

SPECIAL REPORT

**Military Assistance to RSF Occurring at ENDF
Base in Asosa, Ethiopia**

8 April 2026

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. Learn more at sph.yale.edu/hrl.

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I. Executive Summary

The Yale School of Public Health's Humanitarian Research Lab (HRL) has concluded with high confidence that there is activity consistent with military assistance to the Rapid Support Forces (RSF) occurring at an ENDF (Ethiopia National Defense Force) base in Asosa Town in the Benishengul-Gumuz region of Ethiopia between 29 December – 29 March 2026. Yale HRL also identifies air activity and defensive hardening at the airport in the form of defensive fighting positions as well as expansion of airport facilities, including a new hangar and concrete pad. The construction findings at Asosa airport corroborate recent reporting by *Reuters*. These findings represent clear visual evidence over a five-month period that RSF is basing its attacks on Blue Nile State, Sudan from inside Ethiopian sovereign territory. This support occurs from within an active ENDF installation in connection with an armed actor credibly accused of committing acts of genocide and illustrates violations of UN Security Council Resolution 1591 prohibiting arms shipments to those engaged in fighting in the Darfur region.¹

HRL has reached its conclusions about military assistance being provided to the RSF at the ENDF facility in Asosa based on five interconnected indicators present at the base over a five-month period of satellite imagery and open source data collection. These indicators, which have been compared with activity patterns at 14 other ENDF bases, are as follows:

1. **Repeating presence of non-ENDF commercial car carriers offloading non-ENDF consistent technicals:** Multiple commercial car carriers inconsistent with ENDF heavy equipment transports (HETs) repeatedly arrive and offload non-ENDF consistent unarmed technicals at the Asosa Town ENDF base since the end of December 2025. No similar activity pattern is observed by HRL at 14 other ENDF bases in the region, including those where ENDF-consistent HETs are visible. Many of the car carriers at the Asosa base are consistent with the blue color and dimensions of car carriers seen in open source videos taken as early as November 2025; these videos show car carriers allegedly transporting technicals bound from Berbera, Somalia to RSF fighters operating from bases in Ethiopia to attack Blue Nile State, Sudan. HRL observed a white car carrier with at least two light technicals loaded on its trailer in satellite imagery heading westward outside Mendi in the direction of Asosa.
2. **Offloaded unarmed technicals consistent with vehicles allegedly bound to RSF fighters in Ethiopia:** The offloaded technicals match the dimensions and colors of many of the vehicles seen in open source videos taken as early as November 2025 of vehicles loaded on car carriers observed at the ENDF base allegedly transporting them from Berbera, Somalia to RSF fighters in Ethiopia. These technicals arrive at the base unarmed and have livery inconsistent with ENDF vehicles of equivalent size and make observed at other ENDF installations by HRL.

3. **Increased presence of tents, vehicle traffic, and logistics activity consistent with high tempo non-ENDF military support operations:** HRL identifies logistics activity, including the arrival of multiple standard “CONEX” commercial shipping containers, the disbursement of supplies, and the appearance of between five to approximately 15 tents capable of holding up to as many as 150 personnel in total at the ENDF base inconsistent with activity observed at other ENDF bases in this timeframe. This activity includes frequent arrivals and departures of commercial transports inconsistent with ENDF livery, massive fluctuations of non-ENDF technical vehicles, and the arrival of white colored armored personnel carriers inconsistent with ENDF livery. Additionally, the ENDF base at Asosa has multiple fuel tanks present at the facility, unlike the alleged RSF base identified by *Reuters* in Menge district, which can support large scale refueling of the non-ENDF consistent vehicles entering and exiting the base since November 2025.
4. **Unarmed technicals are being retrofitted with gun mounts for heavy machine guns at base:** In February 2026 satellite imagery, HRL observes some unarmed non-ENDF technicals with uniform gun mounts capable of holding heavy machine guns. Objects measuring 1.6 meters consistent with 50-caliber machine guns are present in rows on the ground near the vehicles fitted with mounts.
5. **Technical vehicles consistent with those present at Asosa are observed in open source data from Kurmuk:** Vehicles consistent with the colors, size, and armament of technicals present at Asosa are visible in open source photos and video collected from contemporaneous fighting by RSF units in and around Kurmuk and other Blue Nile frontlines during the period in which alleged military assistance to RSF is observed at the ENDF base. The ENDF base is located approximately 100 kilometers from Kurmuk, Blue Nile, Sudan.

II. Background

Over the past five months there have been multiple sources reporting that RSF has launched attacks on Blue Nile from Ethiopia and now has supply routes running through the country. In November 2025, videos published on social media by CNN *Inside Africa*² and other entities³ reportedly showed car carriers carrying white and tan technical vehicles and cargo containers along the route from either Berbera, the contested Red Sea port in Somalia,¹ or from Djibouti to Asosa, Ethiopia. CNN *Inside*

¹ Berbera is in the Somaliland region of Somalia, home to both a military base and seaport developed through major investment by the UAE beginning in 2018. Somaliland has sought independence from Somalia since 1991; it currently operates as a de facto state but lacks widespread international recognition. Ethiopia On 26 December 2025, Israel became the first country to fully recognize Somaliland as an independent state, which was condemned by the

Africa stated that the transport of such vehicles was in support of RSF operations. HRL has identified both light technical vehicles and car carriers consistent with the dimensions, make, and color of those visible in videos from November at the Asosa site in satellite imagery from November 2025 and January, February, and March 2026.

In December 2025, sources claimed to *Al Jazeera Arabic* that RSF was operating a training camp in Ethiopia and receiving logistical support and coordination from the Ethiopian army (ENDF).⁴ The source reported that Asosa is a node in the logistics routes for RSF supplies that arrived in either Berbera, Somalia, or Mombasa, Kenya for “the supply and arrival of combat vehicles, artillery systems, and jamming devices.”⁵ HRL can now confirm *Al Jazeera’s* reporting that Asosa is a key logistics node for activity consistent with military assistance to the RSF.

In February 2026, *Reuters* released a report claiming to have identified a new training site for RSF fighters in the Menge district of Benishangul-Gumuz region of Ethiopia, northeast of Asosa, using reports from multiple unnamed sources and satellite imagery analysis showing the construction of a significant number of tents at a site near Menge. Officials identified in the report claimed each to have seen convoys of over 120 vehicles over two days in mid-November 2025 each holding 50-60 “fighters” on the dirt roads near the purported training facility. HRL has assessed the activity at the facility identified in Menge by *Reuters* through satellite imagery analysis and cannot confirm the allegations made in the *Reuters* report about RSF activities there with currently available data.

The *Reuters* report also identified activity at Asosa airport, including a new apron, hangar, and objects consistent with an antenna and mobile ground data terminal.⁶ HRL corroborates *Reuters* reporting of the new construction activity, as well as identifying a previously unreported underground bunker-type installation under construction, and defensive fighting positions. HRL cannot independently corroborate the reports of

Somali government. On which cancelled its security cooperation agreement with the United Arab Emirates for allegedly participating in the undermining of its sovereignty.

Council on Foreign Relations “Somaliland: The Horn of Africa’s Breakaway State” *Council on Foreign Relations*, 21 January 2025. Available at <https://www.cfr.org/backgrounders/somaliland-horn-africas-breakaway-state#chapter-recommended-resources>, archived at <https://perma.cc/SZW2-VF6R>;

Billard, Robert. “Recognition Looms for Somaliland: Strategic Implications in the Horn of Africa” *Military Network*, 20 March 2026. Available at <https://www.military.com/feature/2026/03/19/recognition-looms-somaliland-strategic-implications-horn-of-africa.html>, archived at <https://perma.cc/T757-ZU9C>;

Mahmood, Omar “Gulf Tensions Spill into Somalia as Mogadishu Snubs UAE” *International Crisis Group*, 16 January 2026. Available at <https://www.crisisgroup.org/alr/africa/somalia-somaliland-saudi-arabia-uae/gulf-tensions-spill-somalia-mogadishu-severs-uae-ties>, archived at <https://perma.cc/25DK-AY6Z>;

Reuters “Somalia ends port deals and security cooperation with UAE” *Reuters*, 12 January 2026. Available at <https://www.reuters.com/world/africa/somalia-annuls-all-agreements-with-uae-including-port-deals-2026-01-12/>, archived at <https://perma.cc/A393-GH4S>

infrastructure consistent with a UAV ground control station. However, HRL does see digging activity generally consistent with the potential installation of a buried fiber optic cable. There are a range of possible alternative explanations for this digging activity along roadways leading to Asosa airport other than fiber optic cable installation. Additional monitoring is required for HRL to reach a definitive conclusion on purported efforts to improve telecommunications capacity and capabilities at the airport.

