

Confirmation of Nine Arson Attacks West of El-Fasher, Sudan

16 April 2024

Yale SCHOOL OF PUBLIC HEALTH
Humanitarian Research Lab

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I. Findings

The Yale School of Public Health's Humanitarian Research Lab (HRL) confirms through analysis of remote sensing and open source data that at least nine communities have been razed by apparent arson attacks between 31 March and 15 April 2024 to the west of El-Fasher, the capital of the North Darfur region of Sudan. Yale HRL's findings corroborate multiple media and other open source reports alleging that these villages were attacked by Rapid Support Forces (RSF) within this timeframe.¹

Yale HRL has cross-corroborated open source reporting, including social media and news websites, with remote sensing data to confirm that arson attacks occurred in the following nine communities: Baraka, Janjounat, Turkniya, Tikailat, Jaranga, Sarfaya, Umm Ashoush, Muqrin, and an unidentified community approximately 9 km north from Tikailat.² Each community exhibits visible thermal scarring consistent with an arson attack during the reported attack period. Other than the unidentified community, each community also had open source reporting consistent with the description of an arson event during the same period. Five of the nine confirmed locations show a positive Visible Infrared Imaging Radiometer Suite (VIIRS) signal indicating a fire event during the reported attack period. The locations ranged from 25 km to 40 km from El-Fasher.

An unknown number of internally displaced persons (IDPs) fleeing the attacks reportedly moved east towards the major IDP camps in and around El-Fasher, including Zamzam, Abu Shouk, and Al Salam.³ An additional thirteen communities beyond those included in this assessment were reportedly attacked; Yale HRL has not yet corroborated these incidents with the data available to a high confidence standard.⁴

Overall, Yale HRL assesses with high confidence that the confirmed attacks and resulting displacement were caused by RSF and aligned forces' systematic targeting of Masalit, Fur, Zaghawa, and other non-Arab communities.

II. Methodology

Yale HRL produced this report through the cross-corroborating of open source and remote sensing data, including satellite imagery and thermal sensor data. Place names were identified using UN P-codes obtained via the United Nations Humanitarian Data Exchange (HDX). This baseline source of information was then verified and informed through open source analysis by Yale HRL's analysts with relevant cultural and linguistic skills. In some cases,

¹ Sudan War Monitor, "تجدد الاشتباكات غرب الفاشر وتدخل الحركات المسلحة والدعم السريع"، April 13, 2024. <https://sudanwarmonitor.com/p/300>, archived at <https://perma.cc/W2ER-F7TQ>; Sudan Akhbar, "النازحون من قرى غرب الفاشر يواجهون ظروفًا صعبة وقاسية"، Sudan Akhbar, April 15, 2024, <https://www.sudanakhbar.com/1508376>, archived at <https://perma.cc/LEQ7-BNNU>; Sudan Tribune. Renewed RSF attacks devastate Darfur villages, displace civilians. April 14, 2024. <https://sudantribune.com/article284442/>, archived at <https://archive.ph/4ypZL>

² HRL_MMC_ID_0001; HRL_MMC_ID_0002; Jinha. عشرات الضحايا في هجمات لقوات الدعم السريع على قرى الفاشر. April 14, 2024. <https://jinhaagency.com/ar/alywm/shrat-aldhaya-fy-hjmat-lqwat-aldm-alsry-ly-qry-alfashr-41516>, archived at <https://perma.cc/MAZ4-VZGA>; Ayin. April 14, 2025 <https://twitter.com/AyinSudan/status/1779099565091635418>, archived at <https://perma.cc/GP4F-SXHY>; Sudan Akbar. تفاصيل ما جرى..النازحون من قرى غرب الفاشر يواجهون ظروفًا صعبة وقاسية. April 15, 2024. <https://www.sudanakhbar.com/1508376>, archived at <https://perma.cc/LEQ7-BNNU>

³ "Renewed RSF attacks devastate Darfur villages, displace civilians," 14 April 2024, Sudan Tribune, <https://sudantribune.com/article284442/>, archived at <https://archive.ph/4ypZL>

⁴ HRL_MMC_ID_0002; Sudan Akbar. تفاصيل ما جرى..النازحون من قرى غرب الفاشر يواجهون ظروفًا صعبة وقاسية. April 15, 2024. <https://www.sudanakhbar.com/1508376>, archived at <https://perma.cc/LEQ7-BNNU>

communities may have names similar to other communities or may be known by multiple names. Specific coordinates have been provided to support the further identification and disambiguation of specific place names and community locations. Human security concerns were accounted for as part of the decision to release specific coordinates; potential civilian risk was rated minimal because these villages have already been visibly attacked.

III. Human Security Situation in El-Fasher

The attacks documented on communities to the west of El-Fasher increase the probability that a multi-directional, full-scale RSF assault on El-Fasher itself is occurring now. One goal of an RSF move on El-Fasher could be to engage and defeat Sudanese Armed Forces (SAF) garrisoned there. Such an attack will likely also target civilians and displaced populations, including the more than 500,000 internally displaced people and over 2.8 million people overall in and around El-Fasher.⁵ The RSF's defeat of SAF forces in El-Fasher would effectively end SAF presence in North Darfur, the last divisional headquarters that SAF holds in the region.

Since 15 April 2023, the RSF and aligned forces have committed widespread, systematic, and targeted attacks on civilian communities across Darfur, specifically targeting Black African Masalit, Fur, Zaghawa, and other communities.⁶ Yale HRL found that between 15 April – 30 July 2023, the RSF and aligned forces systematically attacked at least 27 communities in Darfur.⁷ The RSF is derived from Janjaweed, which was responsible for attacks in Darfur that the United States concluded in 2004 amounted to genocide.⁸ Throughout the first year of the conflict starting on 15 April 2023, the RSF has systematically consolidated control over the Darfur region, including Nyala and Zalingei, to the Chadian border.⁹

The RSF controls the major roads and junctions surrounding El-Fasher which will likely prevent civilians from fleeing. In December 2023, the Biden administration released an Atrocity Determination concluding that the RSF and aligned forces has committed crimes against humanity including ethnic cleansing. Members of SAF were found to have committed war crimes.¹⁰

⁵ "Darfur network reports alarming humanitarian situation in El Fasher," 24 February 2024, Dabanga Sudan, <https://www.dabangasudan.org/en/all-news/article/darfur-network-reports-alarming-humanitarian-situation-in-el-fasher>, archived at <https://perma.cc/3E9M-JKNN>; "Sudan Displacement Data," 21 September 2023, IOM HDX, <https://data.humdata.org/dataset/sudan-displacement-data-idps-iom-dtm>, archived at <https://perma.cc/4DS6-S9DB>

⁶ Blinken, Anthony J. "Actions Against Senior Rapid Support Forces Commanders in Sudan" 6 September 2023. *U.S. Department of State*. <https://www.state.gov/actions-against-senior-rapid-support-forces-commanders-in-sudan/>, archived <https://perma.cc/E2ZF-KRJ3>.

