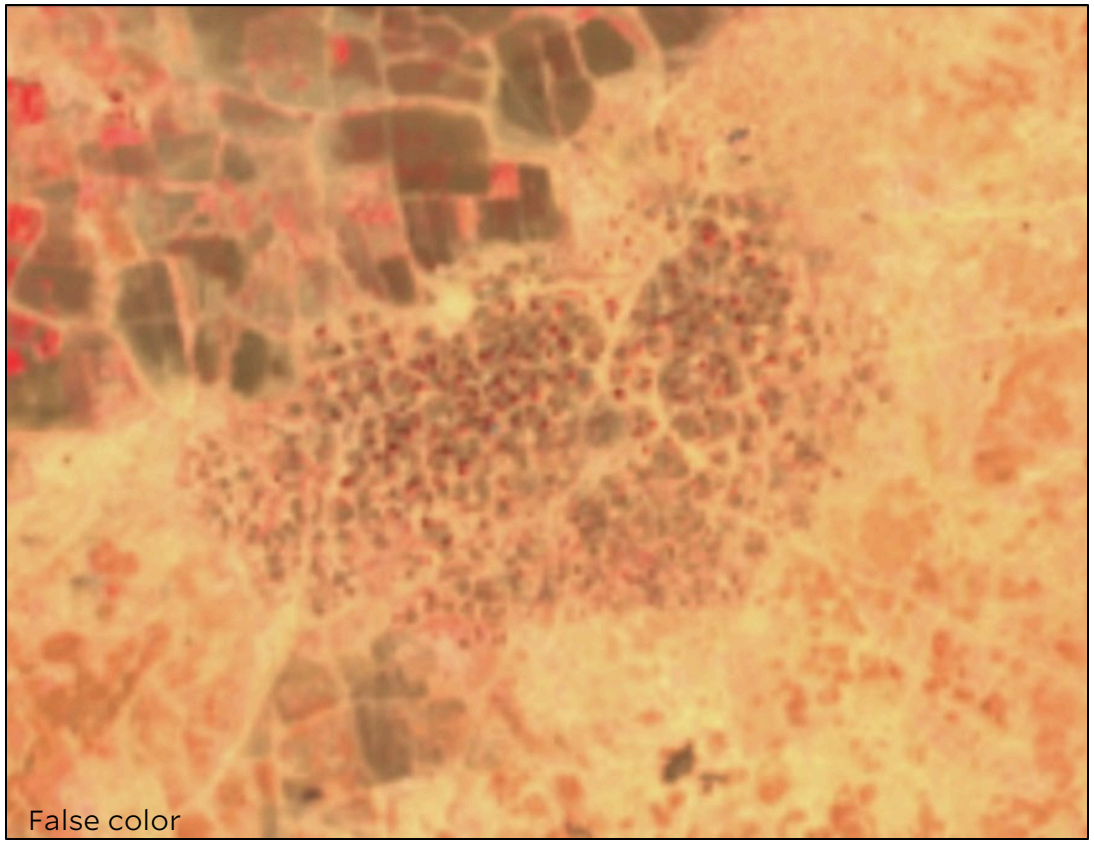
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Muqrin, El-Fasher Locality

THERMAL SCARRING OBSERVED BETWEEN 25 AND 30 JANUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at Muqrin between 25 and 30 January 2025.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



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Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

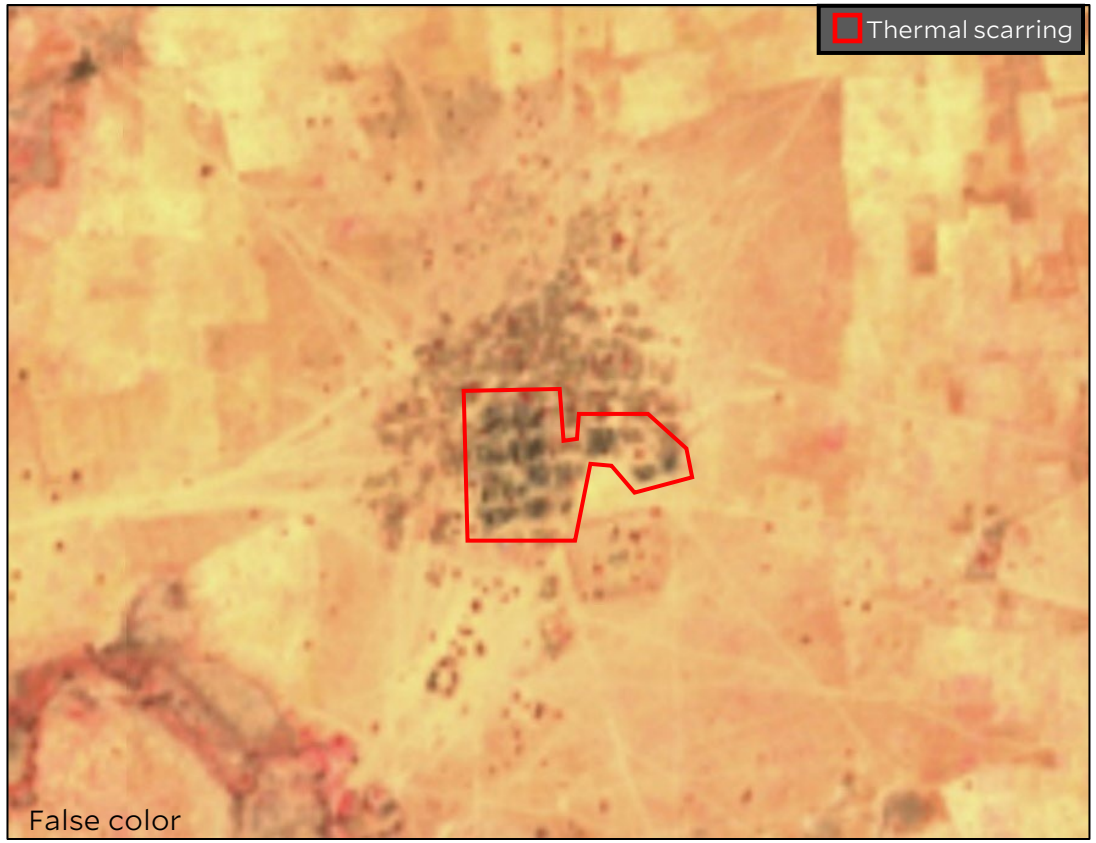
Karwa, Dar As Salaam

THERMAL SCARRING OBSERVED BETWEEN 30 JANUARY AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at Karwa, Dar As Salaam locality between 30 January and 04 February 2025. According to analysis of VIIRS data, fire event detections occurred on 31 January at Karwa.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.

30 January 2025 © 2025 Copernicus Sentinel



04 February 2025 © 2025 Copernicus Sentinel

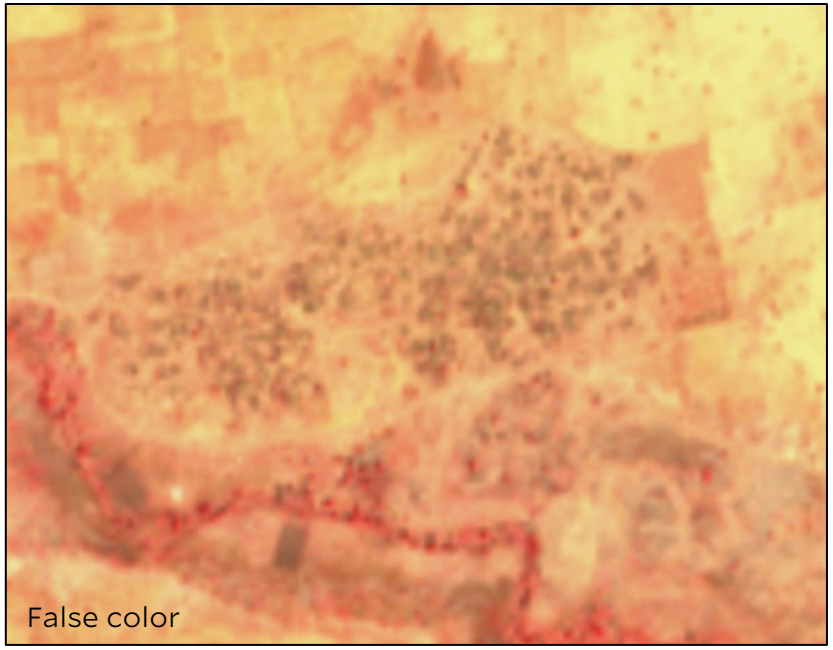
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Tebeldiyat, Dar As Salaam

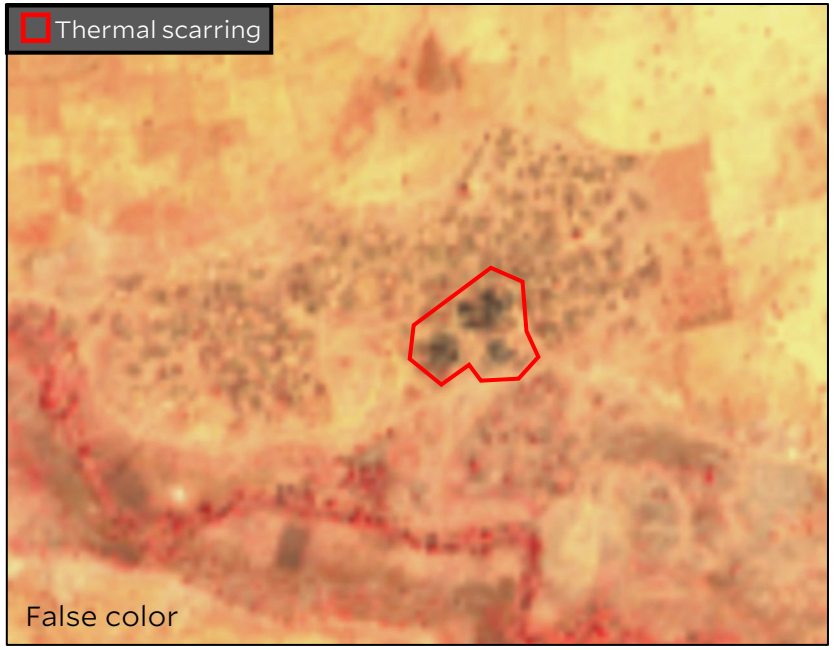
THERMAL SCARRING OBSERVED BETWEEN 25 JANUARY AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at Tebeldiyat, Dar As Salaam locality, between 30 January and 04 February 2025. According to analysis of VIIRS data, fire event detections occurred on 27 and 31 January at Tebeldiyat.