III. Detailed Findings

Yale HRL has identified activity at an ENDF base in Asosa Town, Ethiopia through satellite imagery analysis that is consistent to high confidence with alleged military assistance by Ethiopia to RSF operations currently occurring in Blue Nile. These activities appear to begin before or on 8 November 2026 with the arrival of 15 cargo trucks across two locations at the site: Three with covered backs parked with their cabs near trees and twelve appearing to be departing the vicinity. Eleven of the twelve departing cargo trucks appear open-backed and empty. By 29 December 2025 there are 16 blue car carriers newly present and visible at the site and 120 light technical vehicles.

Following this initial period of cargo truck activity, commercial car carriers begin to arrive and depart the facility at a high tempo, offloading non-EDNF consistent light technical vehicles, possible armored personnel carriers (APCs), and cargo containers that become visible in satellite imagery. The chart below details HRL's observations of vehicle and shipping container activity at the Asosa base.

Equipment and Materiel at Visible in Satellite Imagery at Asosa ENDF Base

Date	Car Carriers	Cargo Carriers	Cargo Containers	Technicals	Possible APCs	Tents	Massing of 1.6 Meter Tubes	Other
8 November 2025	0	15 (11 not loaded, 4 loaded)	0	0	0	0	Not visible	1 HET
9-11 November 2025 (Low-Resolution)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Activity, possible ground clearing
29 December 2026	16 blue	0	0	120	0	5	Not visible	1 HET
24 January 2026	0	0	0	25	0	5	Yes, Dark Objects	1 Military transport vehicle
28 January 2026	0	0	0	3	0	5	Yes, 1.6 meter tubes visible, fluctuate	
18 February 2026	28 (19 white, 9 blue)	1	12	200	0	7	Yes, 1.6 meter tubes, fluctuate	1 Military transport vehicle
9 March 2026	0	11	16	0	0	10	Yes, Dark Objects	
4:58 UTC, 29 March 2026	8 white	0	17	25	40	15	White covering over location where dark tubes were visible	
12:21 UTC, 29 March 2026	9 white (2 of 8 visible at 4:58 UTC have also moved)	0	17	35	25	15	White covering over location where dark tubes were visible	

The following subsections detail HRL's analytic process for each of the critical indicators briefly summarized in the executive summary in section I of this report. A detailed methodology is provided in Appendix I following the report's conclusion (IV. Special Comment).

Car Carriers and Transport Vehicles at ENDF Base in Asosa

HRL identifies the presence of objects consistent with commercially available, non-military trailers typically used to transport multiple commercial vehicles, referred to in this report as “car carriers,” at the ENDF base in Asosa Town, Benishengul, Ethiopia visible in very high resolution satellite imagery on 29 December 2025, 18 February 2026, and 29 March 2026. The objects consistent with car carriers measure on average approximately 25 meters long by 2.5 meters wide.

These car carriers visible at the ENDF base in Asosa include two variations: car carriers painted white and car carriers painted off-white and blue. The car carriers at the ENDF base in Asosa are consistently seen without vehicles loaded on the carriers. These car carriers are consistent with those seen in commercial transport of vehicles. Tracking – marks in the earth made by repeated vehicle tracks—visible at the site is consistent with frequent parking and vehicle offload activity that matches the dimensions and turning radius of the car carriers.

Sixteen blue car carriers are visible at the Asosa ENDF base in 29 December 2025 satellite imagery, the first time HRL observes them at the site. In 18 February 2026 satellite imagery, there are a total of 28 car carriers - nine appear blue and the remaining 19 appear white. In satellite imagery from 9 March 2026, there are no car carriers visible at the location. However, in two separate satellite images taken on 29 March 2026, there are eight and then nine white car carriers present. Two carriers change location during that seven-hour period. There are an increase of about 10 light technical vehicles and a decrease in approximately 15 APC-consistent vehicles at the base between the two satellite images collected on 29 March 2026.

Open source videos show blue car carriers loaded with multiple layers of light tan technical vehicles, some with a distinctive brown stripe running along the center, running in a convoy with cargo transport vehicles. These videos were likely released in early November 2025. These car carriers and cargo transport vehicles were reportedly heading into Ethiopia in support of RSF operations in Blue Nile State, Sudan.⁷

HRL assessed activity at 14 other ENDF bases and did not identify the presence of significant activity consistent with the offloading of commercial vehicles or the presence of objects consistent with white or blue commercial car carriers. This activity is solely present at the Asosa ENDF base and appears to occur simultaneously to fluctuations in both light technical vehicles and armored personnel carriers (APCs) at the Asosa site. None of these vehicles appear consistent with known ENDF vehicles or other patterns of commonly observed ENDF activity in this region.

In satellite imagery from 27 March 2026, HRL identified a white car transport carrier loaded with at least two light colored vehicles on the main road located east of Mendi, Ethiopia. The car transport carrier loaded with light colored vehicles is facing westward followed by a blue transport vehicle carrying a standard shipping container. Mendi is located approximately 92 kilometers by road to the southeast of Asosa on the main road heading east. It is along routes that connect Ethiopia from east to west. These roads connect to Berbera, Somalia, to the east.

Light Technicals and Armored Personnel Carriers (APCs) at Asosa ENDF Base

HRL first observes light technical vehicles at the Asosa ENDF base in satellite imagery collected 29 December 2025 when 120 light technical vehicles were present. The number of light technical vehicles present at the base fluctuates significantly after that date and ranges from at least 200 light technical vehicles on 18 February to no light technical vehicles visible in satellite imagery from 9 March 2026. The last observation of light technical vehicles at the base occurs in the most recent imagery collected of the base on 29 March 2026 when two images show 25 technicals earlier in the day and 35 technicals visible by afternoon, indicating new vehicles had arrived there in the intervening period between shots.

HRL also identifies vehicles measuring approximately 6.0 by 2.4 meters and displaying characteristics consistent with armored personnel carriers (APCs) visible in satellite imagery collected on 29 March 2026. The apparent APCs are positioned near the light technicals at that time. Forty of these APC-consistent vehicles are visible in imagery collected at 4:58 UTC and later decrease to 25 APC-consistent vehicles present at the site by 12:21 UTC. These vehicles are again parked near the light technicals, which also fluctuate in number that day.

The light technical vehicles observed at the Asosa ENDF site include those which are white or off-white colored and dark green. Light technical vehicles are not typically present at ENDF bases and were not visible at those assessed by HRL at other locations in Ethiopia. The livery of the light technical vehicles at this site is not consistent with the livery of the ENDF. These white or off-white colored technical vehicles are consistent with those seen in open source videos on blue commercial car carriers reportedly in eastern Ethiopia and near Berbera, Somalia.⁸ Both the white and darker colored technicals are consistent with the type and colors of technical vehicles — both mounted and unmounted — that RSF is using in ongoing Blue Nile combat operations, according to multiple open source videos analyzed by HRL.⁹

Increased Logistics Activity and Growing Number of Tents at Asosa ENDF Base

Phenomena are observed by HRL at the Asosa ENDF camp between November 2025 and March 2026 consistent with increased logistics activity, a growing number of tents, and a fluctuation of non-ENDF vehicle presence that supports HRL's conclusion that military assistance is being provided to RSF at that base. No similar activity patterns are seen at other ENDF bases monitored by HRL.

Between five and fifteen tents of varying size and color are visible at the site at different times across the 29 December 2025 – 29 March 2026 timeframe. These tents are not consistent with standard ENDF barracks or tents and can house ten people per tent. HRL also identifies the appearance and removal of multiple standard cargo commercial shipping containers, measuring approximately 6x3 meters, at the site. Ten cylindrical containers consistent with fuel tanks are visible. While their presence is notable, the fuel tanks have been present at this base for years before activity consistent with RSF support operations began.

The geographic position of the base approximately 100 kilometers from Kurmuk, Sudan is important context for evaluating the logistical changes visible at the Asosa base during the period of this study. It is well situated to provide resupply, refueling, and vehicle maintenance to forward deployed RSF forces inside Blue Nile State, Sudan and the activity observed there is consistent with Asosa ENDF base performing these functions for the non-ENDF personnel that appear there over the 29 December 2025 – 29 March 2026 period covered by this report.