⁷ Sudan Conflict Observatory "Report 008. SIRBA, WEST DARFUR, 24 JULY– 30 JULY 2023." 2 August 2023. <https://hub.conflictobservatory.org/portal/apps/sites/#/sudan/documents/33bda16ddb444a395627050ffa85119/explore>, archived at <https://archive.ph/guzy1>

⁸ 118 STAT. 4012. 108th Congress, "Public Law 108–497: Comprehensive Peace in Sudan Act of 2004," PUBLIC LAW 108–497—DEC. 23, 2004 "COMPREHENSIVE PEACE IN SUDAN ACT OF 2004" 23 December 2004, <https://www.govinfo.gov/content/pkg/PLAW-108publ497/pdf/PLAW-108publ497.pdf>, archived at <https://perma.cc/PZ5W-WBPD>; Ferguson, Kate "The RSF are out to finish the genocide in Darfur they began as the Janjaweed" 24 July 2024. *The Guardian*. <https://www.theguardian.com/global-development/2023/jul/24/rsf-janjaweed-hemedti-out-to-finish-darfur-sudan-genocide-uk-cannot-stand-by>, archived at <https://perma.cc/893J-R93W>; Reuters "Who is fighting in Sudan" 15 April 2024, *Reuters*. <https://www.reuters.com/world/africa/who-are-sudans-rapid-support-forces-2023-04-13/>, archived at <https://archive.ph/wip/GeCIU>; "Sudan unrest: What are the Rapid Support forces?" 16 April 2023, *Al Jazeera*. <https://www.aljazeera.com/news/2023/4/16/sudan-unrest-what-is-the-rapid-support-forces> archived at <https://perma.cc/G8HH-U3ZP>; Human Rights Watch, "Men Without Mercy: Rapid Support Forces Attacks against Civilians in Darfur, Sudan" 9 September 2015, *Human Rights Watch*. <https://www.hrw.org/report/2015/09/09/men-no-mercy/rapid-support-forces-attacks-against-civilians-darfur-sudan>, archived at <https://perma.cc/KWE7-WE3M><https://perma.cc/PZ5W-WBPD>.

⁹ Gouja, Ahmed, "As Darfur falls to the RSF, where is the outrage at their atrocities?" 11 December 2023, *The New Humanitarian*. <https://www.thenewhumanitarian.org/first-person/2023/12/11/sudan-war-darfur-rsf-atrocities>, archived at <https://perma.cc/U2WB-WWL9>.

¹⁰ Blinken, Anthony J., "War Crimes, Crimes Against Humanity, and Ethnic Cleansing Determination in Sudan," 6 December 2023. U.S. Department of State, Washington, D.C. "https://www.state.gov/war-crimes-crimes-against-humanity-and-ethnic-cleansing-determination-in-sudan/", archived at <https://perma.cc/CY3F-JXZ2>

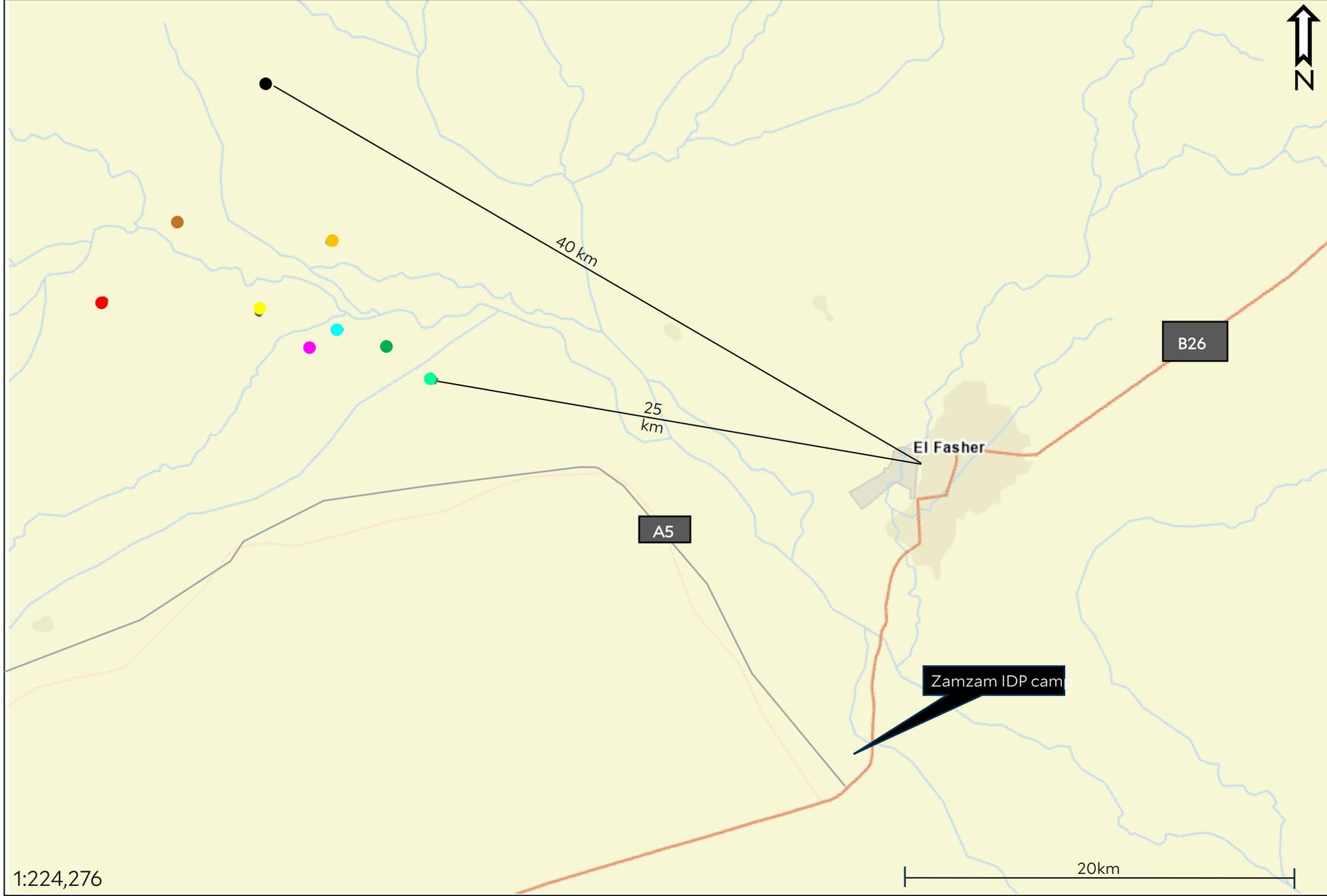
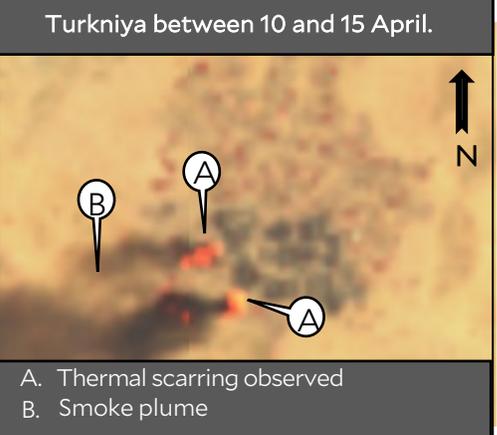
The Yale School of Public Health's Humanitarian Research Lab (HRL) conducts research, develops methodologies, and supports affected communities and humanitarian practitioners to improve and protect the public health and human security of populations impacted by complex disasters. Yale HRL's work on Sudan is generously supported by Avaaz.