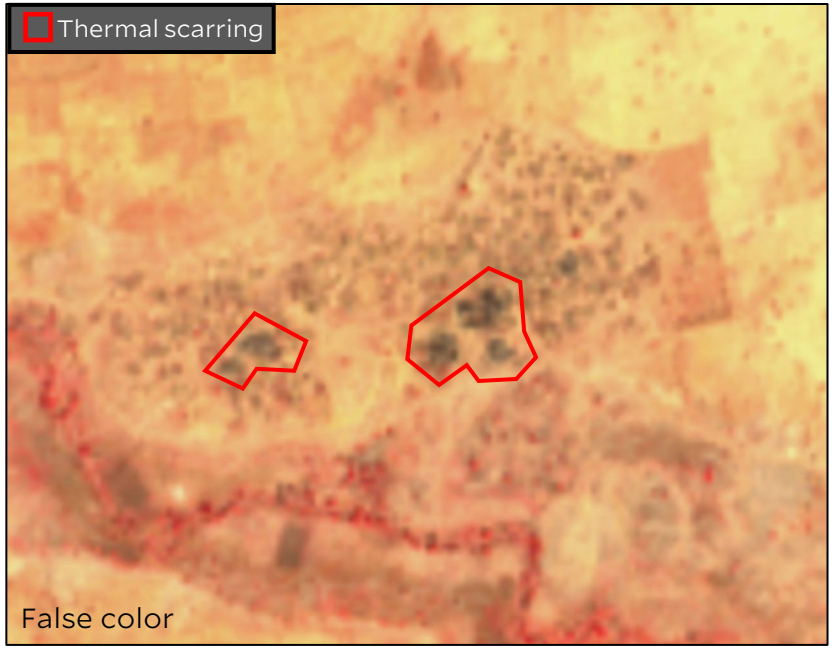
The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



25 January 2025 © 2025 Copernicus Sentinel



30 January 2025 © 2025 Copernicus Sentinel



04 February 2025 © 2025 Copernicus Sentinel

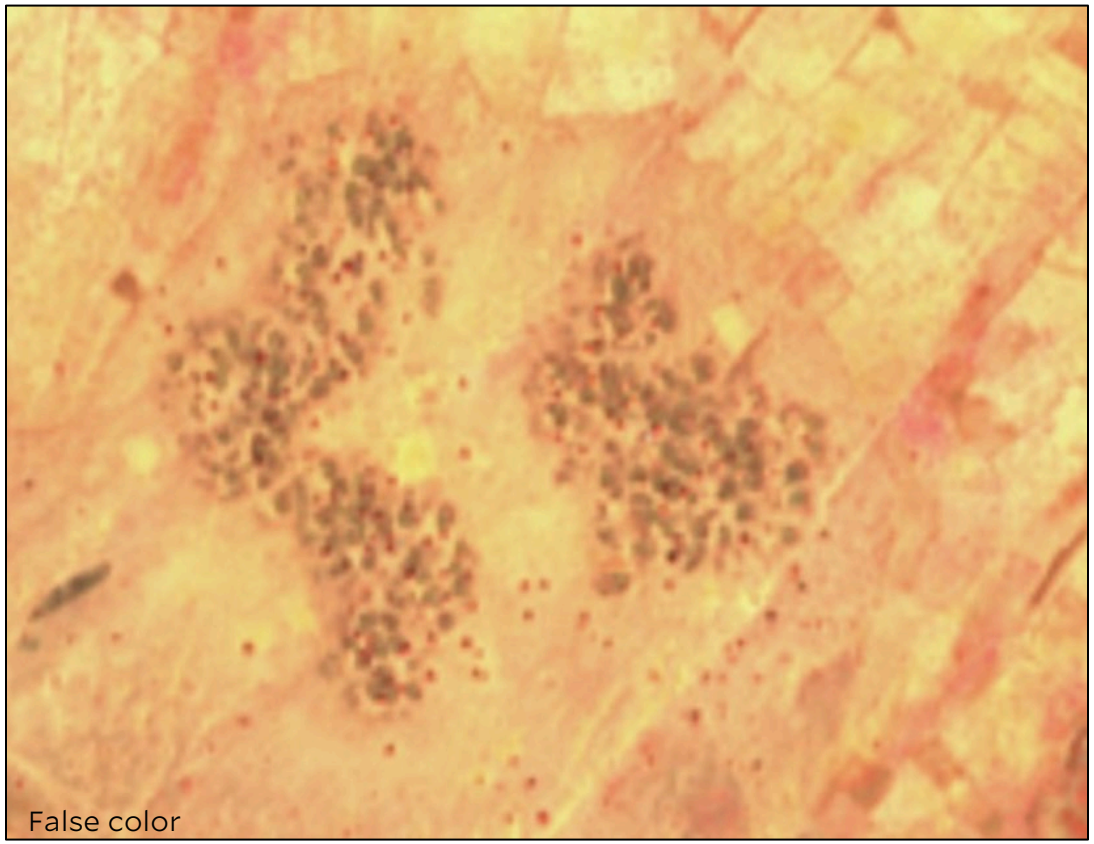
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Dar As Salaam Communities 1 & 2

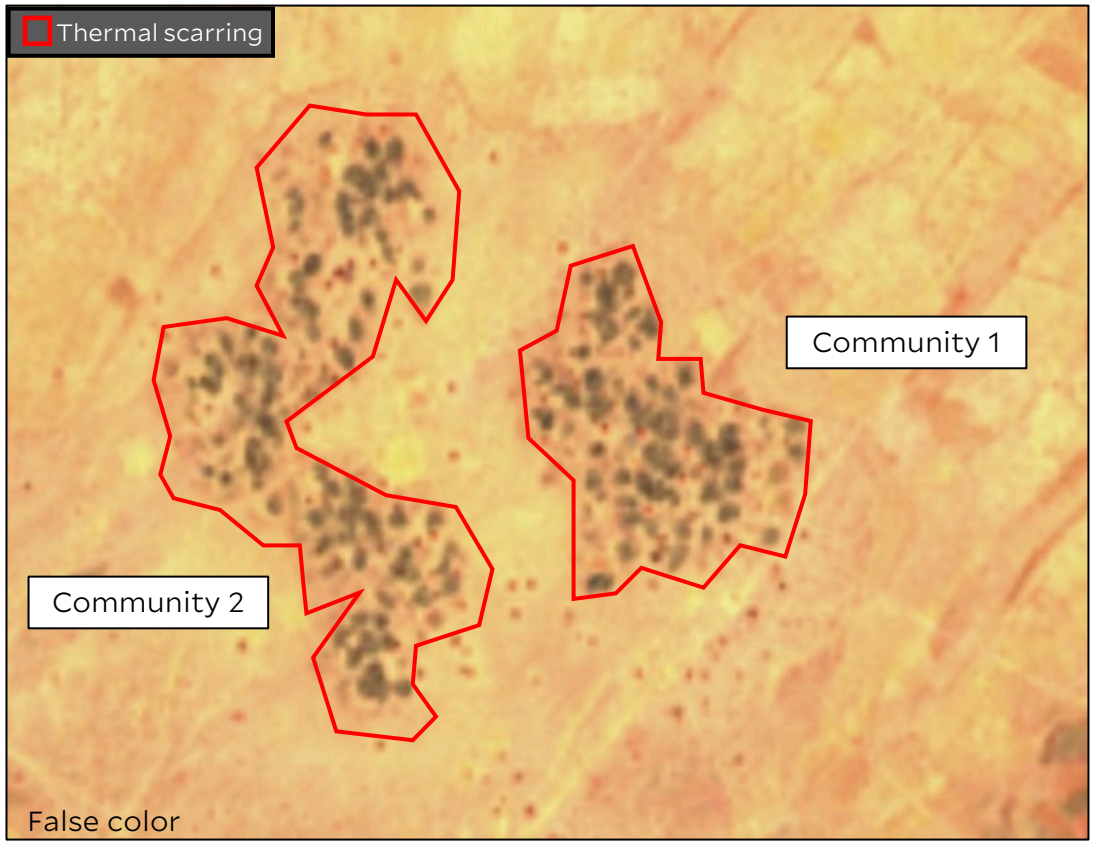
THERMAL SCARRING OBSERVED BETWEEN 11 DECEMBER 2024 AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at two communities, referred to here as "Dar As Salaam Communities 1 & 2" between 11 December 2024 and 04 February 2025. Thermal scarring at "Community 1" is observed between 11 and 21, 26 and 31 December 2024, 05 and 15 January 2025, 30 January and 04 February 2025 and at "Community 2" between 11 and 21 December 2024, as well as 10 and 15 January 2025. According to analysis of VIIRS data, fire event detection occurred on 18, 20, and 23 December 2024 and 14 January 2025.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



04 February 2025 © 2025 Copernicus Sentinel

Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

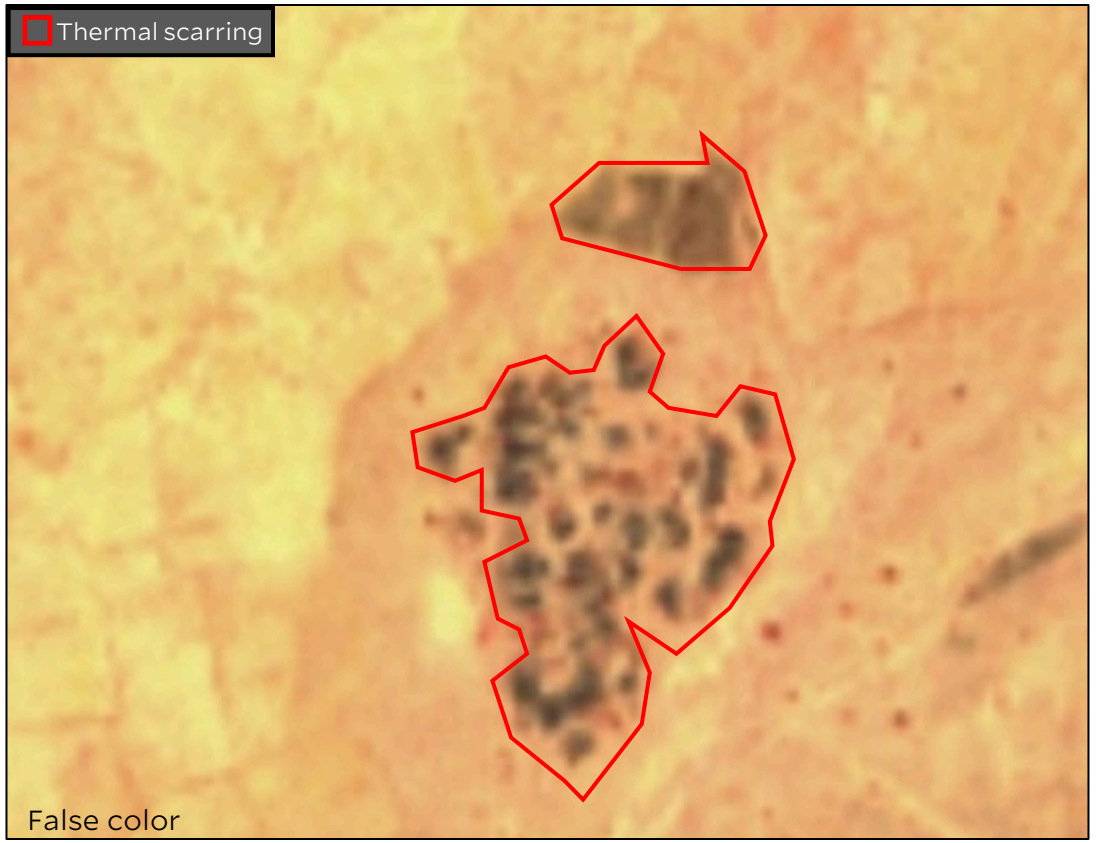
Dar As Salaam Community 3

THERMAL SCARRING OBSERVED BETWEEN 11 AND 26 DECEMBER 2024

According to analysis of satellite imagery, thermal scarring was observed at a community referred to here as "Dar As Salaam Community 3," between 11 and 26 December 2024. According to analysis of VIIRS data, fire event detections occurred on 23 and 25 December 2024.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.