Modifications to Light Technical Vehicles Alongside 50-Caliber-Consistent Gun Barrels

HRL has observed activities consistent with the modification of unarmed light technical vehicles to be equipped with gun mounts capable of holding heavy machine guns. These activities are visible in satellite imagery at the Asosa ENDF Base in satellite imagery throughout the 24 January – 29 March 2026 period. The vehicles visible on transport carriers — both in open source videos reported to be east of Asosa and in satellite imagery from Mendi, east of Asosa — all include technical vehicles that appear unmodified and consistent with commercial vehicles. As discussed above, the livery and vehicle type are not consistent with those in standard use by Ethiopia’s armed forces.

The light technical vehicles at Asosa ENDF Base are consistently located in tightly organized parking close to long black colored objects visible laying on the ground. These dark objects are visible near the site used to park technical vehicles in satellite imagery from 24 and 28 January, 18 February, and 9 March 2026. There are white coverings over the places that the black 1.6 meter tubes were previously visible in satellite imagery taken on 29 March 2026, potentially to conceal these objects from aerial observation.

When assessed in the highest-resolution satellite imagery available of the site (from 28 January and 18 February 2026), HRL assesses that these black objects are tubes that consistently measure approximately 1.6 meters. As many as 150 tubes were visible on the ground at one time. These objects are consistent with the length of a gun barrel, including the 50-caliber machine gun often used by RSF mounted on the back of technical vehicles. The area where these dark objects are placed changes over time, as does the number of the 1.6-meter objects present.

At least 200 light technical vehicles are visible parked near these 1.6-meter tubes in satellite imagery on 18 February 2026. The majority of these 200 light technical vehicles appear to have mounts for machine guns now present in their truck beds.

HRL assesses that this activity is consistent with mounting light technical vehicles to carry heavy machine guns. HRL makes this conclusion based on (a) the repeated presence of these 1.6-meter tubes consistent with 50-caliber machine gun that are (b) located alongside the light technical vehicles that (c) include some with visible gun mountings after being parked at this site. These vehicles are consistent with mounted technicals utilized by RSF in battle across frontlines in Blue Nile, Sudan in March 2026.

Technical Consistent with Asosa ENDF Base Vehicles Observed in Open Source Data from Blue Nile

RSF is known to use gun-mounted light technical vehicles in battle across multiple regions of Sudan. Videos reportedly from battles in Blue Nile state occurring in March 2026 show RSF utilizing both light-colored and dark green-colored technical vehicles that include mounted heavy machine guns. The vehicles assessed in Asosa are consistent in color and type with vehicles utilized by RSF in battle across frontlines in Blue Nile, Sudan in March 2026, according to HRL's analysis.¹⁰

ENDF Base Comparison

HRL assessed all available VHR satellite imagery across 14 other ENDF military bases in western and central Ethiopia for any indicators of troop buildup, equipment buildup, or increased fortification during the timeframe of alleged RSF support activities at Asosa to determine if the phenomena there is anomalous. As a result of this base comparison study, HRL concluded that the Asosa activity was uniquely anomalous compared to activity at all bases in the comparison data set.

These military base locations were identified through military land use polygons present in the OpenStreetMap database as of 6 April 2026.¹¹ Of these 14 locations, only two had clearly observable vehicle activity consistent with ENDF operations, such as the movement of olive drab colored cargo trucks, which are standard ENDF vehicles. However, the two locations identified showed a static force posture with no major activity swells, no signs of fortification, or any force disposition consistent with state of alert or heightened security.

Analysts reviewed this activity in contemporaneous low-resolution satellite imagery from 2026 and found that the car carriers were visible in low-resolution satellite imagery from Copernicus Sentinel. Activity consistent with the car carriers is not visible across more than 40 images between 4 January 2024 - 8 May 2025, further corroborating that this activity is uniquely anomalous to this time period.

Recent Air Activity and Construction at Asosa Airport

HRL identifies recent air activity and construction at Asosa Airport, which is approximately 8.5 kilometers from the ENDF facility. This activity does not corroborate HRL's assessment that the nearby Asosa ENDF base is being used to provide military assistance to the RSF. However, this activity may be relevant to the operations HRL documents at the Asosa base and warrants close monitoring.

HRL identifies unique air activity, such as transport aircraft, occurring between 18 February – 29 March 2026. A helicopter measuring 20 meters in length and consistent with a Mi-17 helicopter is visible on the apron in satellite imagery from 18 February 2026. A C-130-consistent aircraft is visible on the apron in satellite imagery from 9 March 2026. On 29 March 2026, a DHC-6 Twin Otter-consistent aircraft is visible on the apron in satellite imagery collected at 4:58 UTC and not present at 12:21 UTC. A DHC-8 Q400-consistent aircraft is newly visible in satellite imagery at 12:21 UTC the same day.

HRL identifies defensive hardening at the airport in the form of defensive fighting positions, as well as expansion of airport facilities, including a new hangar and concrete pad. Some form of underground structure is also being constructed at the facility. Additionally, there is trenching activity that may indicate the possible installation of fiber optic cables, though additional monitoring is required to reach a definitive analytic conclusion. *Reuters* first identified construction activity of the hangar and concrete pad.¹²

IV. Special Comment

The significance of this report is threefold. First, it represents the first definitive visual proof over a five-month period that RSF is basing its attacks on the Blue Nile State, Sudan from inside Ethiopian sovereign territory. Second, it demonstrates that this support is occurring inside an active ENDF installation with the direct collusion of Ethiopia's military with an armed actor credibly accused of genocide in El Fasher by the United Nations. Third, it shows that Ethiopia is actively violating UN Security Council Resolutions, including 1591 prohibiting arms shipments to those engaged in fighting in the Darfur region.

While this study answers some critical questions that have been raised by RSF's recent offensive in Blue Nile, it also raises more questions than it answers. How many other bases does RSF have in Ethiopia and what role do the purported bases identified by news organizations play in this effort? How long has Ethiopia been assisting the RSF? What role is the UAE playing in facilitating Ethiopia's support to the RSF? What is Ethiopia receiving in return from what outside actors for providing the RSF this support? What role has the Somaliland local government, or the Somali government, played in the supply of materiel flowing through the Berbera port or other locations in its territory?

This report alone cannot answer all these questions. However, it can hopefully play a role in catalyzing efforts by the international community to answer them quickly and decisively. Ethiopia must allow the international community to freely visit Asosa and use this report as a starting point for urgent fact finding. As more civilians are being killed and displaced by escalating fighting in Blue Nile State, Ethiopia must start answering the questions raised by this report about its now proven role in Sudan's ongoing tragedy.