Overview of Thermal Scarring West of El-Fasher

This assessment is based on Sentinel satellite imagery, VIIRS data and open source reporting. The radii represent the distance of the closest and furthest damaged communities to El-Fasher.

- Thermal scarring observed between 31 March and 5 April.**
 - Thermal scarring (Baraka)
 - Thermal scarring (Janjounat)
- Thermal scarring observed between 05 and 15 April.**
 - Thermal scarring (Sarfaya)
 - Thermal scarring (Umm Ashoush)
 - Thermal scarring (Tikailat)
 - Thermal scarring (Turkniya)
 - Thermal scarring (Jaranga)
 - Thermal scarring (Muqrin)
 - Thermal scarring (Unidentified community)

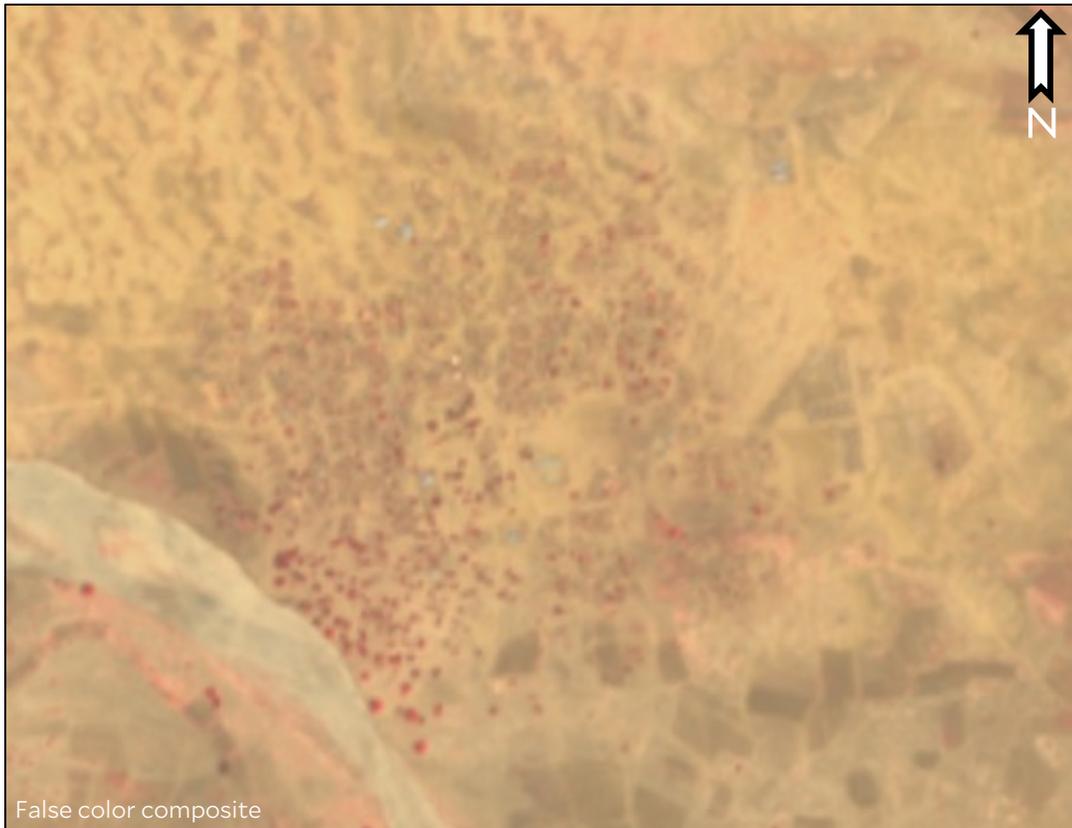
Thermal emissions and smoke plume observed on 15 April at Turkniya according to analysis of imagery.



Baraka

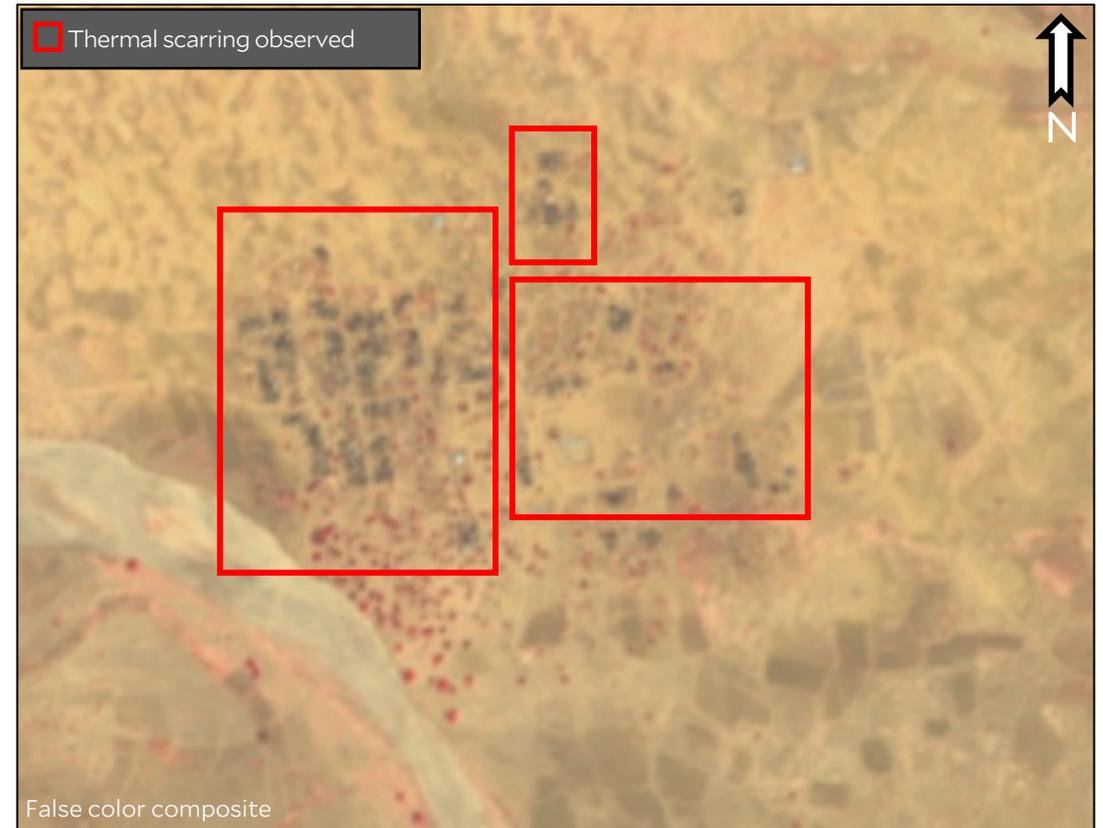
THERMAL SCARRING OBSERVED BETWEEN 31 MARCH - 05 APRIL 2024

According to analysis of satellite imagery, thermal scarring was observed within the village of Baraka between 31 March and 05 April 2024. According to analysis of VIIRS data, the time of thermal scarring can be narrowed down to 3 and 4 April 2024.