11 December 2024 © 2024 Copernicus Sentinel



26 December 2024 © 2024 Copernicus Sentinel

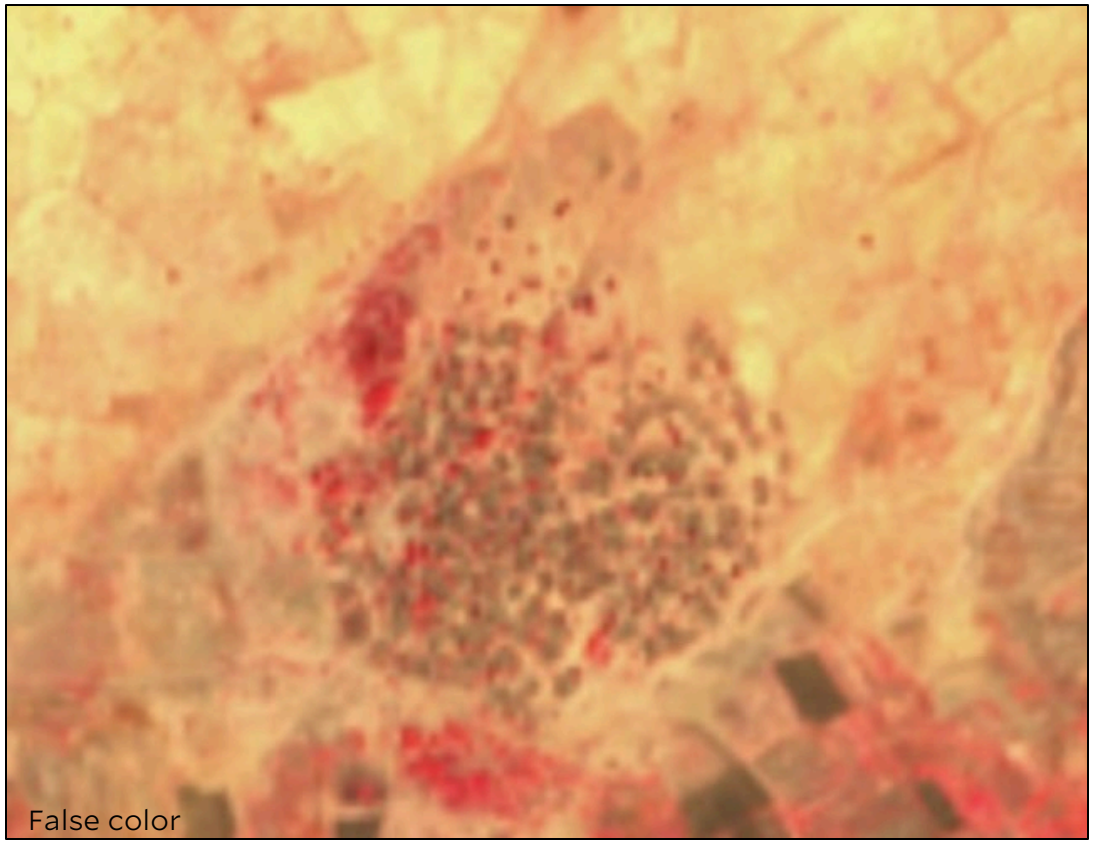
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Dar As Salaam Community 4

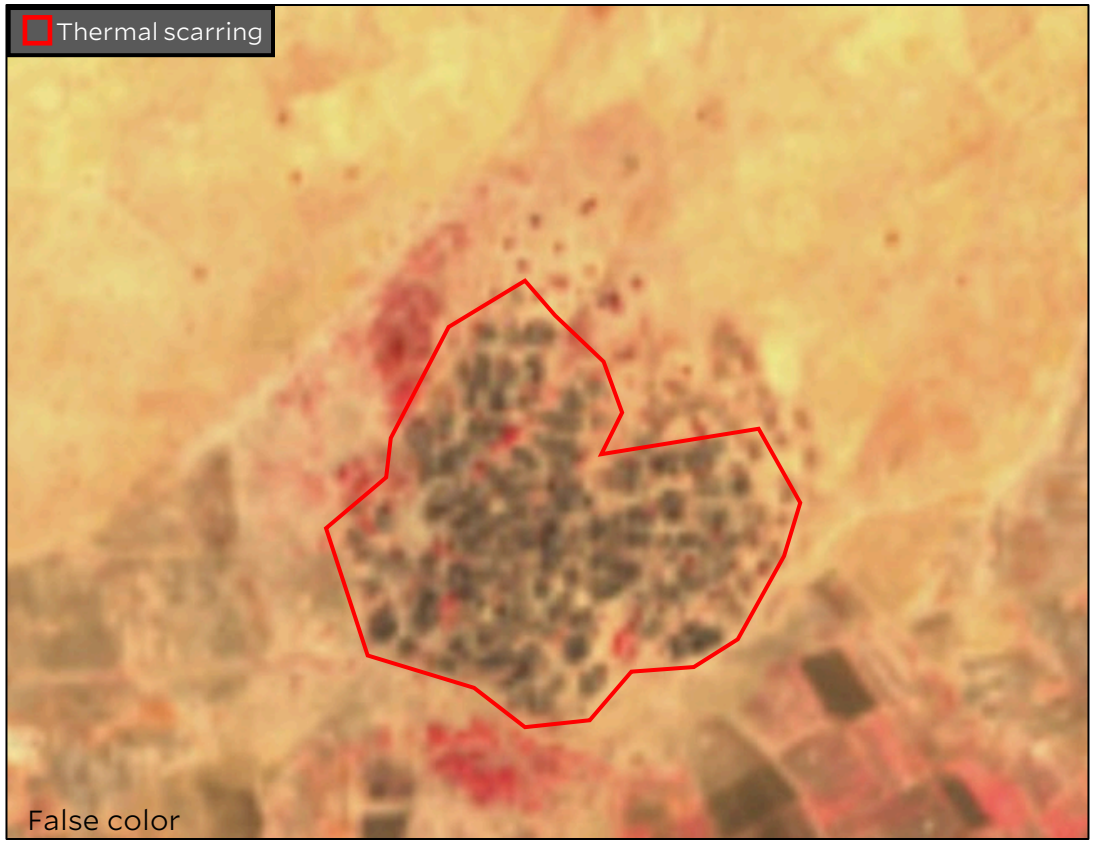
THERMAL SCARRING OBSERVED BETWEEN 11 DECEMBER 2024 AND 20 JANUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at community, referred to here as "Dar As Salaam Community 4," between 11 December 2024 and 20 January 2025. Based on low resolution Sentinel imagery, timeframe of burning can be narrowed down to the time between 11 and 26 December 2024, 10 and 20 January 2025. According to analysis of VIIRS data, fire event detection occurred on 19, 21, and 25 December 2024.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



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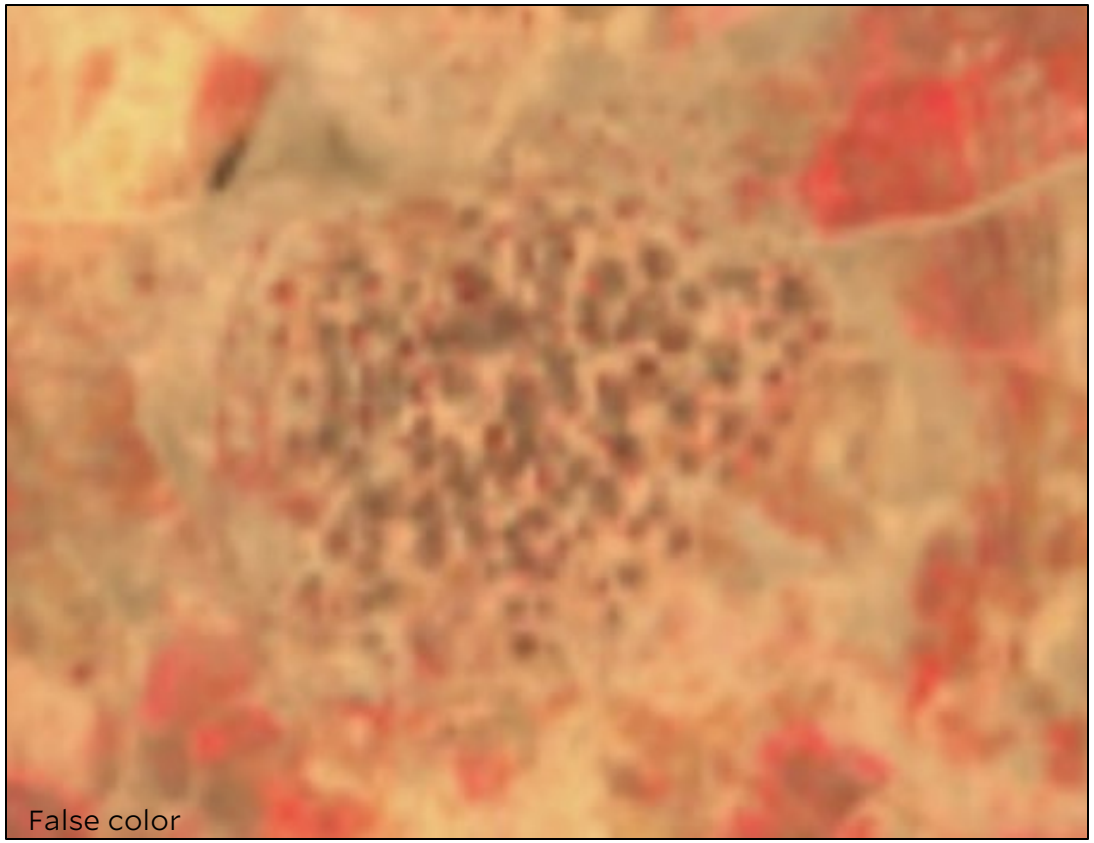
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Damm Sillik, Dar As Salaam