Asosa to Kurmuk

N



Kurmuk,
Sudan



92 kilometers to
Kurmuk, Sudan



Asosa ENDF
Base

Asosa
Airport



0 5 10 20 Kilometers

Legend



Asosa Airport



Asosa ENDF Base

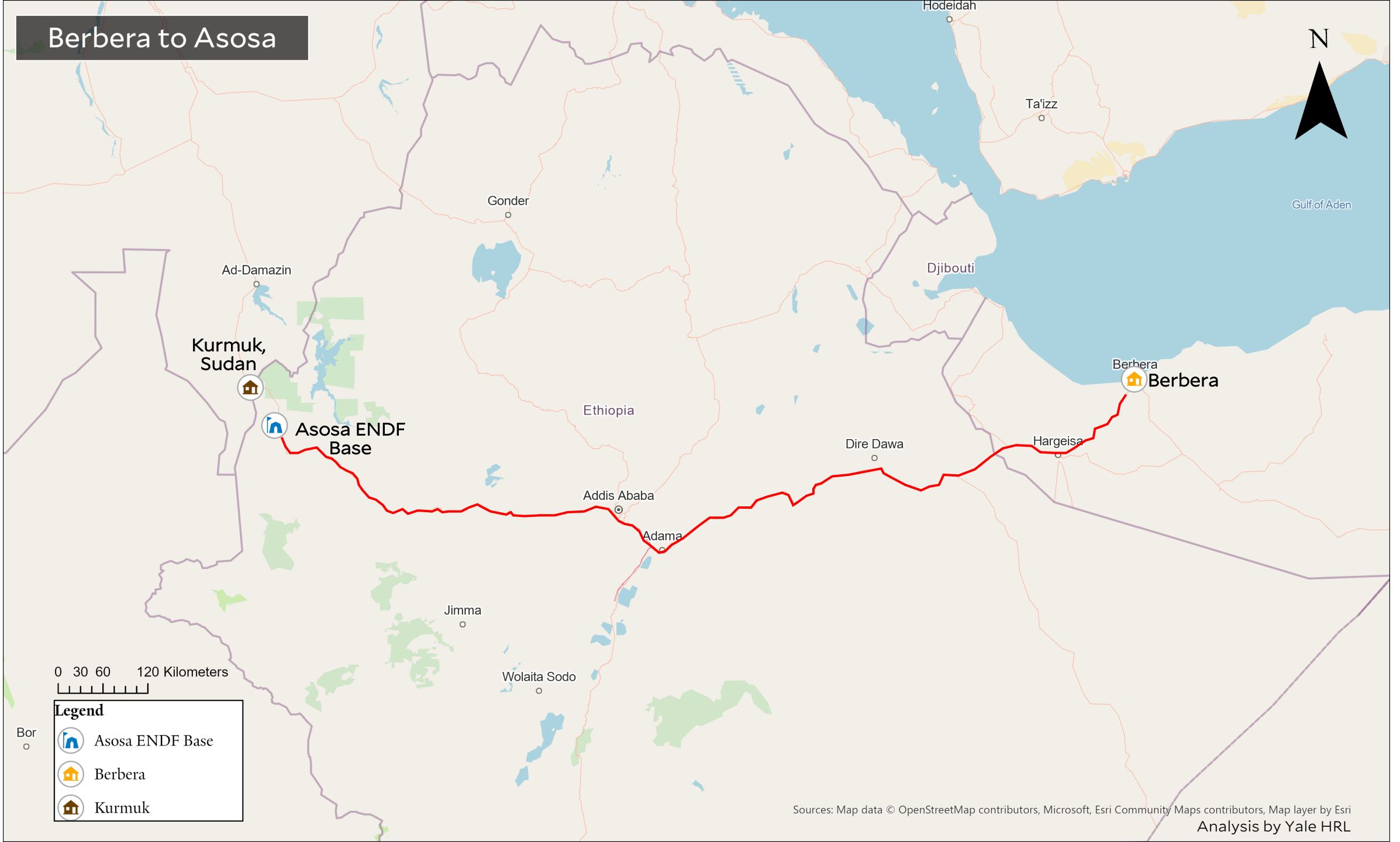


Kurmuk

Sources: Map data © OpenStreetMap contributors, Microsoft, Esri
Community Maps contributors, Map layer by Esri




Analysis by Yale HRL

Berbera to Asosa



0 30 60 120 Kilometers

Legend

-  Asosa ENDF Base
-  Berbera
-  Kurmuk

Asosa, Ethiopia

Vehicle presence observed on 12 June 2025

Analysis of satellite imagery collected on 12 June 2025 over an alleged ENDF base on the outskirts of Asosa shows the presence of a 15m-long green cargo truck and a 10 m white-cab flatbed truck on roadways within the confines of the base.

An area identified at the north of the base shows a grouping of assorted military transport vehicles, some of which have been parked in their respective positions for several months. At least five of these vehicles have been identified as newly present in their respective positions when compared to previous imagery collected on 18 April 2025.



Alleged ENDF Base, Asosa

Cargo trucks, transport vehicles and HET observed between 12 June-08 November 2025



12 June 2025 © 2026 Vantor

Analysis of satellite imagery collected over an alleged ENDF base in Asosa between 12 June and 08 November 2025 shows the new presence of 15 15m-long cargo trucks, 11 which appear to be open-backed and of varying colors and one that appears to be covered and green in color. The open-backed trucks appear to be empty, 12 of the trucks are facing towards the eastern access point of the base.

Also present at this location are a heavy equipment transport (HET) on an intersecting road and three green covered cargo trucks, consistent with the single covered facing the eastern access point of the base, parked with their cabs under tree cover. Two additional transport vehicles are also identified parked south of these cargo trucks.

In previous imagery collected 12 June 2025 a 15m-long green, covered cargo truck consistent with the covered cargo trucks identified on 08 November 2025 is observed at this location.



08 November 2025 © 2026 Vantor

Asosa, Ethiopia

New presence of light technical vehicles, vehicle trailers, & tents observed between 08 November-29 December 2025

Analysis of satellite imagery collected between 08 November and 29 December 2025 over an alleged ENDF Base on the outskirts of Asosa shows the new presence of approximately 120 light technical vehicles of varying colors of green or white and light beige. At least one military personnel transport vehicle is also identified.

Also observed during this period is the new presence of at least 16 blue car carriers (vehicle transport trailers) and at least 5 tents measuring approximately 4.5x4.5 m in dimension.

These light technical vehicles and vehicle trailers were not present in imagery analyzed 08 November 2025.

Observed to the west are 10 fuel storage tanks previously established at the site.



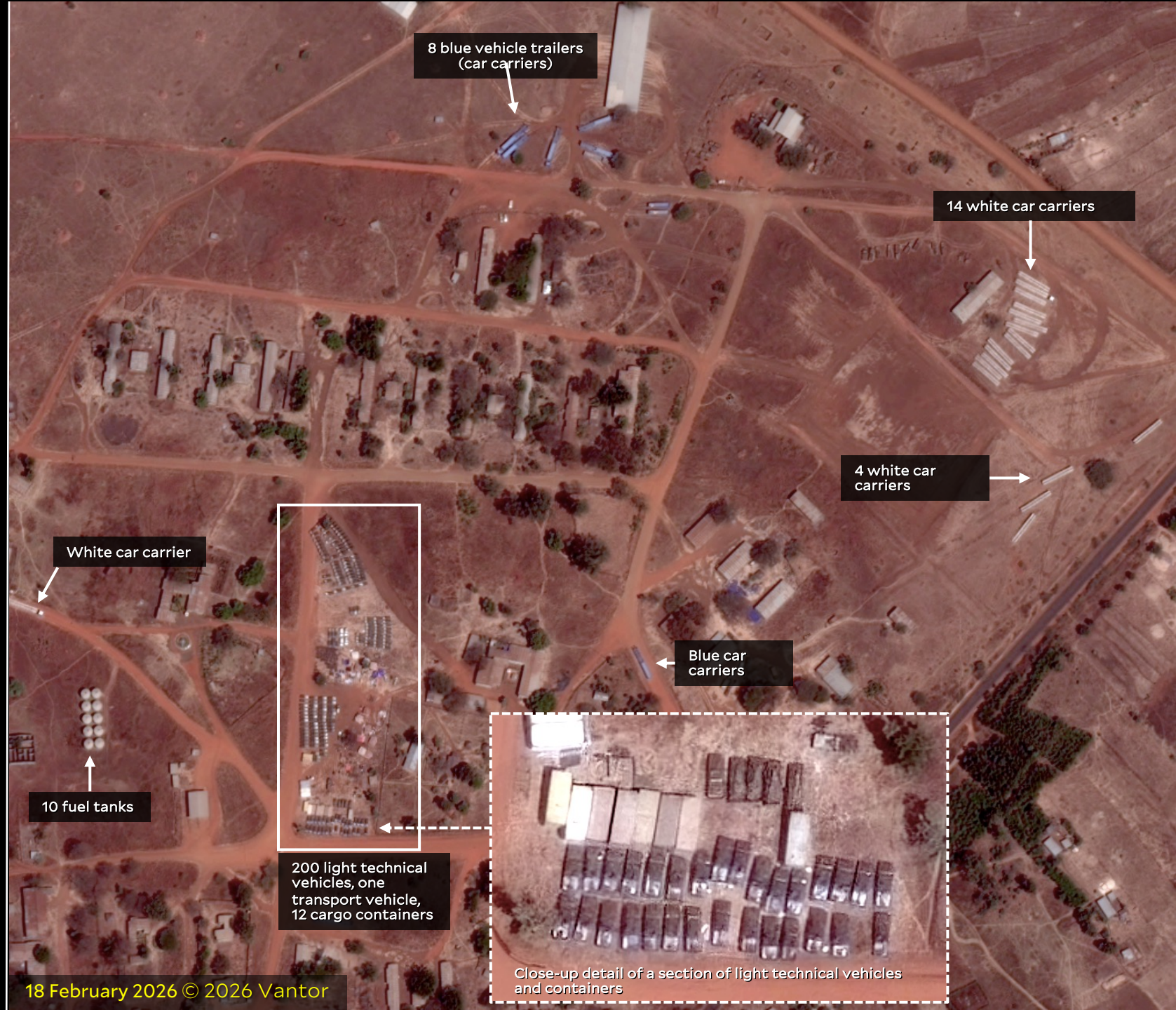
Asosa, Ethiopia

New presence of light technical vehicles, transport vehicle, cargo containers & vehicle trailers observed between 28 January-18 February 2026

Analysis of satellite imagery collected between 28 January and 18 February 2026 over an alleged ENDF Base on the outskirts of Asosa shows the new presence of approximately 200 light technical vehicles, one transport vehicle, and at least 12 cargo containers, each measuring approximately 6x3m in dimension.

Also observed during this period is the new presence of at least 28 car carriers (vehicle transport trailers) colored blue or white.