25.0067706°E 13.7205271°N

31 March 2024 © 2024 Sentinel



False color composite

25.0067706°E 13.7205271°N

05 April 2024 © 2024 Sentinel

Janjounat

THERMAL SCARRING OBSERVED BETWEEN 31 MARCH AND 15 APRIL 2024

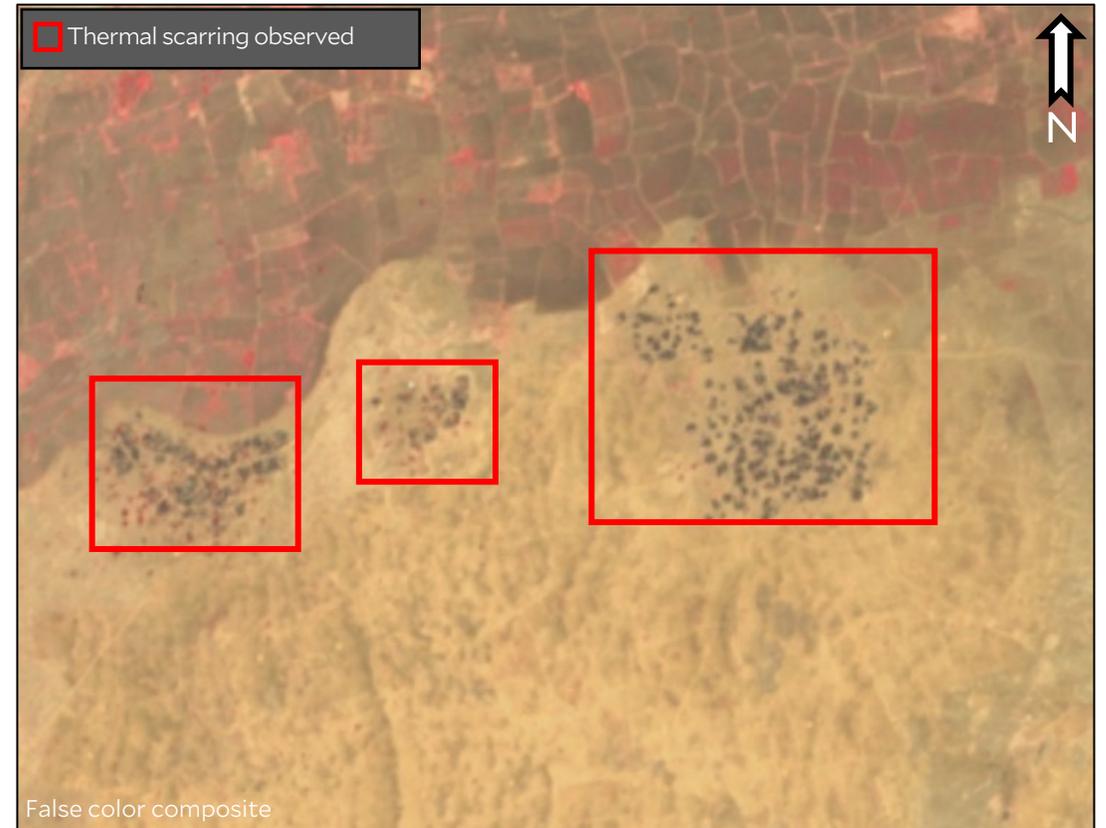
According to analysis of satellite imagery, thermal scarring was observed within the village of Janjounat between 31 March and 15 April 2024. According to analysis of VIIRS data, the time of thermal scarring can be narrowed down to 4 April 2024.



