Confirmation of Aerial Bombardment at Kenana Fuel Depot

4 May 2026

Yale SCHOOL OF PUBLIC HEALTH
Humanitarian Research Lab

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Satellite Imagery © 2026 Vantor.

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I. Key Findings

The Yale School of Public Health's Humanitarian Research Lab (HRL) confirms damage consistent with aerial bombardment to a fuel depot in Kenana, White Nile State, Sudan in satellite imagery collected between 26 February – 4 May 2026. The sides of a large cylindrical fuel depot appear damaged and there is visible black scorching on the ground. The roof of a small proximate rectangular structure also appears damaged. Thermal (fire) signals from NASA FIRMS' VIIRS sensor were collected at the location on 3 May 2026.

The damage, which occurred in an area where no direct conflict is reported, is consistent with aerial bombardment. Local media and videos across social media reported that a drone attack targeted a fuel depot and gas station in Kenana, White Nile on 3 May 2026.[1] Videos posted on social media after the alleged attack show damage to the side of a round fuel structure and a mass of black smoke behind a small gas station.[2] No casualties were credibly reported as of publication.[3]

Yale HRL does not currently assess whether the damage to this fuel depot is consistent with a loitering munition (also known as a "kamikaze" or "suicide drone") or a munition dropped by an unmanned aerial vehicle (UAV) at this time.

The damaged fuel station is located near the facilities of both the Kenana Ethanol Production Facility and the Kenana Sugar Factory; no damage was visible in satellite imagery at either of those facilities during the 26 February – 4 May 2026 period.

Kenana is in an area fully under Sudan Armed Forces (SAF) control and at least 150 kilometers away from contested territories. The Kenana Sugar Factory and Kenana Ethanol Production Facilities are major economic drivers in Sudan with significant foreign investment. The damage to the fuel depot in Kenana was highly likely conducted by the Rapid Support Forces.

SAF has also reportedly conducted repeated attacks on fuel depots and fuel markets, including the Adekong Fuel Market on the border of Adre, Chad, and El-Geneina, West Darfur, Sudan in recent weeks.[4]

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. Thermal (fire) sensor data includes 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.

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] Radio Dabanga "هجمات بطائرات مسيّرة على كنانة وأم درمان" *Radio Dabanga*, 3 May 2026. https://www.dabangasudan.org/ar/all-news/article/%d9%87%d8%ac%d9%85%d8%a7%d8%aa-%d8%a8%d8%b7%d8%a7%d8%a6%d8%b1%d8%a7%d8%aa-%d9%85%d8%b3%d9%8a%d9%91%d8%b1%d8%a9-%d8%b9%d9%84%d9%89-%d9%83%d9%86%d8%a7%d9%86%d8%a9-%d9%88%d8%a3%d9%85-%d8%af%d8%b1%d9%85, archived at https://perma.cc/3NTN-WJXT.

Sudan Tribune "قصف عنيف يطال مصنع إيثانول ومستودعات وقود في كنانة" *Sudan Tribune,* 3 May 2026. https://sudantribune.net/article/313462, archived at https://perma.cc/QD6N-7LNV

[2] Sudan War Updates (@sudan_war) "" *X, formerly known as Twitter*. 3 May 2026 https://x.com/sudan_war/status/2050940220925677837, archived at https://perma.cc/B2JV-8JTD

[3] Radio Dabanga "هجمات بطائرات مسيّرة على كنانة وأم درمان" *Radio Dabanga*, 3 May 2026. https://www.dabangasudan.org/ar/all-news/article/%d9%87%d8%ac%d9%85%d8%a7%d8%aa-%d8%a8%d8%b7%d8%a7%d8%a6%d8%b1%d8%a7%d8%aa-%d9%85%d8%b3%d9%8a%d9%91%d8%b1%d8%a9-%d8%b9%d9%84%d9%89-%d9%83%d9%86%d8%a7%d9%86%d8%a9-%d9%88%d8%a3%d9%85-%d8%af%d8%b1%d9%85, archived at https://perma.cc/3NTN-WJXT.