Observed to the west are 10 fuel storage tanks previously established at the site.



8 blue vehicle trailers
(car carriers)

14 white car carriers

4 white car carriers

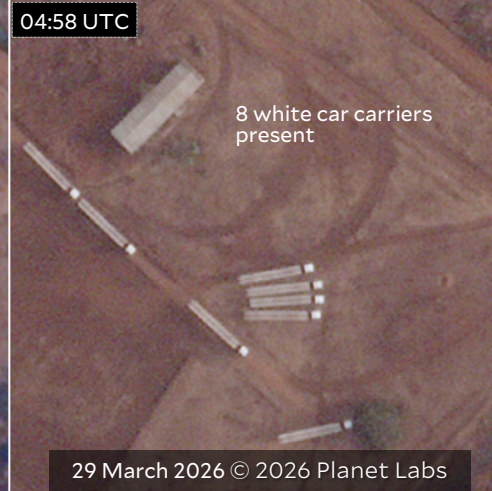
White car carrier

Blue car carriers

10 fuel tanks

200 light technical vehicles, one transport vehicle, 12 cargo containers

Close-up detail of a section of light technical vehicles and containers



Asosa, Ethiopia

Light technical vehicle and car carrier activity, and cargo trucks observed on 09 and 29 March 2026

Analysis of satellite imagery collected on 09 and 29 March 2026 shows a new presence of 25 light technical vehicles of varying color signatures at an alleged ENDF base in Asosa, Ethiopia. Also observed is the new presence of approximately 40 white/light-colored vehicles consistent in characteristics with armored personnel carriers (APCs), measuring approximately 6.04x2.37 m in averaged dimension. 8 white car carriers (vehicle trailers) are also newly observed at this location.

Subsequent imagery collected again on 29 March 2026, approximately 7 hours later, shows the number of light technical vehicles has increased to 35, and the possible APCs have decreased in number to 25. The number of car carriers in this image has increased by 1, and at least 2 car carriers are in different positions than previously observed in imagery collected 7 hours prior.

East of Mendi, Ethiopia

Vehicle activity observed on 27 March 2026

In satellite imagery collected on 27 March 2026, a car carrier transporting at least two light-colored vehicles approximately measuring 6.1m by 2m is observed traveling along the B40 located east of Mendi traveling westward toward Asosa.



Alleged ENDF Base, Asosa

Light technical vehicles, transport vehicle and cargo containers observed between 28 January-18 February 2026

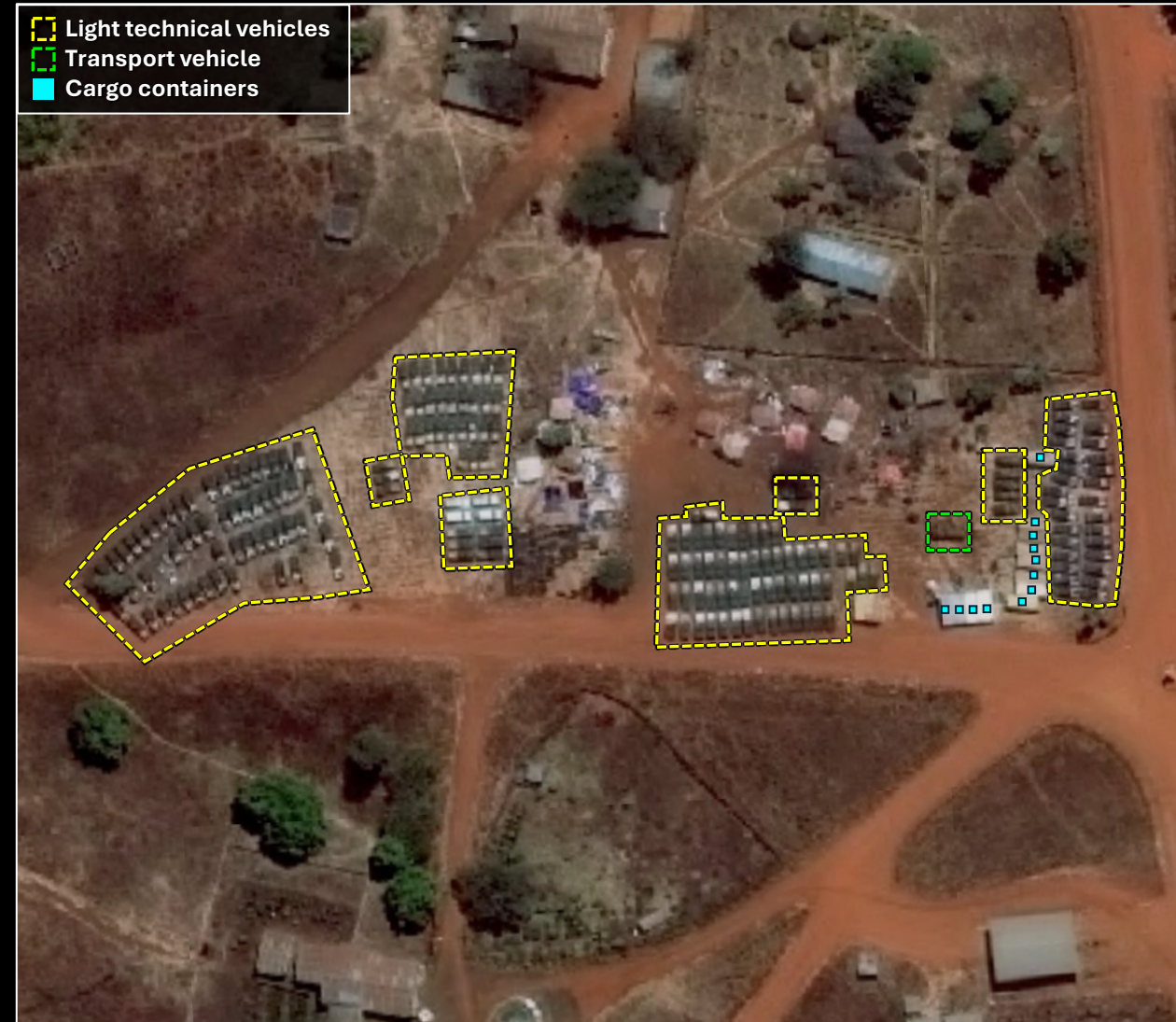
Analysis of satellite imagery collected between 28 January and 18 February 2026 shows the new presence of approximately 200 light technical vehicles and one transport vehicle at an alleged ENDF Base on the outskirts of Asosa.

Also newly present during this period are at least 12 cargo containers, each measuring approximately 6x3m in dimension.

Previously, three light technical vehicles were observed at this location on 28 January 2026.