False color composite

24.9705217°E 13.6869446°N

31 March 2024 © 2024 Sentinel



False color composite

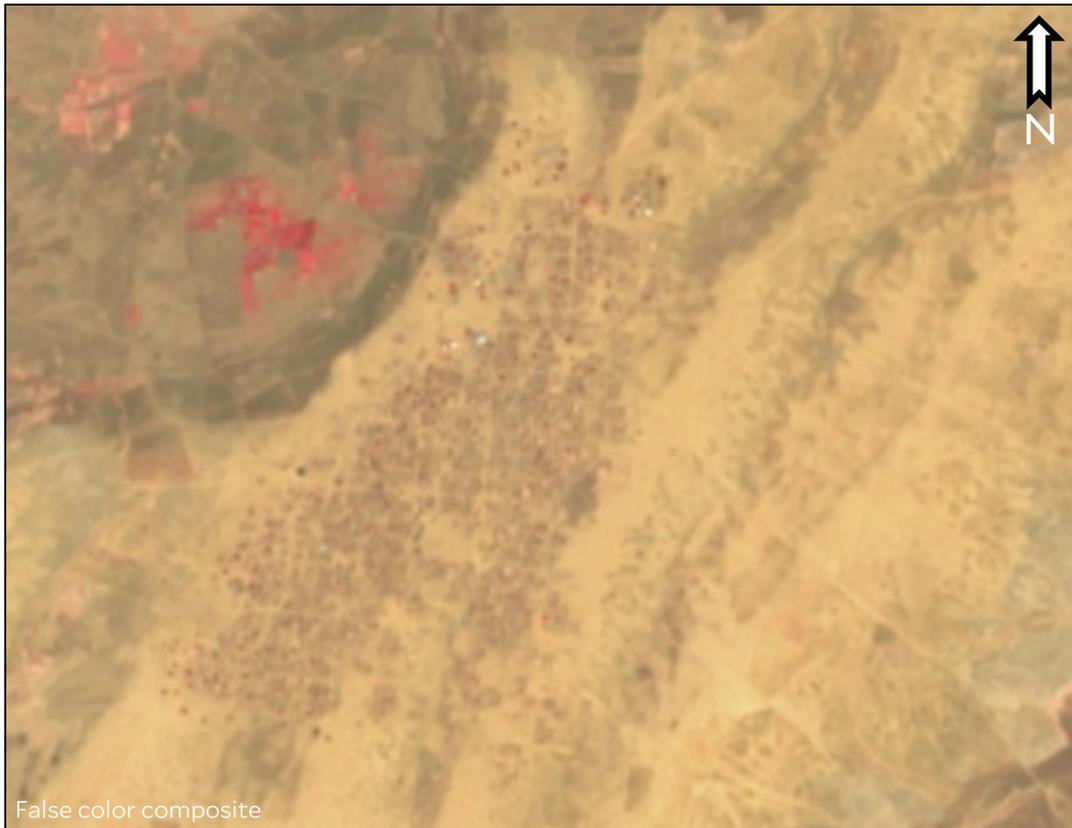
24.9705217°E 13.6869446°N

15 April 2024 © 2024 Sentinel

Sarfaya

THERMAL SCARRING OBSERVED BETWEEN 10 AND 15 APRIL 2024

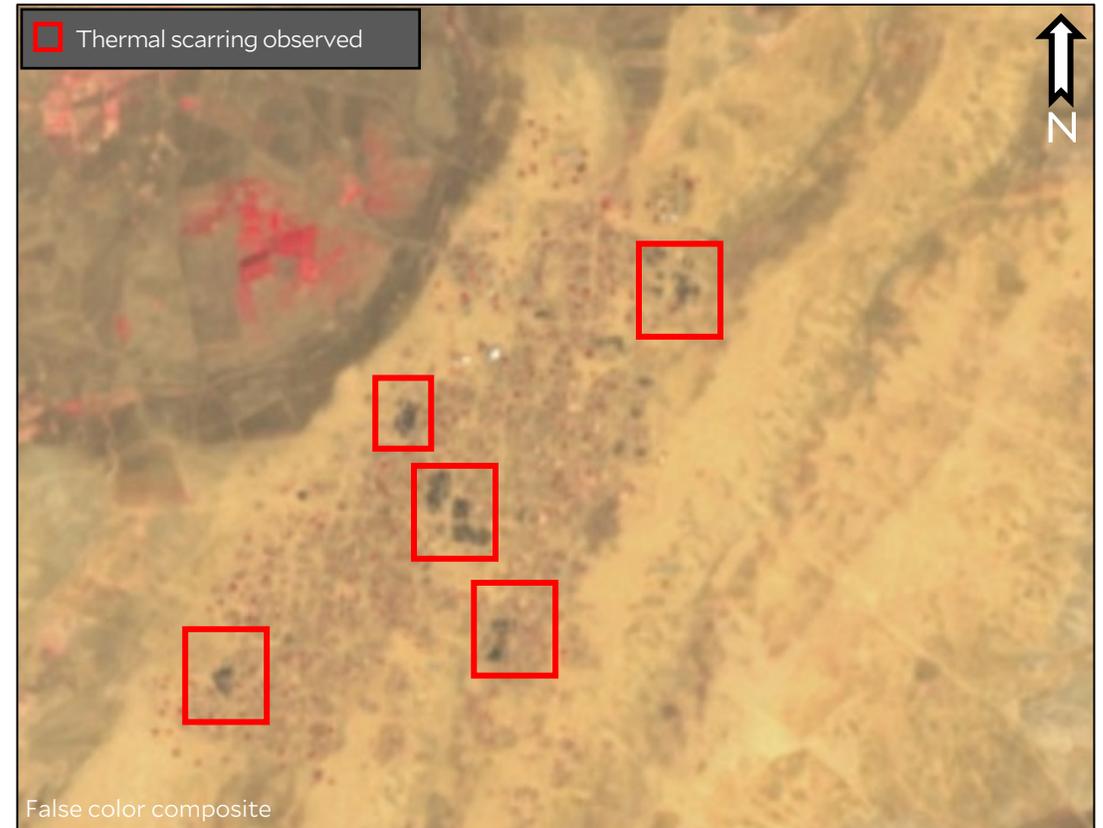
According to analysis of satellite imagery, thermal scarring was observed within the village of Sarfaya between 10 and 15 April 2024. According to analysis of VIIRS data, the time of thermal scarring can be narrowed down to 15 April 2024.



False color composite

25.0432760°E 13.6824946°N

10 April 2024 © 2024 Sentinel



False color composite

25.0432760°E 13.6824946°N

15 April 2024 © 2024 Sentinel

Tikailat

THERMAL SCARRING OBSERVED BETWEEN 10 AND 15 APRIL 2024

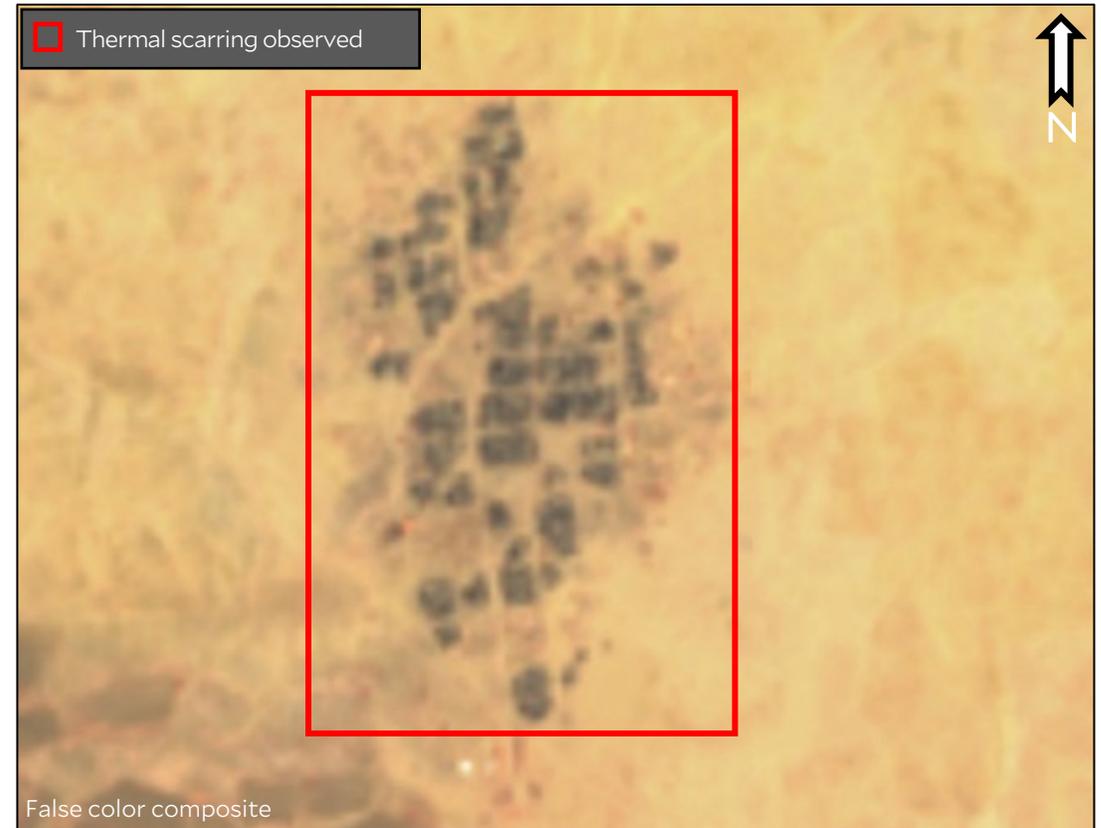
According to analysis of satellite imagery, thermal scarring was observed within the village of Tikailat between 10 and 15 April 2024. According to analysis of VIIRS data, the time of thermal scarring can be narrowed down to 14 April 2024.