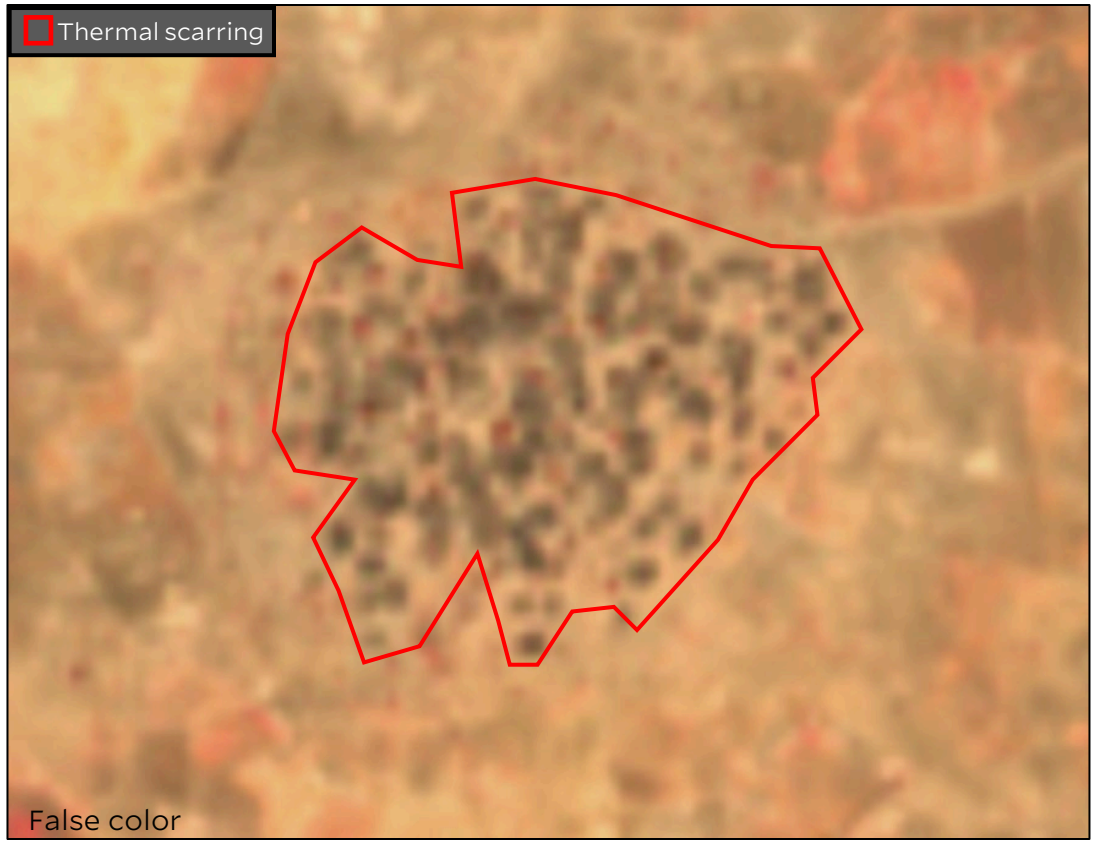
THERMAL SCARRING OBSERVED BETWEEN 11 DECEMBER 2024 AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at Damm Sillik between 11 December 2024 and 04 February 2025. Based on low resolution Sentinel imagery, the timeframe of burning can be narrowed down to the time between 11 and 21 December 2024, 10 and 20 January 2025 and 25 January and 04 February 2025. According to analysis of VIIRS data, fire event detection occurred on 20 December 2024.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



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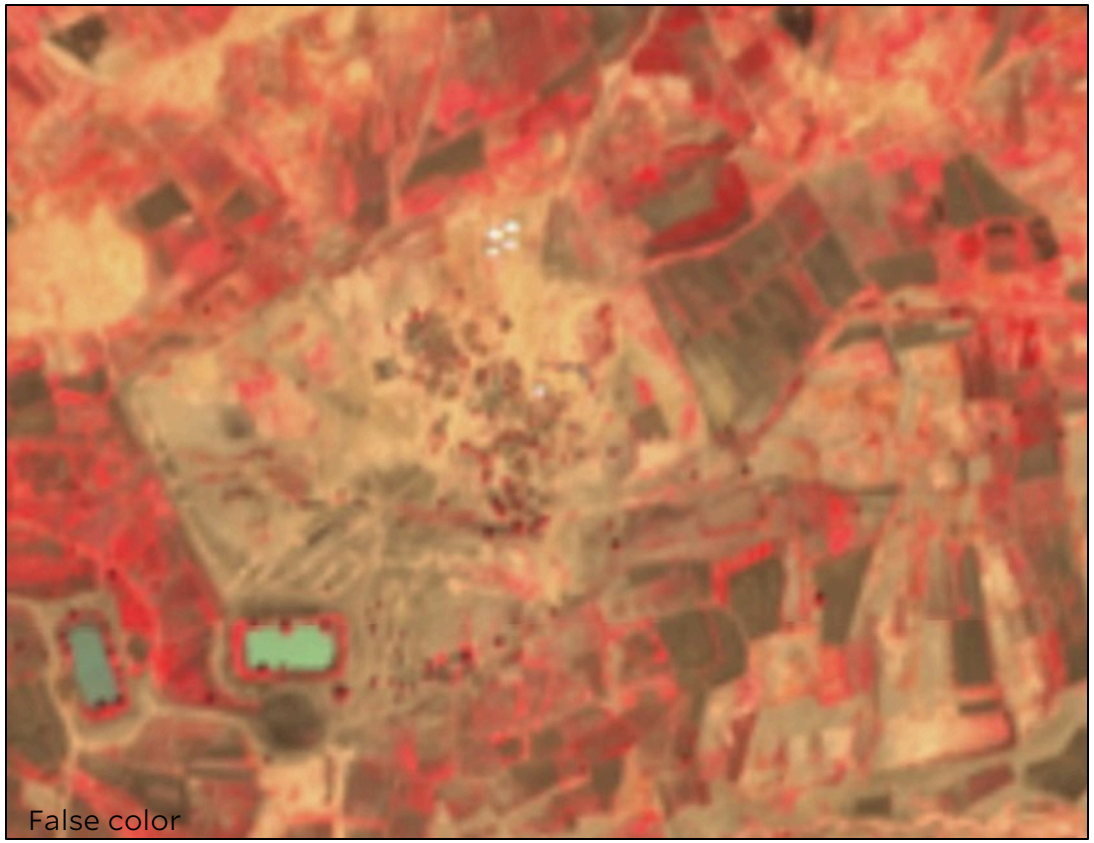
Tamad Deheish, Dar As Salaam

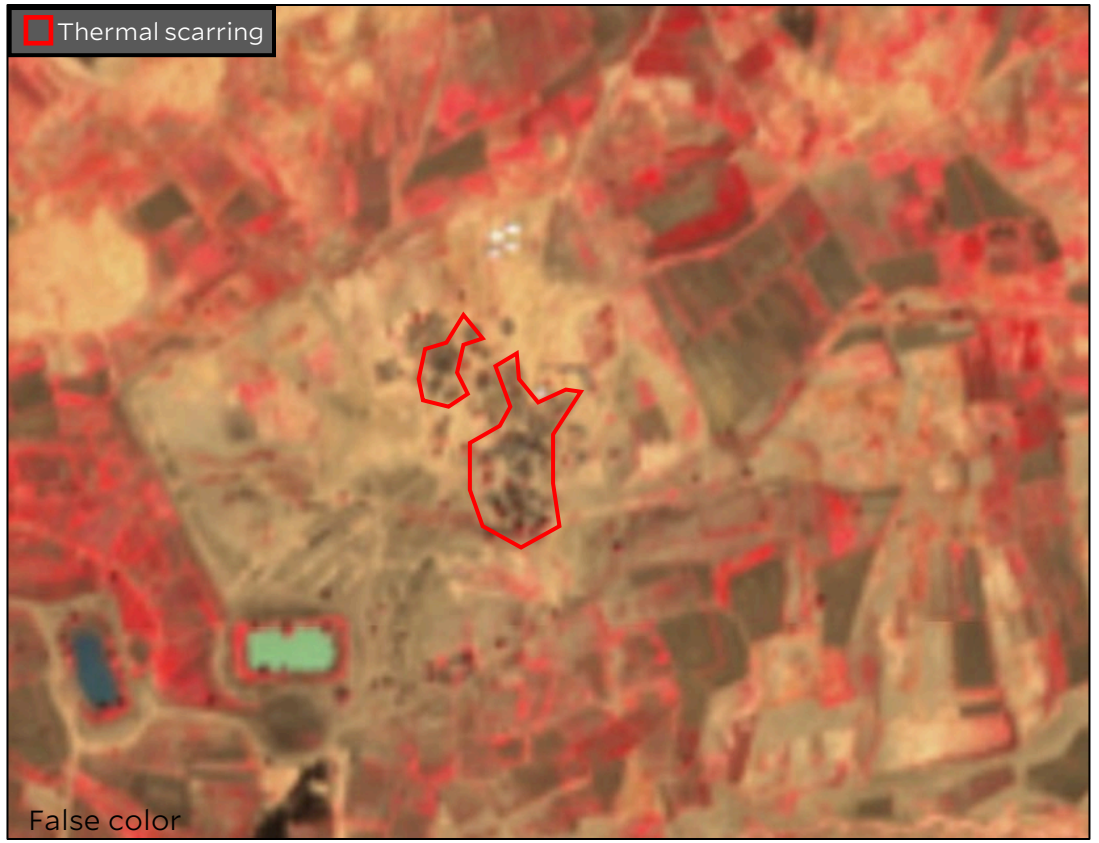
THERMAL SCARRING OBSERVED BETWEEN 11 AND 21 DECEMBER 2024

According to analysis of satellite imagery, thermal scarring was observed at Tamad Deheish between 11 and 21 December 2024. According to analysis of VIIRS data, fire event detection occurred on 19 and 20 December 2024.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



21 December 2024 © 2024 Copernicus Sentinel

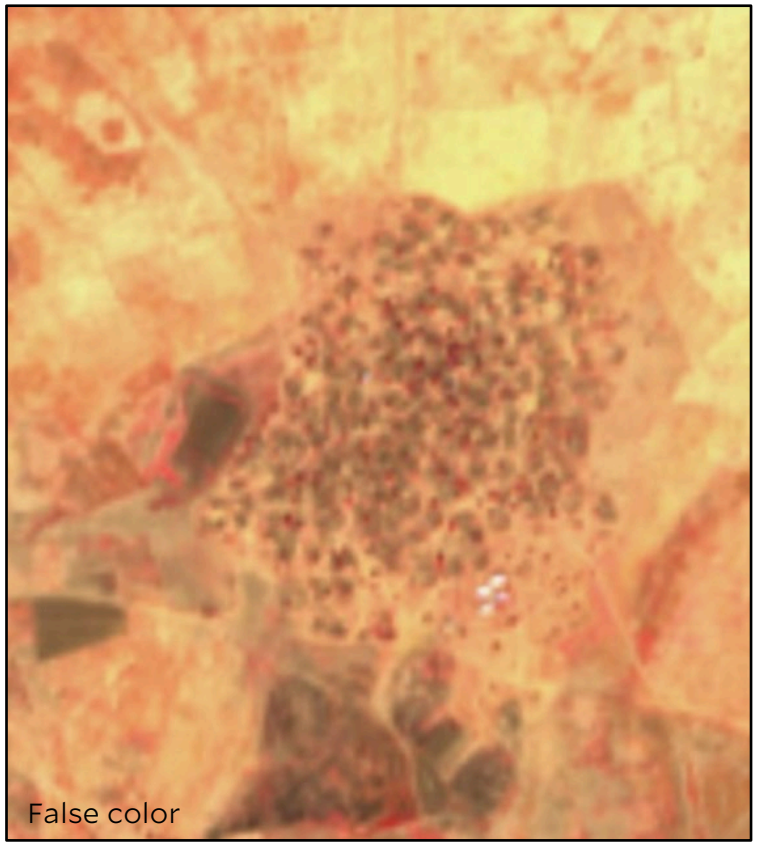
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Dar As Salaam Community 7