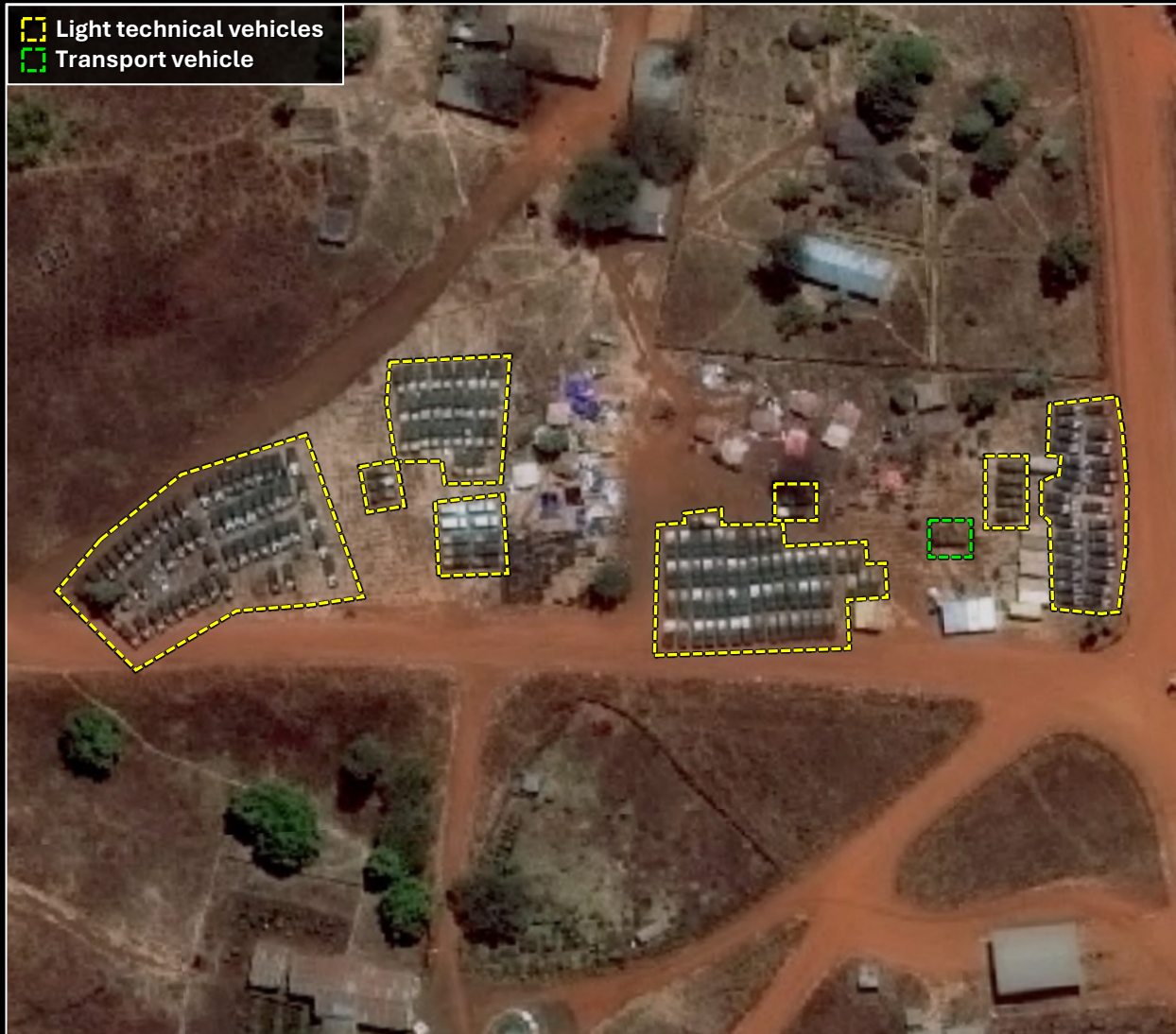
28 January 2026 © 2026 Vantor



18 February 2026 © 2026 Vantor

Alleged ENDF Base, Asosa

Light technical vehicles, transport vehicle and cargo containers observed between 28 January-18 February 2026



18 February 2026 © 2026 Vantor

Analysis of satellite imagery collected over an alleged ENDF base in Asosa shows that approximately 200 light technical vehicles and one transport vehicle previously observed on 18 February 2026 are absent in subsequent imagery collected on 09 March 2026.



09 March 2026 © 2026 Planet Labs

Alleged ENDF Base, Asosa, Ethiopia

New construction observed between 28 January-18 February 2026

Analysis of satellite imagery collected between 28 January and 18 February 2026 shows the construction of two new structures at an alleged ENDF base in Asosa, Ethiopia. Both structures appear to be metal-roofed, with one measuring 18x10 m and the second measuring 9x5 m in dimension.

Also observed during this timeframe is the new presence of a 30 m-long berm in addition to a 65 m-long footpath connecting to already-established buildings at the location.



