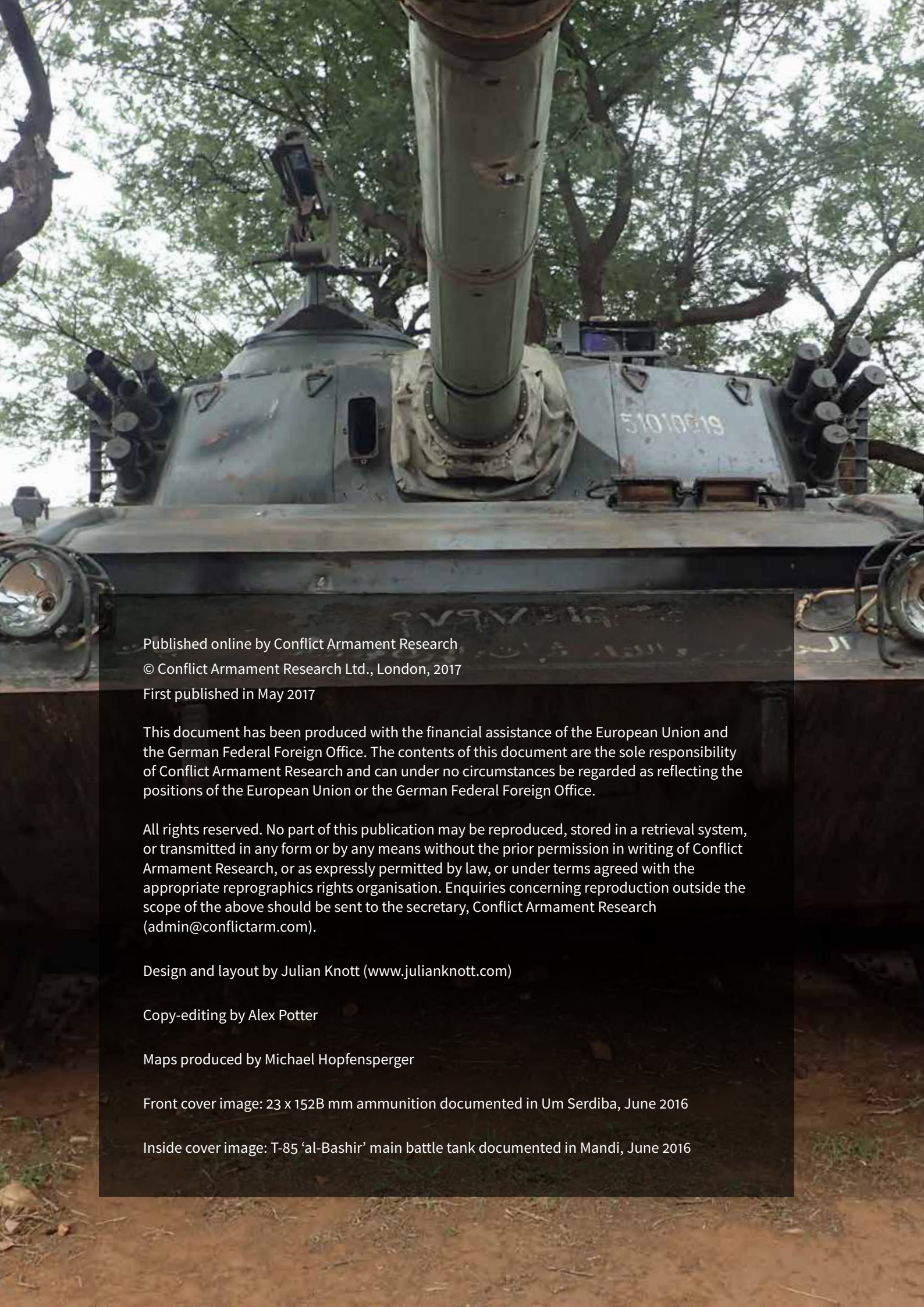




SUDANESE STOCKPILES AND REGIONAL WEAPON DIVERSION

An analysis of captured equipment in the possession of the
Sudan People's Liberation Army-North in the
Nuba Mountains.

May 2017



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Front cover image: 23 x 152B mm ammunition documented in Um Serdiba, June 2016

Inside cover image: T-85 'al-Bashir' main battle tank documented in Mandi, June 2016