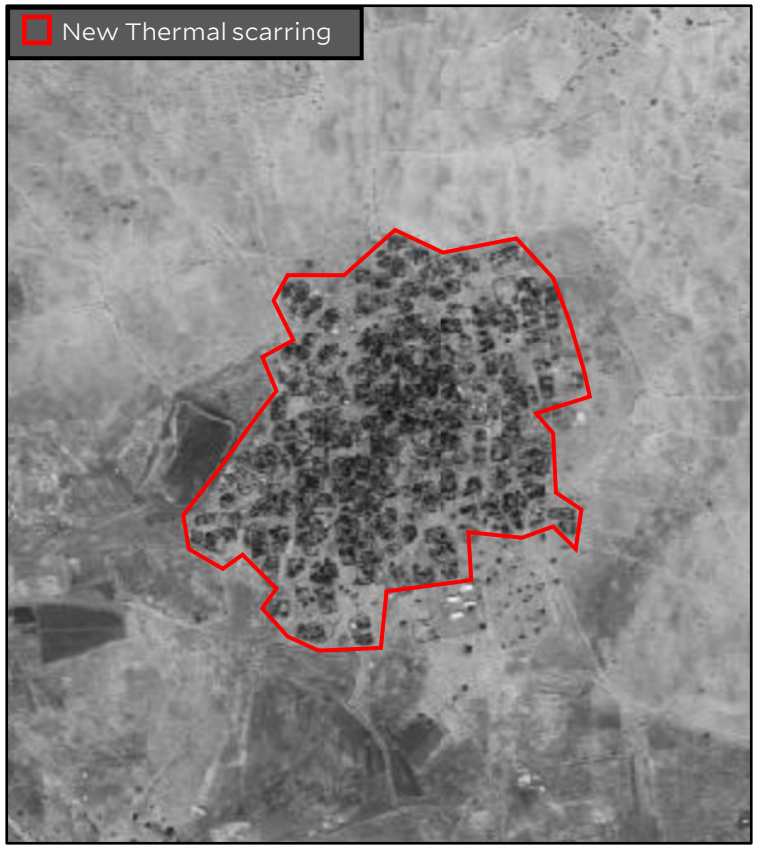
THERMAL SCARRING OBSERVED BETWEEN 11 DECEMBER 2024 AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at a community, referred to here as "Dar As Salaam Community 7," between 11 December 2024 and 04 February 2025. Based on low resolution Sentinel imagery, the timeframe of burning can be narrowed between 11 and 31 December 2024 and 15 January and 04 February 2025. According to analysis of VIIRS data, fire event detection occurred on 19, 20, 21, 27 and 28 December 2024.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



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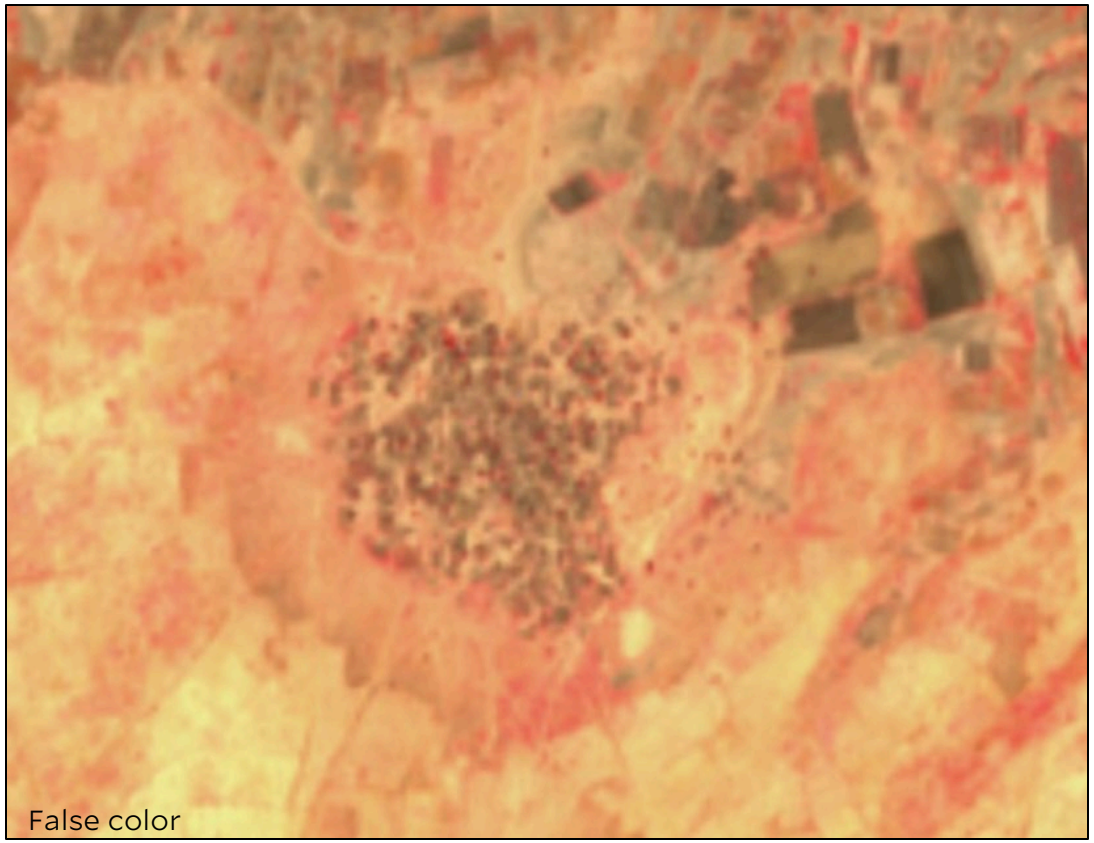
Dar As Salaam Community 8

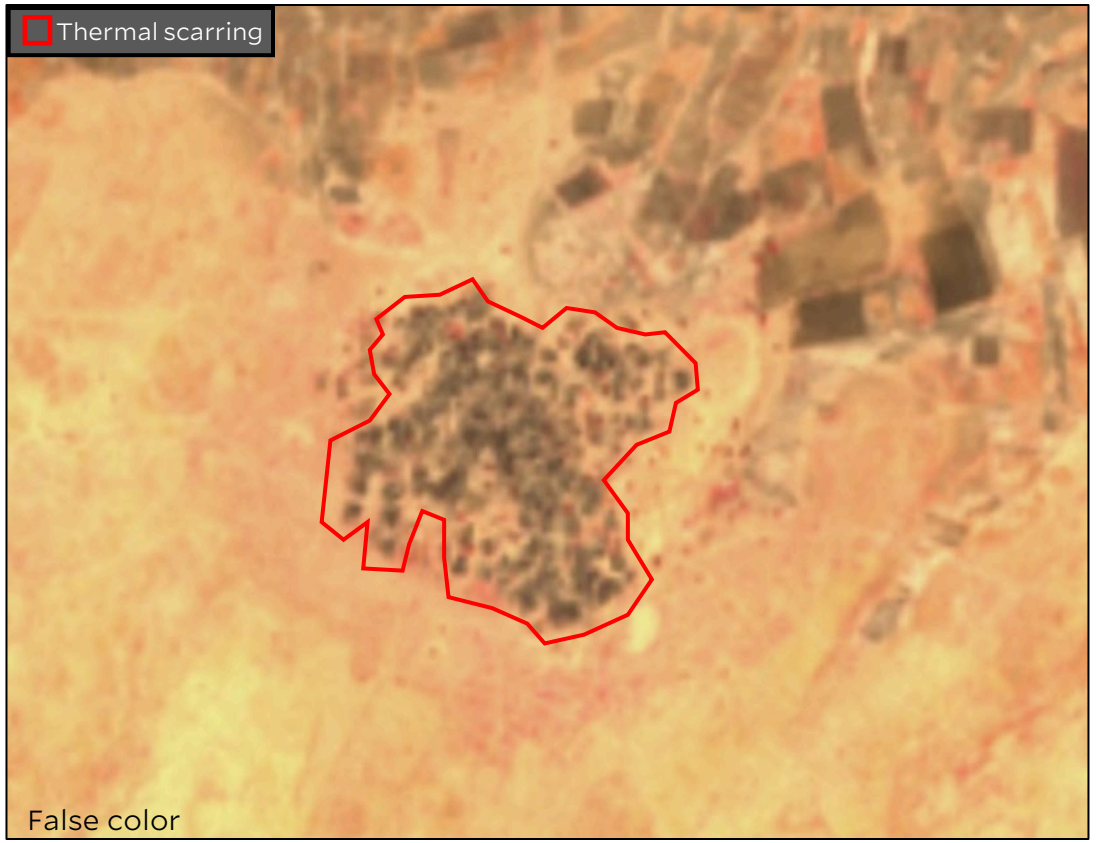
THERMAL SCARRING OBSERVED BETWEEN 11 DECEMBER 2024 AND 30 JANUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at a community, referred to here as "Dar As Salaam Community 8," between 11 December 2024 and 30 January 2025. Based on low resolution Sentinel imagery, the timeframe of burning can be narrowed between 11 December 2024 and 10 January 2025 and 25 and 30 January 2025. According to analysis of VIIRS data, fire event detection occurred on 21, 22, 23, 28, and 30 December 2024 and 05 January 2025.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