28 January 2026 © 2026 Vantor



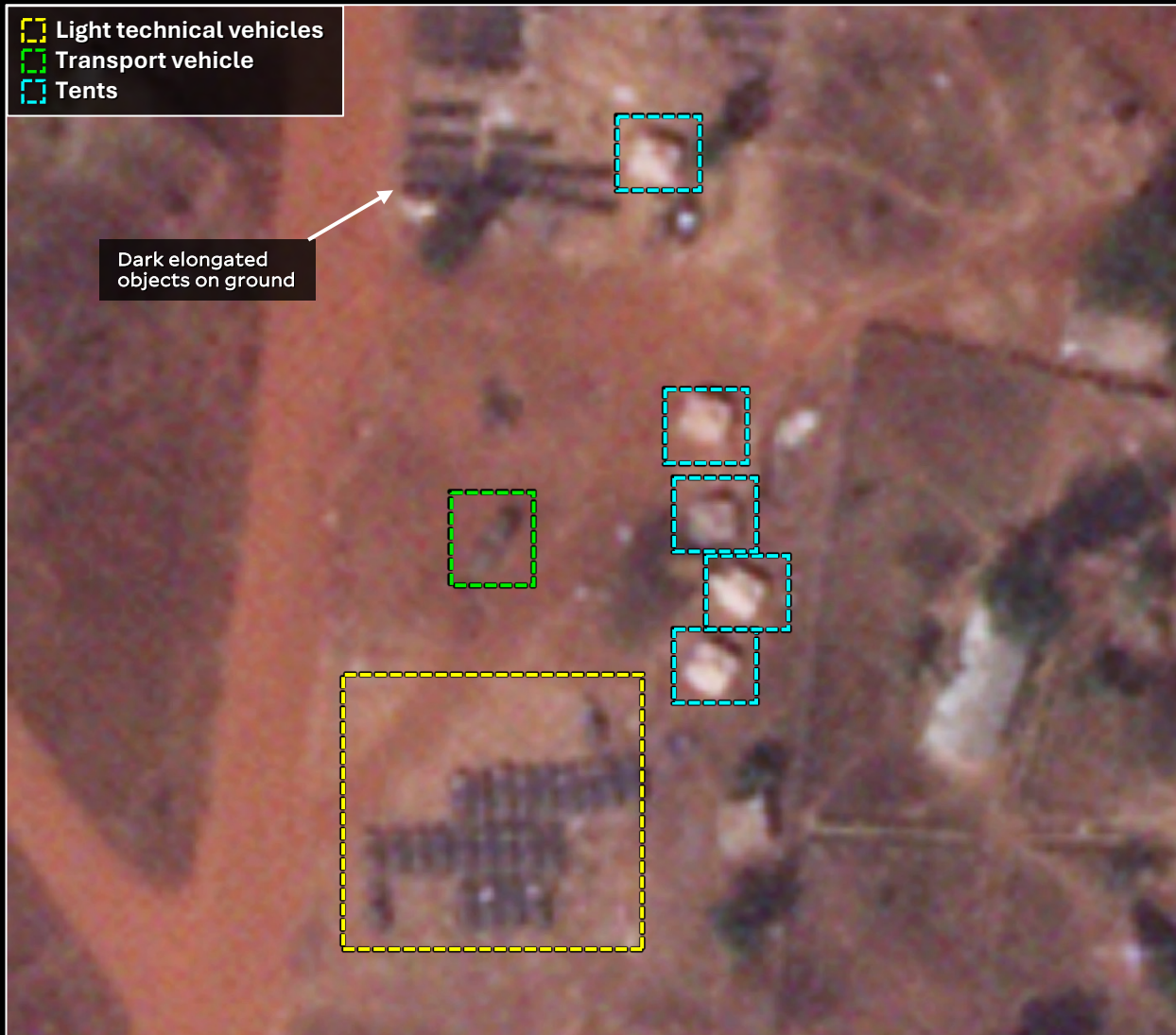
18 February 2026 © 2026 Vantor

Alleged ENDF Base, Asosa, Ethiopia

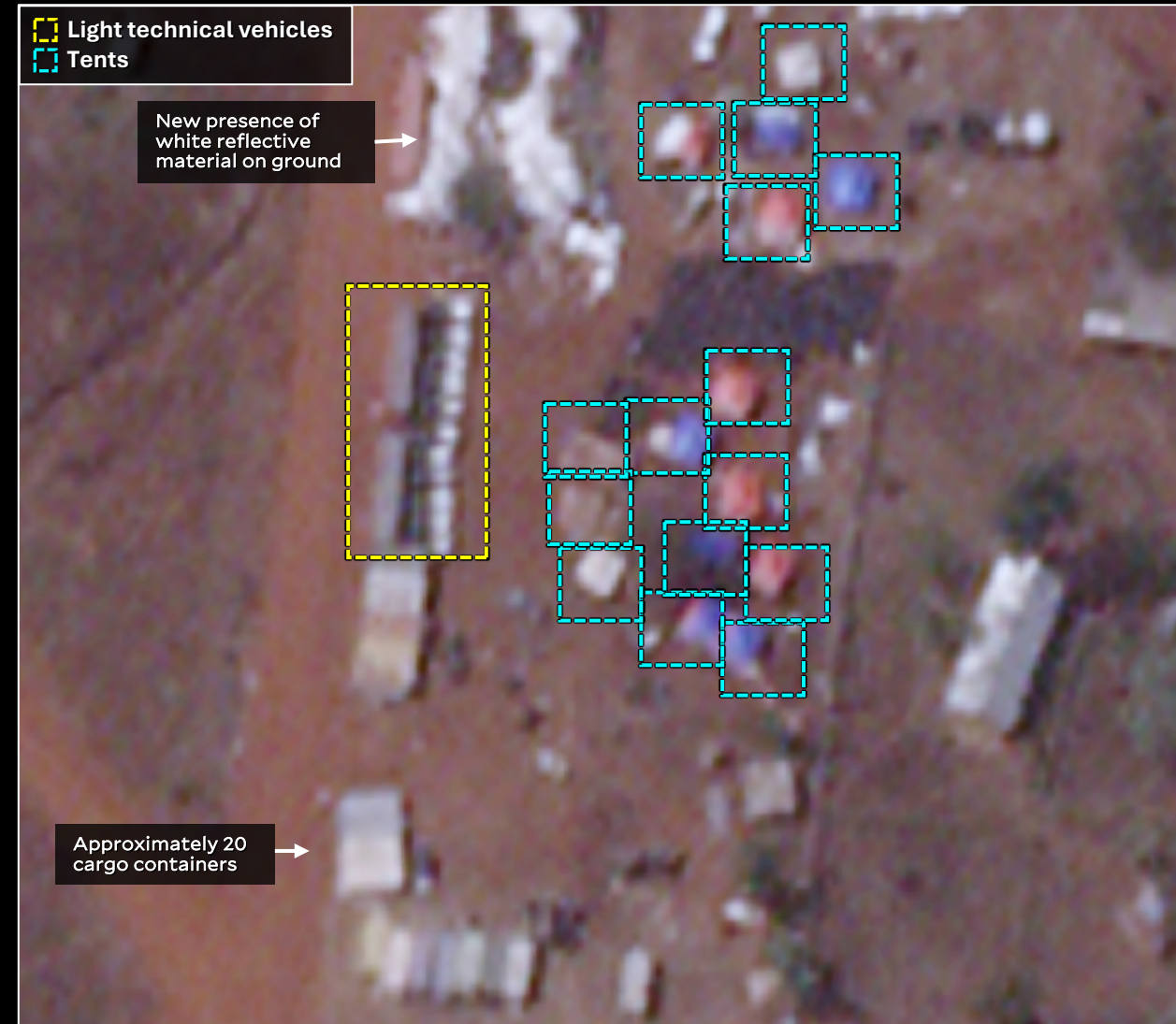
New construction observed between 28 January- 29 March 2026

Analysis of satellite imagery collected between 24 January and 29 March 2026 shows the new presence and increase of tents at an alleged ENDF base in Asosa, Ethiopia. 24 January 2026 shows the same 5 new tents, measuring approximately 4.5x4.5m, that appeared in imagery collected on 29 December 2025. Also observed is the new presence of 25 light technical vehicles, one military transport truck and several elongated dark objects on the ground measuring approximately 1.5 m in length.

Imagery collected on 29 March 2026 shows the total tent number has increased to 15. The majority of these tents appear to have arrived as early as 09 March 2026. Approximately 20 cargo containers are visible, the majority of which arrived between 28 January and 18 February 2026. At least 12 out of a total 25 light technical vehicles that were seen on imagery collected on the morning of 29 March 2026 are observed in close proximity to the tents. The location where the dark elongated objects were observed is covered with white reflective material.



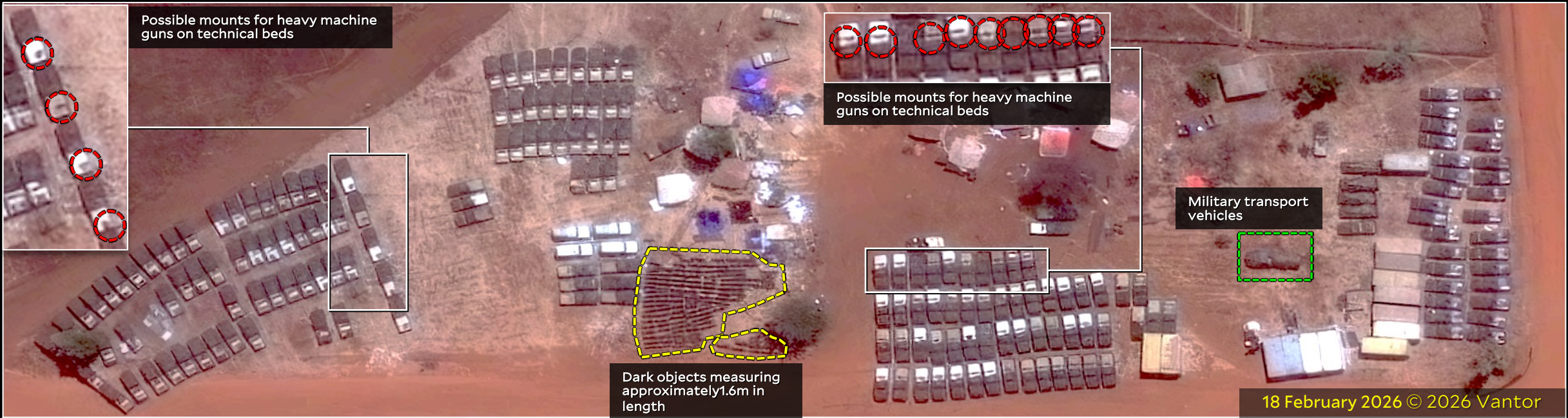
24 January 2026 © 2026 Planet Labs



29 March 2026 © 2026 Planet Labs

Asosa, Ethiopia

Possible unmounted heavy machine guns, military transport vehicle, and light technical vehicles with possible mounts for weapons



Analysis of satellite imagery collected on both 28 January and 18 February over an alleged ENDF base in Asosa, Ethiopia, shows the presence of several elongated dark objects measuring approximately 1.6 m in length on both dates (outlined in yellow). The measurements and coloring are consistent with possible unmounted heavy machine guns intended for application to light technical vehicles.

A military transport vehicle measuring approximately 7x3 m is observed in two different positions on between both dates (outlined in green).

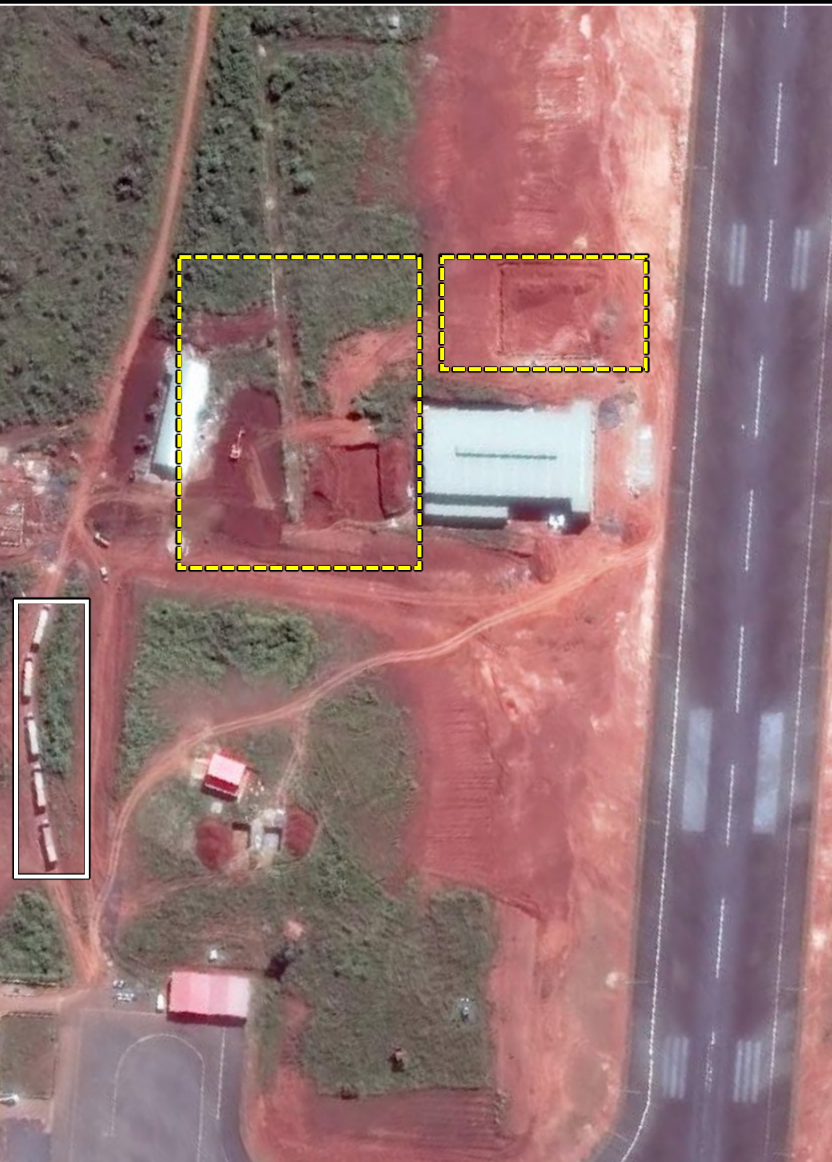
On 18 February 2026, with the arrival of approximately 200 light technical vehicles, the number and placement of dark objects fluctuates. The majority of light technical vehicles appear to have mounts or placements of possible machine guns on their beds (outlined in red).