False color composite

25.0745801°E 13.7128648°N

10 April 2024 @Sentinel



False color composite

25.0745801°E 13.7128648°N

15 April 2024 © 2024 Sentinel

Umm Ashoush

THERMAL SCARRING OBSERVED BETWEEN 10 AND 15 APRIL 2024

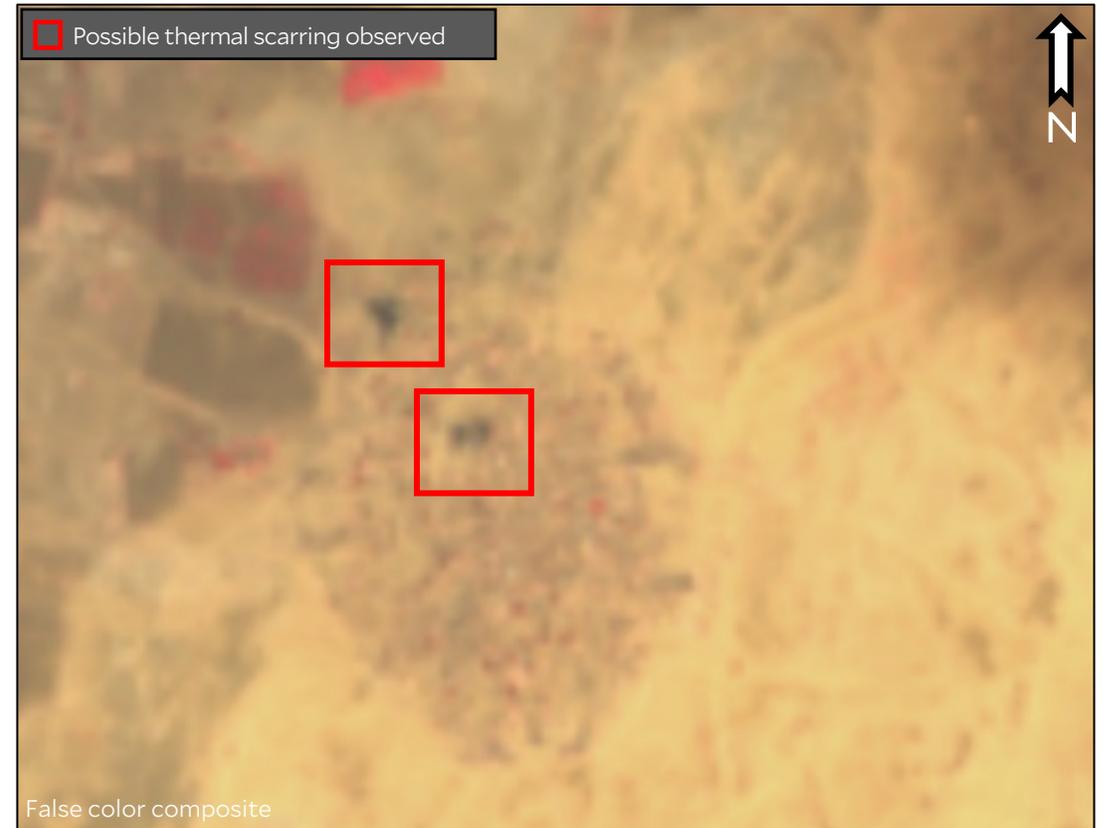
According to analysis of satellite imagery, thermal scarring was observed within the village of Umm Ashoush between 10 and 15 April 2024.



False color composite

25.0658969°E 13.6680647°N

10 April 2024 © 2024 Sentinel



False color composite

25.0658969°E 13.6680647°N

15 April 2024 © 2024 Sentinel

Turkniya

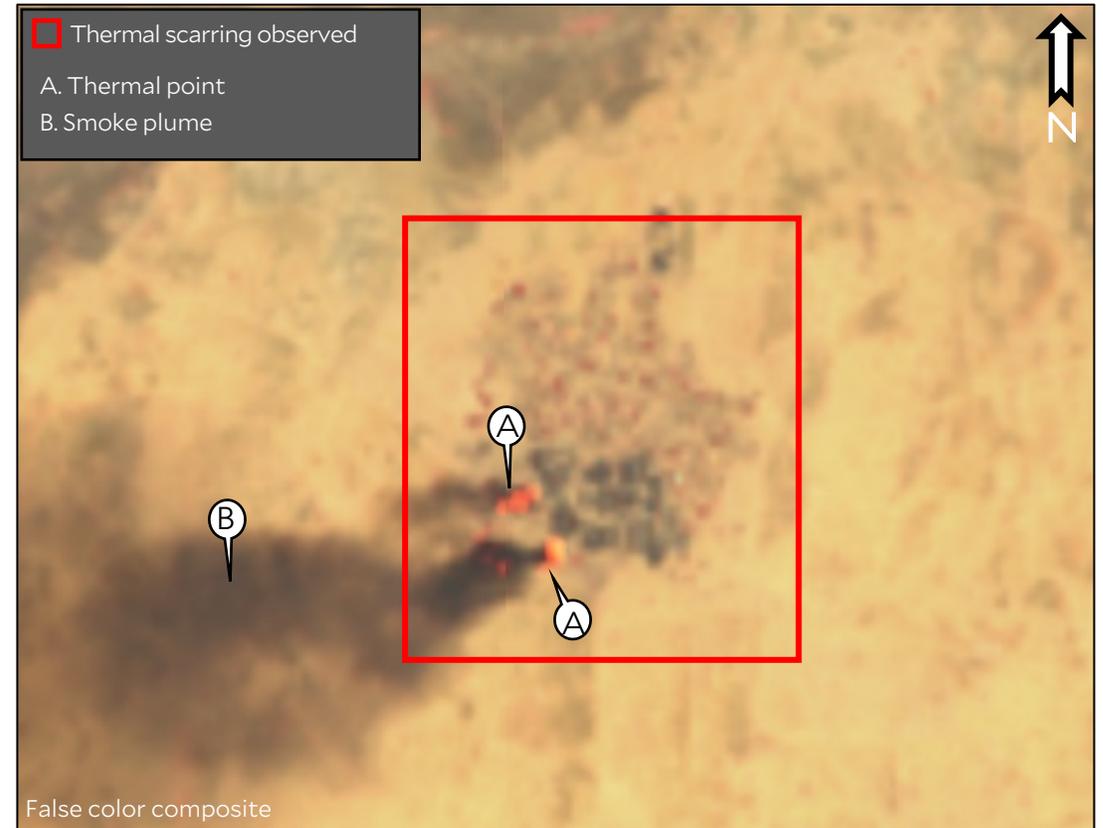
THERMAL SCARRING OBSERVED BETWEEN 10 AND 15 APRIL 2024

According to analysis of satellite imagery, thermal scarring was observed within Turkniya village between 10 and 15 April 2024. Additionally, at least two thermal emission points and smoke plumes are observed on 15 April 2024.