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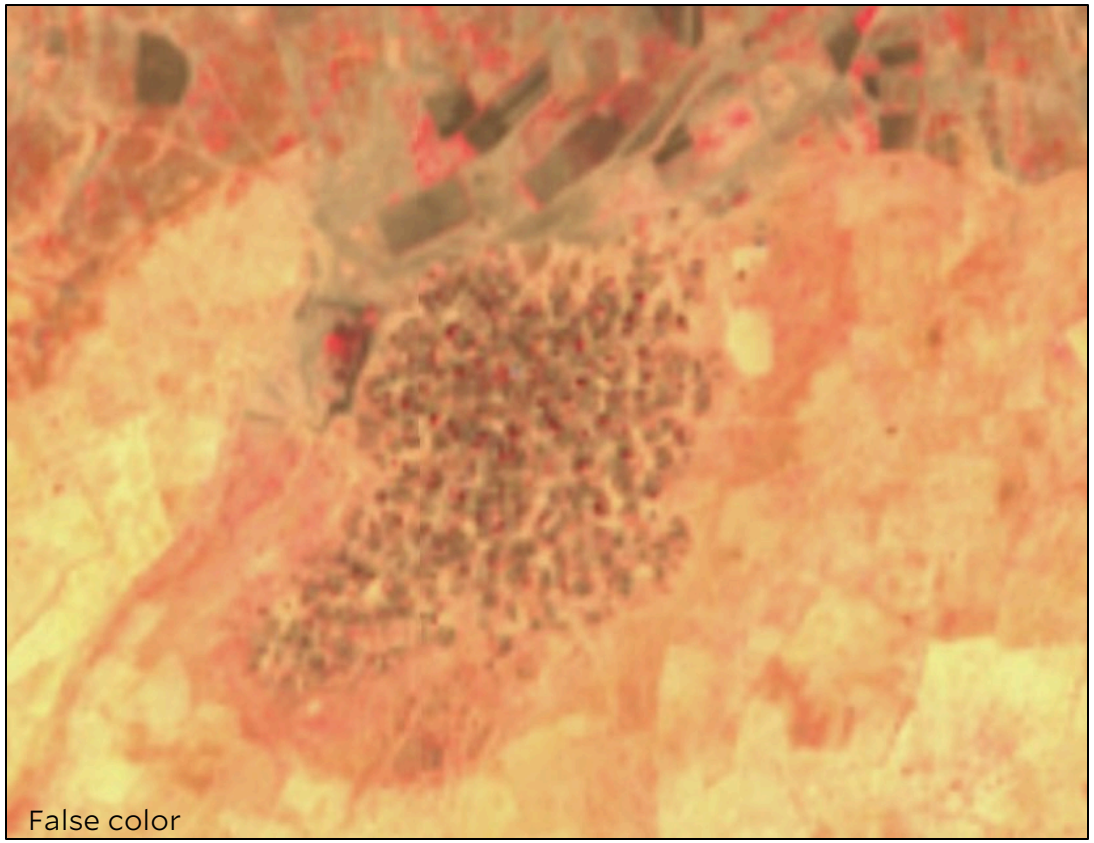
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Kurgala, Dar As Salaam

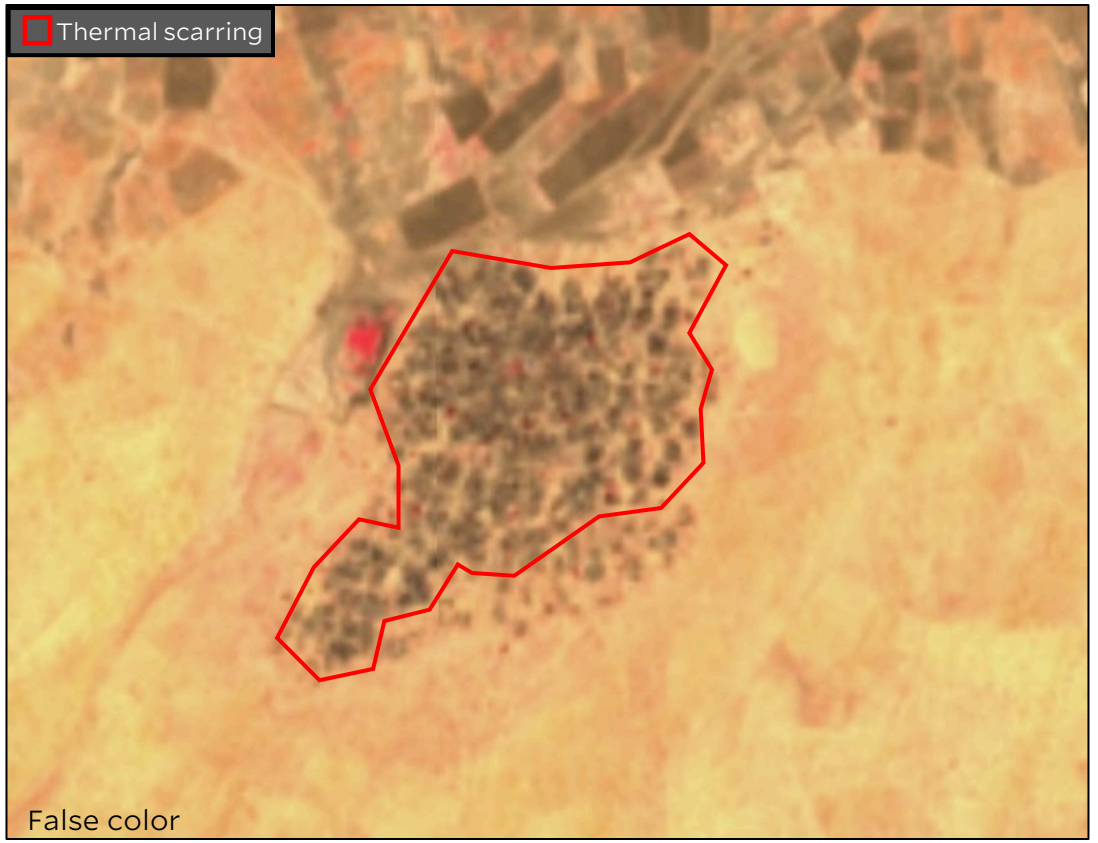
THERMAL SCARRING OBSERVED BETWEEN 11 DECEMBER 2024 AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at Kurgala between 11 December 2024 and 04 February 2025. Based on low resolution Sentinel imagery, the timeframe of burning can be narrowed between 11 December 2024 and 20 January 2025 and 30 January and 04 February 2025. According to analysis of VIIRS data, fire event detection occurred on 21, 22, 26 and 28 December 2024.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



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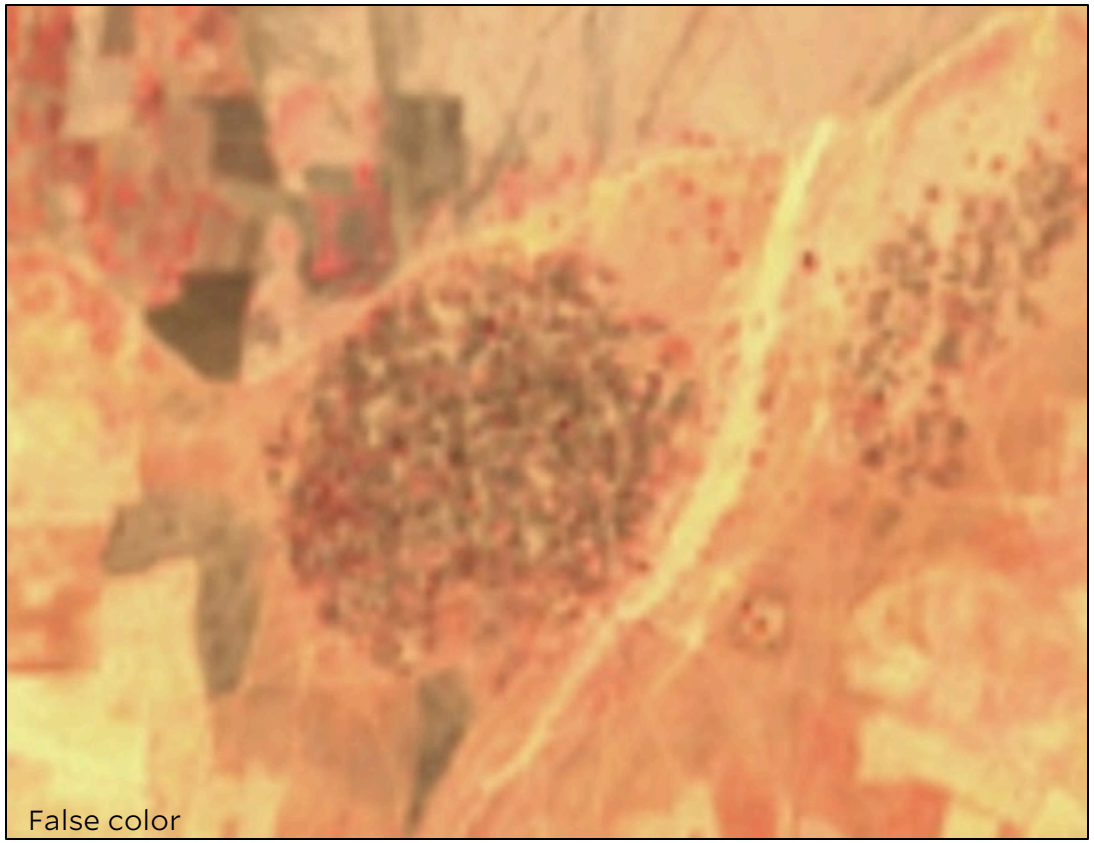
Kibga, Dar As Salaam

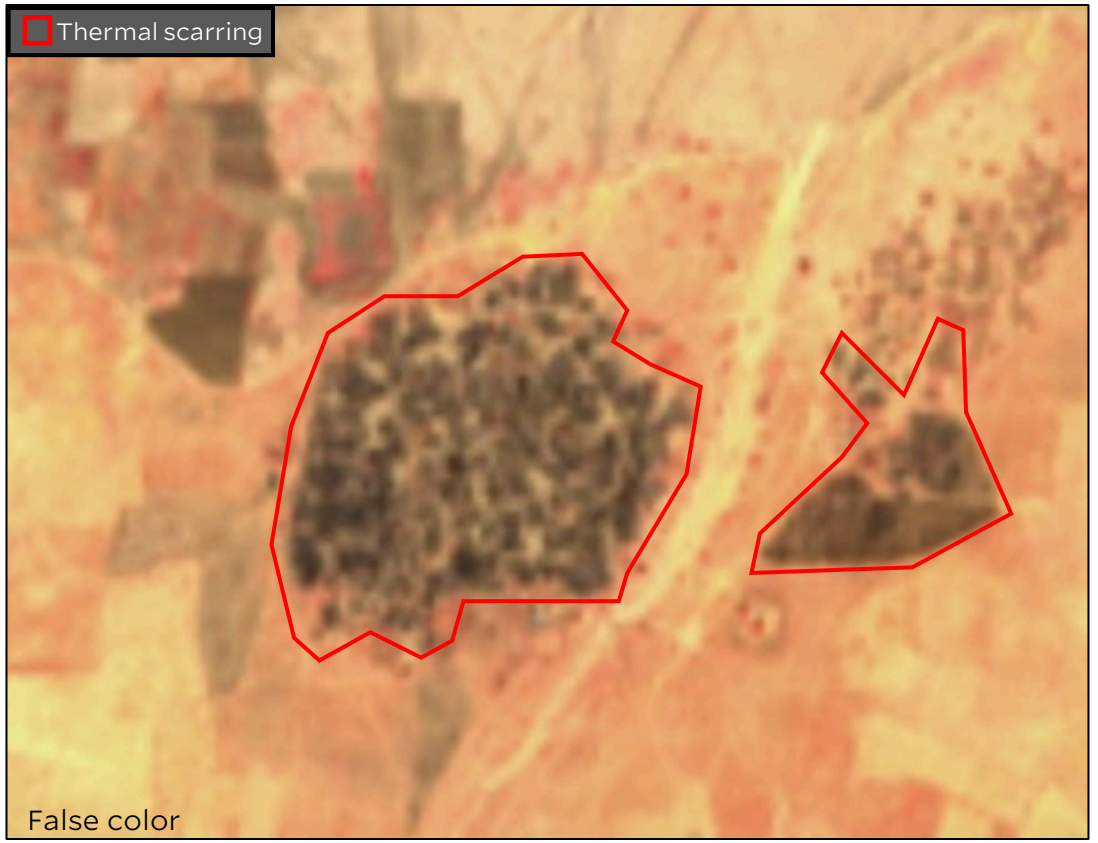
THERMAL SCARRING OBSERVED BETWEEN 31 DECEMBER 2024 AND 20 JANUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at Kibga between 31 December 2024 and 20 January 2025. According to analysis of VIIRS data, fire event detection occurred on 31 December 2024, 05 and 16 January 2025.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