Asosa Airport, Ethiopia

08 November 2025, 28 January-18 February 2026

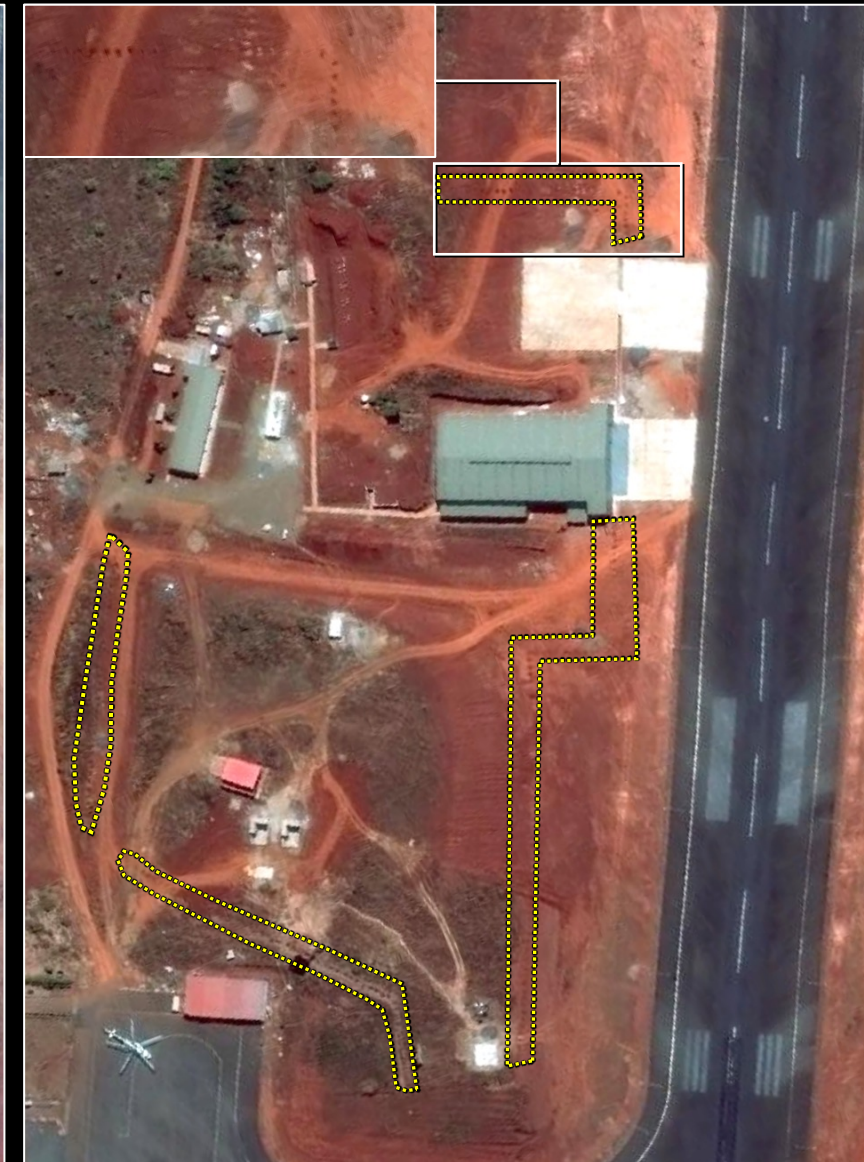
Satellite imagery collected between 08 November 2025 and 18 February 2026 over Asosa Airport shows increased digging and construction activity. Digging activity is first observed in satellite imagery collected on 08 November 2028 at a site that is then a likely concrete pad in imagery collected on 28 January 2026. Near the white surface there is digging visible in imagery collected on 8 November 2026 that is later covered up that might be consistent with an underground bunker-type activity by 28 January 2026. Further analysis of satellite imagery collected on 18 February 2026 shows potential defensive activity.



08 November 2025 © 2026 Vantor



28 January 2026 © 2026 Vantor



18 February 2026 © 2026 Vantor

Asosa Airport, Ethiopia

Helicopter observed on 18 February 2026

In satellite imagery collected on 18 February 2026 over Asosa Airport shows an object consistent with a Mi-17 helicopter measuring approximately 20 meters in length.



Asosa Airport, Ethiopia

Aircraft activity observed on 09 and 29 March 2026

Analysis of satellite imagery collected between 09 and 29 March 2026 over Asosa Airport shows increased aircraft presence. An aircraft with measurements consistent with a C-130 is visible on the apron in satellite imagery collected on 09 March 2026. The C-130 -consistent aircraft is absent and an aircraft consistent with a DHC-6 Twin Otter is visible at the site in satellite imagery collected on 29 March 2026 at 04:58 UTC. In satellite imagery collected on 29 March 2026 at 12:21 UTC, the aircraft consistent with the DHC-6 Twin Otter is absent and an aircraft consistent with a DHC-B Q400 is newly present.



09 March 2026 © 2026 Planet Labs



29 March 2026 © 2026 Planet Labs



29 March 2026 © 2026 Planet Labs

Asosa, Ethiopia

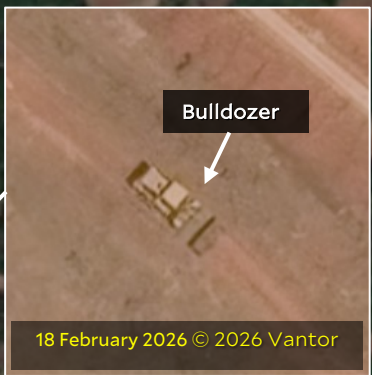
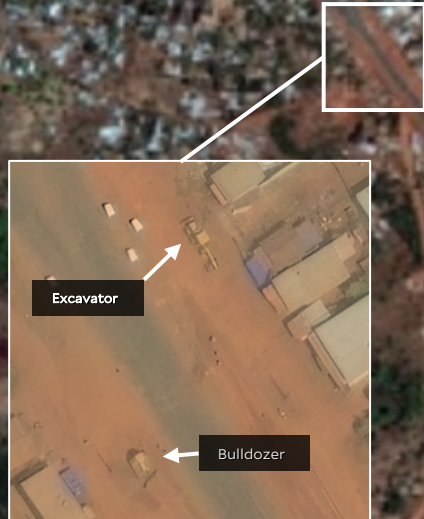
Construction activity observed on 28 January and 18 February 2026

Construction Start as of 18 February 2026

Construction End as of 18 February 2026

Asosa Airport

18 February 2026 © 2026 Vantor





Bahir Dar ENDF Base, Ethiopia

ENDF vehicle activity observed between 24 February-03 March 2026

Analysis of satellite imagery collected between 24 February and 03 March 2026 shows vehicle activity consistent with ENDF operations.

Imagery collected on 24 February 2026 shows the presence of at least 38 cargo trucks and trailers measuring roughly 10 meters in length at the base.

Further analysis of imagery collected on 03 March 2026 shows the presence of 5 new olive drab-colored trucks measuring 16 by 3 meters consistent with ENDF.

This analysis shows a static force posture with no major activity swells and no signs of fortification or force disposition consistent with state of alert or heightened security.



ENDF Air Defense Base, Ethiopia

ENDF vehicle activity observed on 10 March 2026

Analysis of satellite imagery collected on 10 March 2026 shows vehicle activity consistent with ENDF operations. Three olive drab-colored vehicles are newly visible in satellite imagery measure as short as 6.5 meters and as long as 11 meters in length.

This analysis shows a static force posture with no major activity swells and no signs of fortification or force disposition consistent with state of alert or heightened security.

Appendix 1: Methodology

HRL utilizes data fusion methodologies of open source and remote sensing data analysis. 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.

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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⁸ Inside Africa (@afric_insde) “Ethiopian federal government has expanded its import and export activities through Somaliland’s Berbera Port due to congestion at Djibouti Port” X, formerly known as Twitter, 12 November 2025. Available at https://x.com/afric_insde/status/1988608974430896203, archived at <https://perma.cc/63JF-2J8M> ;

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¹¹ Data © OpenStreetMap contributors. Modified by Yale HRL.

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