25.0791813°E 13.6755562°N

10 April 2024 © 2024 Sentinel



False color composite

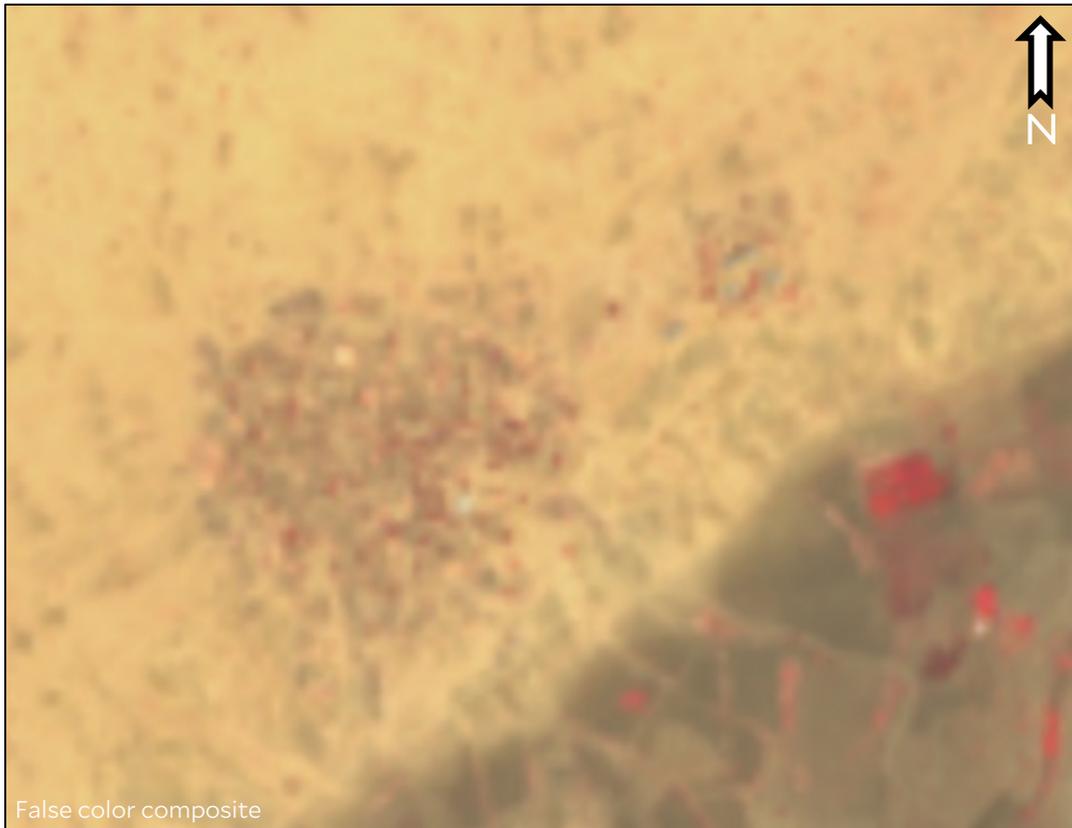
25.0791813°E 13.6755562°N

15 April 2024 © 2024 Sentinel

Jaranga

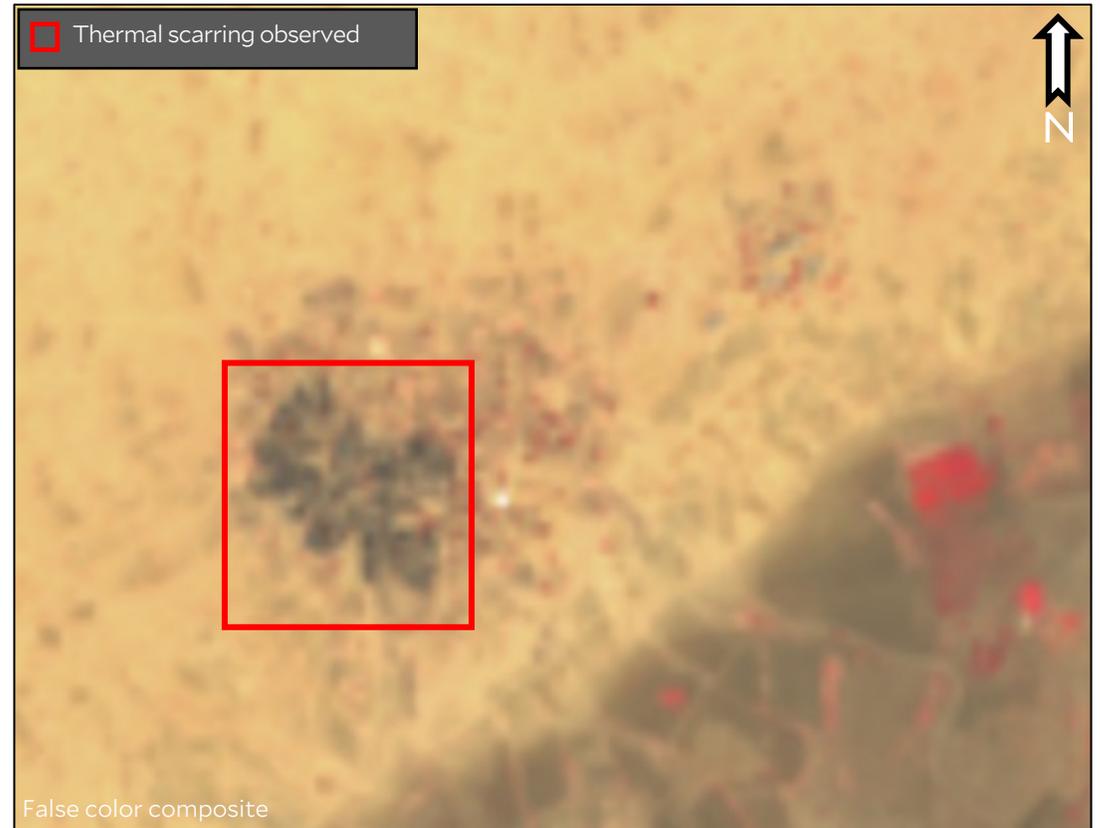
THERMAL SCARRING OBSERVED BETWEEN 10 AND 15 APRIL 2024

According to analysis of satellite imagery, thermal scarring was observed within Jaranga village between 10 and 15 April 2024.