31 December 2024 © 2024 Copernicus Sentinel



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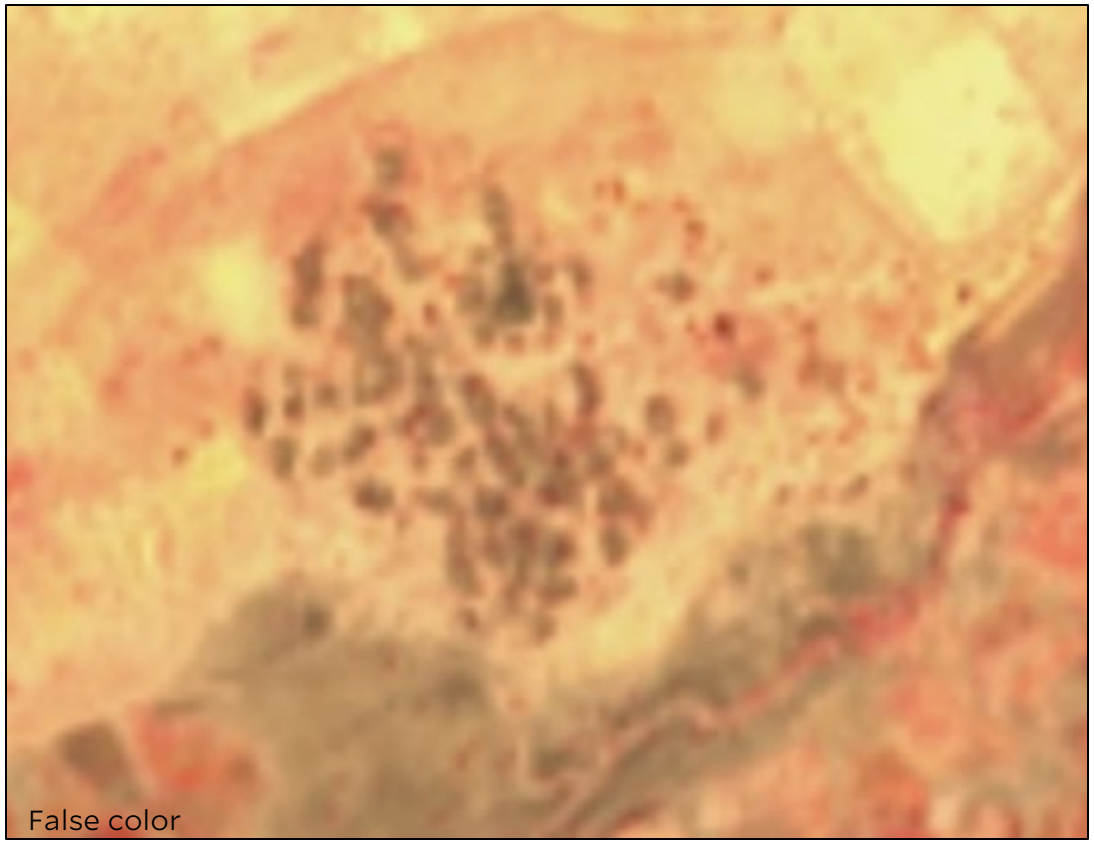
Dar As Salaam Community 11

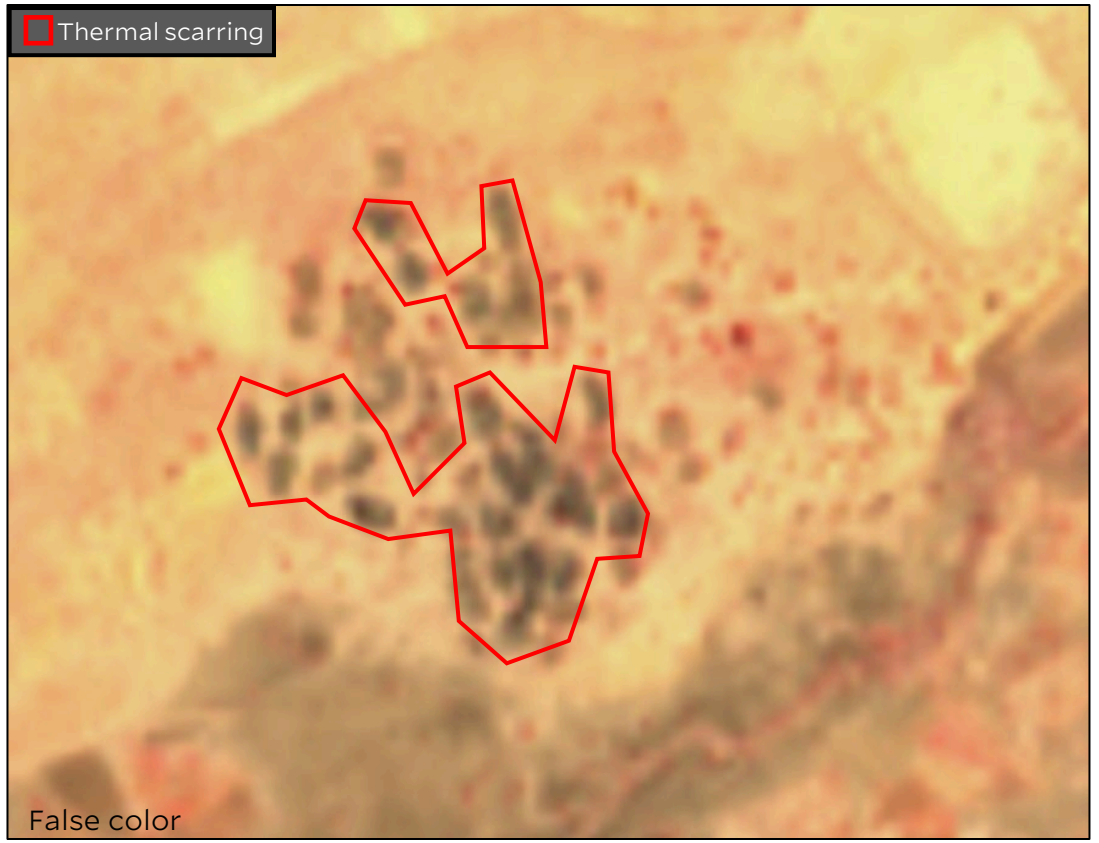
THERMAL SCARRING OBSERVED BETWEEN 11 DECEMBER 2024 AND 04 FEBRUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at community, referred to here as "Dar As Salaam Community 11," between 11 and December 2024 and 04 February 2025. Based on low resolution Sentinel imagery, the timeframe of burning can be narrowed between 11 and 21 December 2024, 05 and 10 January 2025, 30 January and 04 February 2025. According to analysis of VIIRS data, fire event detection occurred on 8 January 2025.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



11 December 2024 © 2024 Copernicus Sentinel



04 February 2025 © 2025 Copernicus Sentinel

Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Dar As Salaam Community 12

THERMAL SCARRING OBSERVED BETWEEN 11 AND 21 DECEMBER 2024

According to analysis of satellite imagery, thermal scarring was observed at a community, referred to here as "Dar As Salaam Community 12," between 11 and 21 December 2024. According to analysis of VIIRS data, fire event detection occurred on 18 December 2024 and 05 January 2025

The thermal scarring is not individuated, nor does it exhibit a pattern of selection consistent with an arson attack.

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21 December 2024 © 2024 Copernicus Sentinel

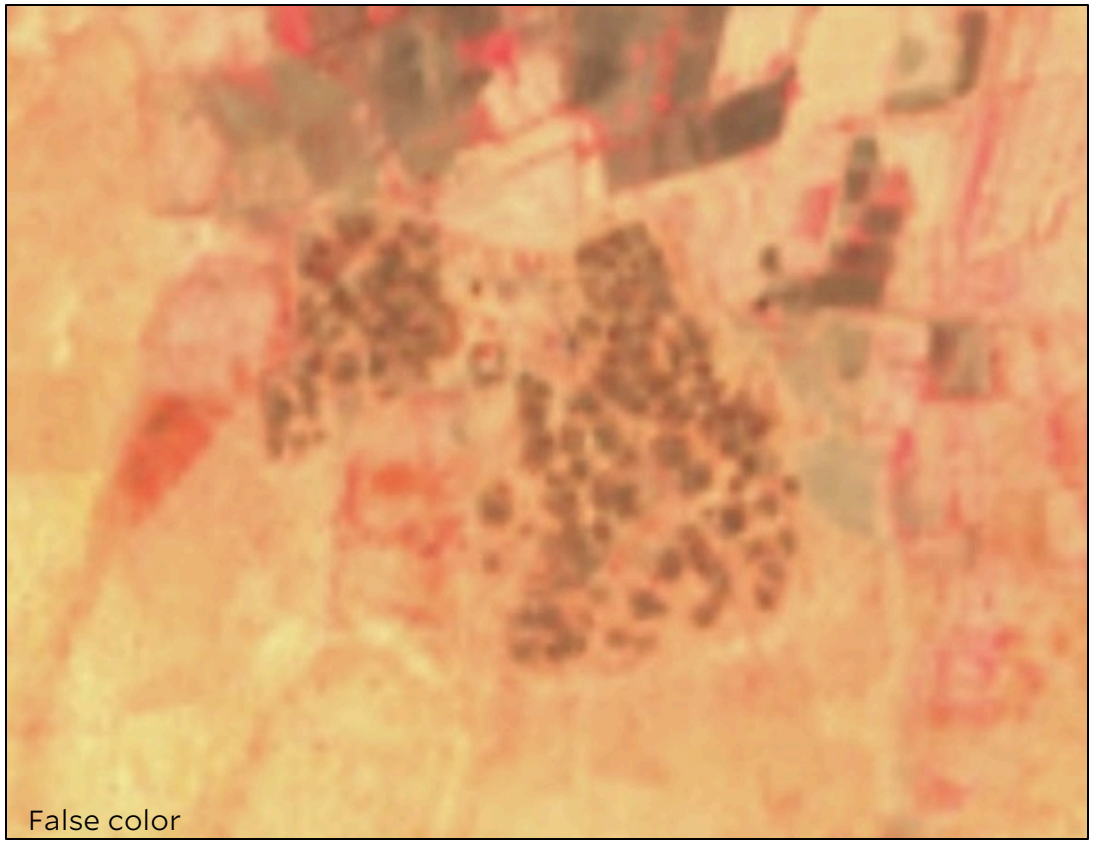
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Dar As Salaam Community 13