[4] Darfur24 "طائرة مسيّرة تقصف منطقة أديكونق الحدودية مع تشاد" *Darfur24*, 14 April 2026. https://darfur24.com/2026/04/14/%d8%b7%d8%a7%d8%a6%d8%b1%d8%a9-%d9%85%d8%b3%d9%8a%d9%91%d8%b1%d8%a9-%d8%aa%d9%82%d8%b5%d9%81-%d9%85%d9%86%d8%b7%d9%82%d8%a9-%d8%a3%d8%af%d9%8a%d9%83%d9%88%d9%86%d9%82-%d8%a7%d9%84%d8%ad%d8%af%d9%88/, archived at https://perma.cc/HQ8W-WG3M;

Darfur Victims Support (@DVSorg)"طائرة مسيّرة تابعة للجيش استهدفت معبر ادي" *X, formerly known as Twitter*. 15 April 2026. https://x.com/DVSorg/status/2044316246686978419, archived at https://perma.cc/N9FC-7SU7;

HRL_MMC_148 archived for human security purposes

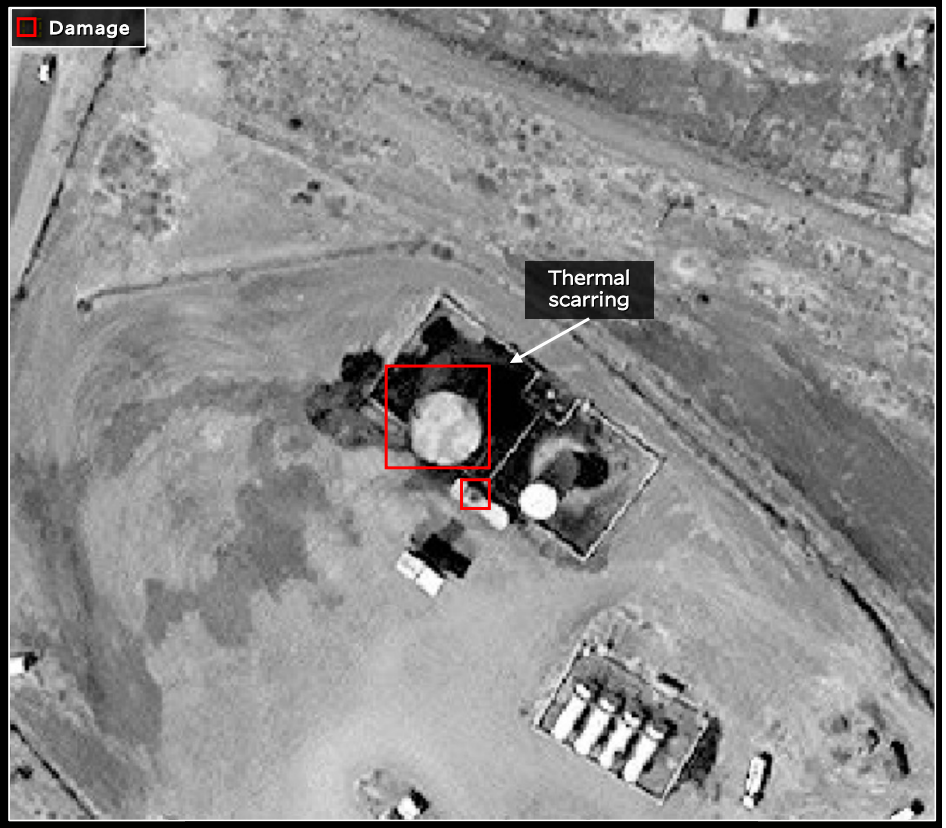
Fuel Depot, Kenana, White Nile

Conflict-related damage observed between
26 February - 04 May 2026

Analysis of satellite imagery collected between 26 February and 04 May 2026 shows damage to a fuel storage tank and adjacent structure. The new presence of thermal scarring surrounds the objects of the area.

The darkening of the roof of the fuel tank and its newly misshapen perimeter indicate that impact likely occurred on the side of the fuel tank. The adjacent structure shows a possible impact to its roof.

26 February 2026 © 2026 Vantor



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