25.1000668°E 13.6689291°N

10 April 2024 © 2024 Sentinel



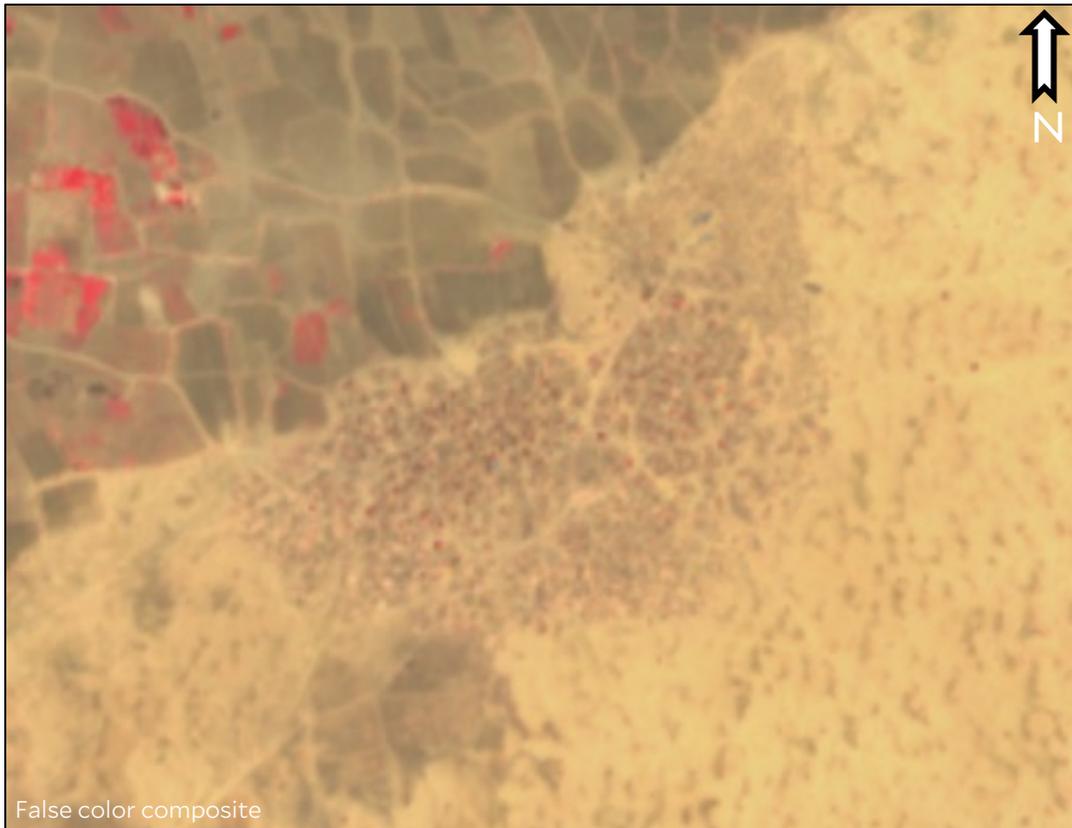
25.1000668°E 13.6689291°N

15 April 2024 © 2024 Sentinel

Muqrin

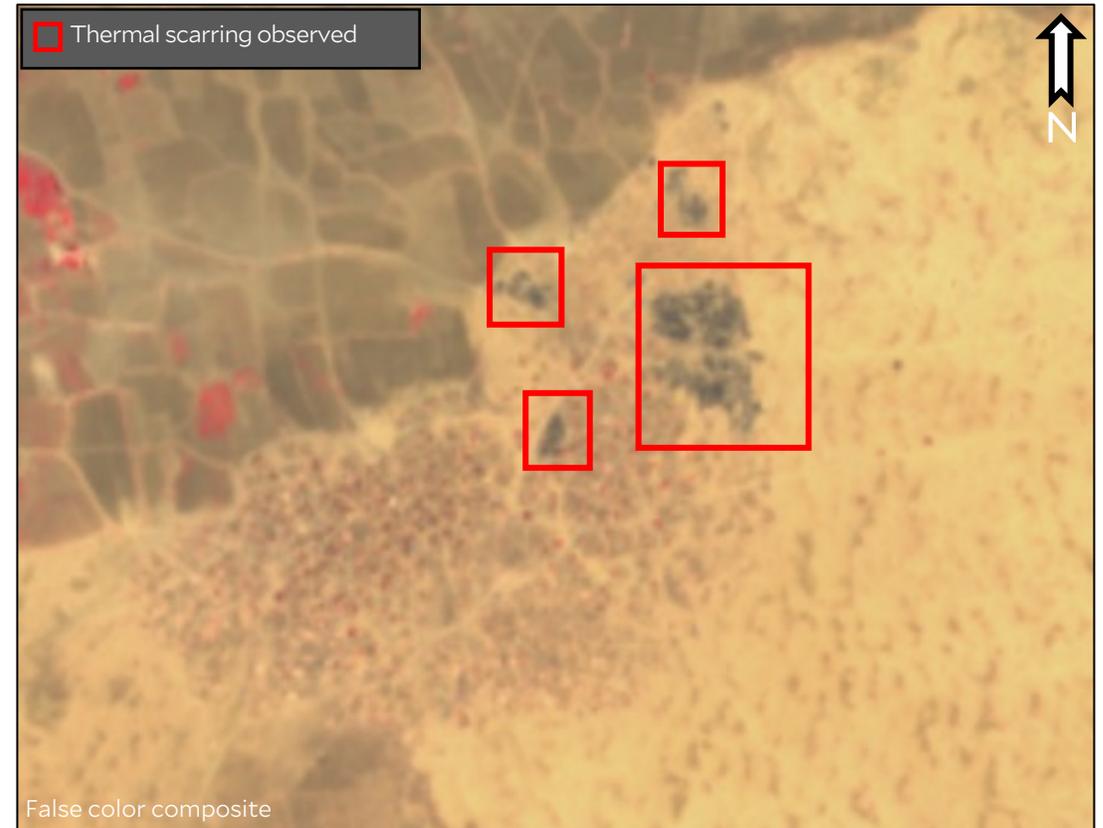
THERMAL SCARRING OBSERVED BETWEEN 10 AND 15 APRIL 2024

According to analysis of satellite imagery, thermal scarring was observed within Muqrin village between 10 and 15 April 2024.



25.1210395°E 13.6540489°N

10 April 2024 © 2024 Sentinel



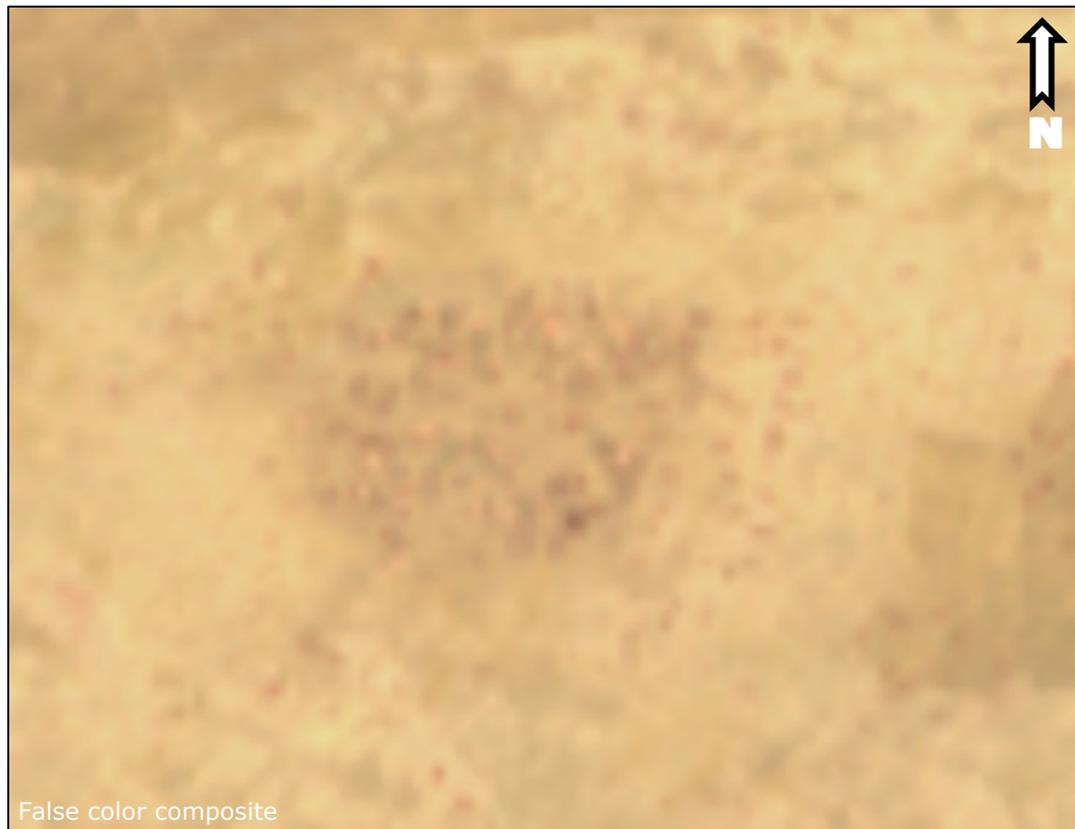
25.1210395°E 13.6540489°N

15 April 2024 © 2024 Sentinel

Unidentified Community

THERMAL SCARRING OBSERVED BETWEEN 10 AND 15 APRIL 2024

According to analysis of satellite imagery, thermal scarring was observed within village between 10 and 15 April 2024. According to analysis of VIIRS data, the time of thermal scarring can be narrowed down to 10 April 2024.



13.787683N, 25.037641E

10 April 2024 © 2024 Sentinel



13.787683N, 25.037641E

15 April 2024 © 2024 Sentinel

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