THERMAL SCARRING OBSERVED BETWEEN 31 DECEMBER 2024 AND 25 JANUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at a community, referred to here as "Dar As Salaam Community 13," between 31 December 2024 and 25 January 2025. Based on low resolution Sentinel imagery, timeframe of burning can be narrowed between 31 December 2024 and 10 January 2025. According to analysis of VIIRS data, fire event detection occurred on 31 December 2024.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



31 December 2024 © 2024 Copernicus Sentinel

25 January 2025 © 2025 Maxar, USG-Plus

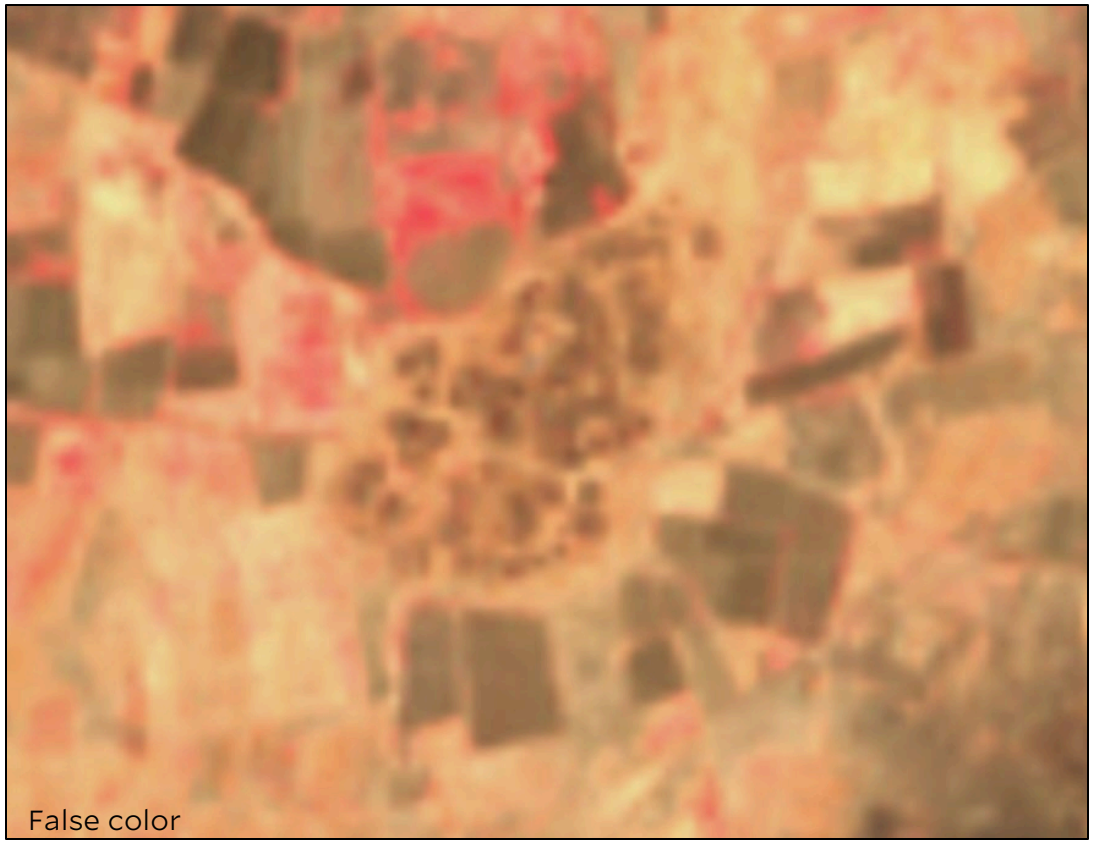
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Dar As Salaam Community 14

THERMAL SCARRING OBSERVED BETWEEN 20 AND 25 JANUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at community, referred to here as ”Dar As Salaam Community 14,” between 20 and 25 January 2025.

The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



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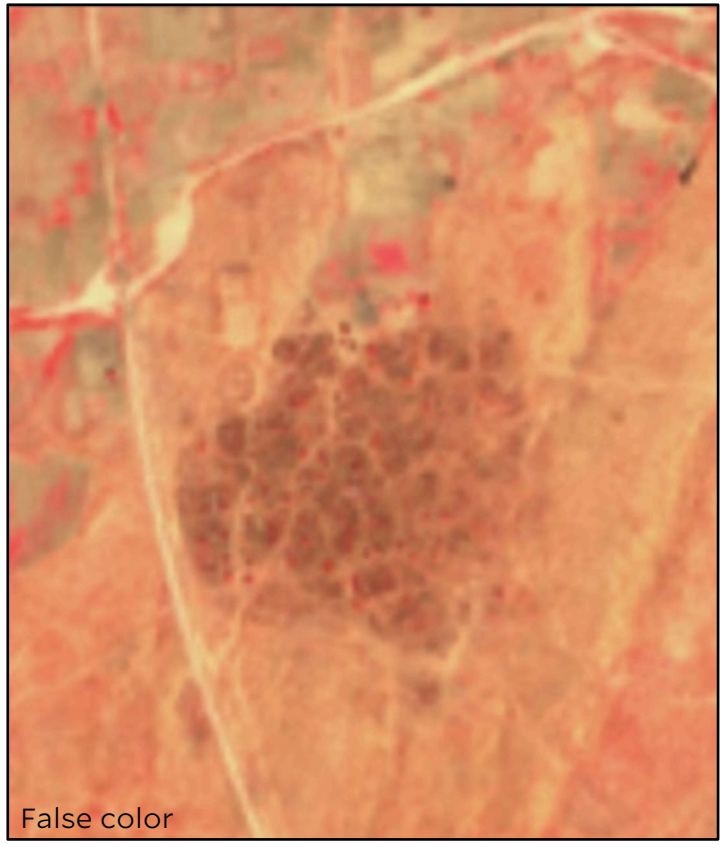
Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

Tawilah Community 6

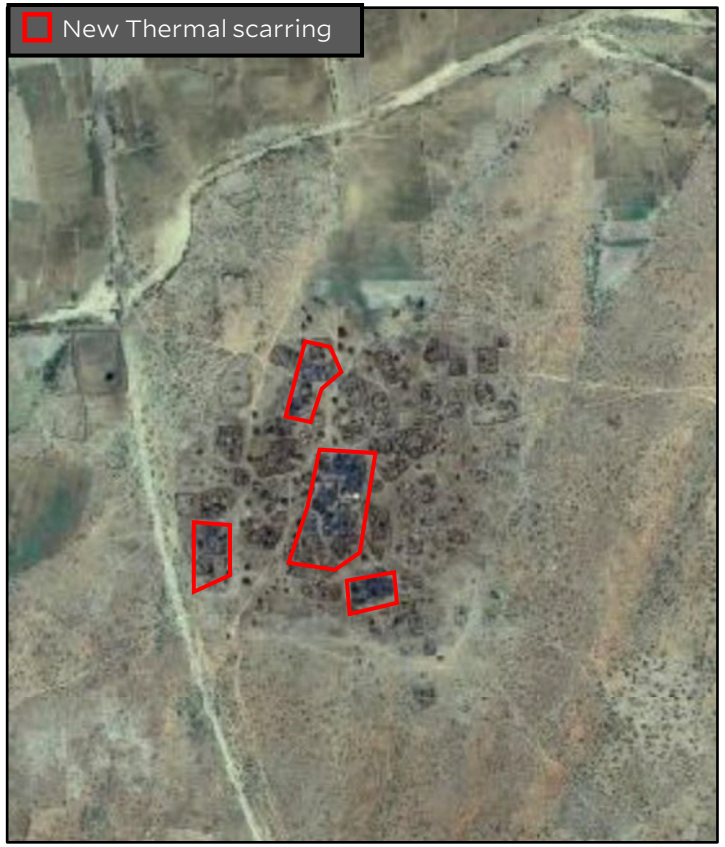
THERMAL SCARRING OBSERVED BETWEEN 27 OCTOBER 2024 AND 25 JANUARY 2025

According to analysis of satellite imagery, thermal scarring was observed at a community, referred to here as "Tawilah Community 6," between 27 October 2024 and 25 December 2024 and 25 December 2024 and 25 January 2025. Based on low resolution Sentinel imagery, timeframe of burning can be narrowed down to the time between 27 October and 16 November 2024, 01 and 06 December 2024 and 15 and 20 January 2025.

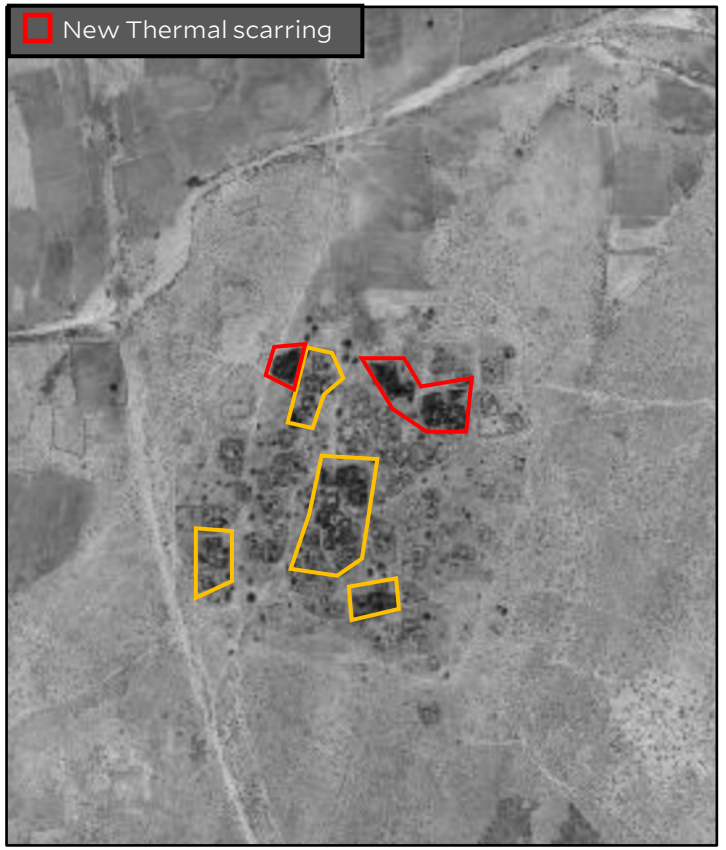
The unaffected ground between burned structures and lack of thermal scarring on the ground outside individual community areas is highly consistent with an intentional attack targeting structures.



27 October 2024 © 2024 Copernicus Sentinel



25 December 2024 © 2024 Maxar, USG-Plus



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Source: https://browser.dataspace.copernicus.eu; https://firms.modaps.eosdis.nasa.gov

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