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ABBREVIATIONS AND ACRONYMS

AU

African Union

CAR

Conflict Armament Research

DRC

Democratic Republic of the Congo

EU

European Union

HAEI

Homicho Ammunition Engineering Industry

IDEX

International Defence Exhibition

MIC

Military Industry Corporation

NISS

National Intelligence and Security Service

SAF

Sudan Armed Forces

SPLA

Sudan People's Liberation Army

SPLA-IO

Sudan People's Liberation Army in Opposition

SPLA-N

Sudan People's Liberation Army-North

SPLM-N

Sudan People's Liberation Movement-North

UAE

United Arab Emirates

UAV

Unmanned aerial vehicle

UN

United Nations

UXO

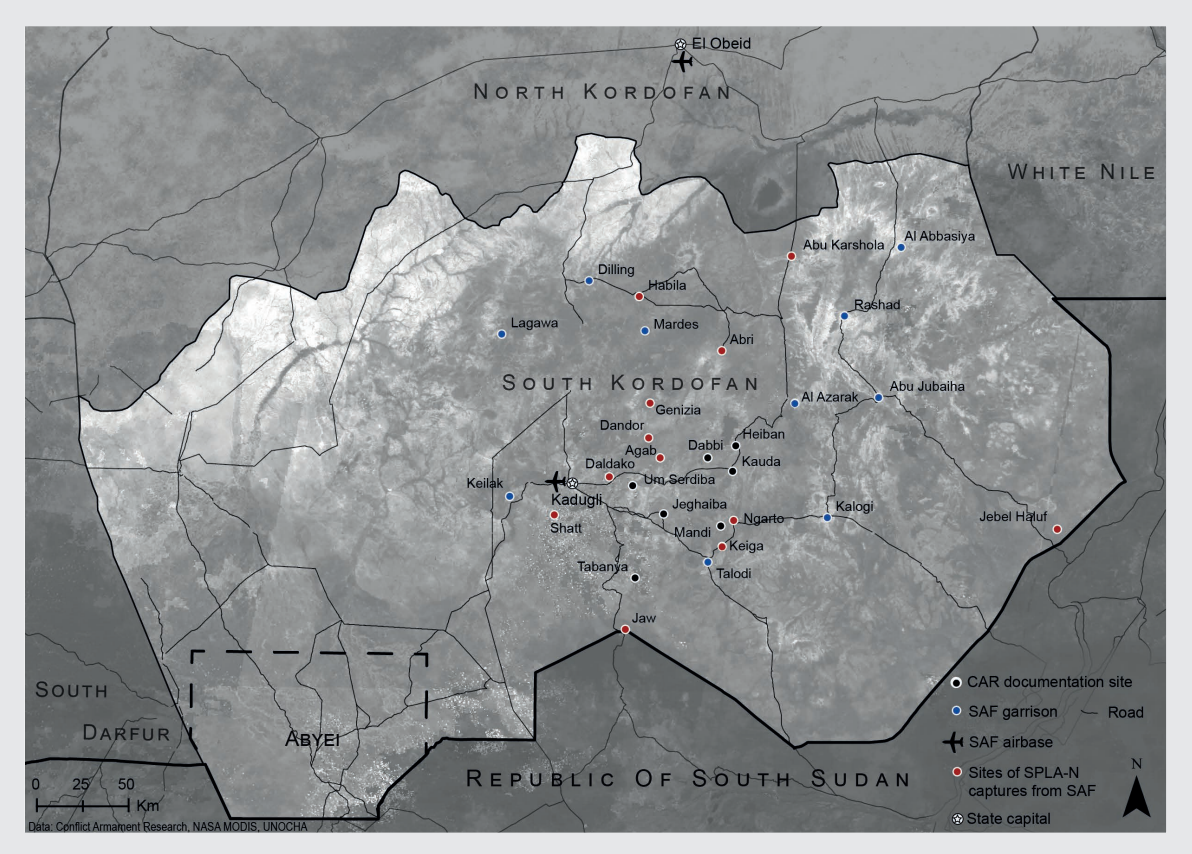
Unexploded ordnance

VIN

Vehicle identification number

MAP

Map 1
Documentation sites in South Kordofan, June 2016



EXECUTIVE SUMMARY

For more than half a decade, Sudan has waged a war of attrition against the Sudan People's Liberation Army-North (SPLA-N) in South Kordofan's isolated Nuba Mountains region and the south-eastern border state of Blue Nile. Despite the Sudan Armed Forces' (SAF) military superiority in terms of logistics, air power, and heavy weaponry, government-aligned forces have failed to dislodge the SPLA-N from the areas it controls. For its part, the SPLA-N has been unable to capture key SAF garrison towns. The military stalemate on the battlefield has contributed to an impasse in negotiations led by the African Union (AU).

In June 2016, Conflict Armament Research (CAR) examined a range of weapons, ammunition, vehicles, and other military and dual-purpose equipment captured from SAF and its affiliated militias by the SPLA-N in the Nuba Mountains.

Despite the imposition of a European Union (EU) arms embargo on Sudan since 1994¹ and a UN arms embargo on the Sudanese states of Darfur since 2005,² CAR's findings suggest that the Sudanese government continues to benefit from relatively unrestricted access to military imports. These imports have been supplemented by the acquisition of non-military or dual-purpose equipment from East Asia, the Middle East, and

THE ANALYSIS OF CAPTURED WEAPONS AND AMMUNITION CONTAINED IN THIS REPORT PROVIDES A GLIMPSE INTO SUDANESE WEAPON STOCKPILES, SUPPLY LINES, AND SOURCES OF EXTERNAL SUPPORT.

Europe. While Sudan continues to import heavy weaponry, mainly from China and the Russian Federation, it has also invested in its own domestic military production and assembly capabilities, which have expanded significantly over the last decade.

CAR's findings also suggest that Sudan continues to supply arms to state and non-state armed groups across the East African region and the western Sahel. Since 2014, CAR and its investigative partners have documented newly manufactured Sudanese military materiel captured from non-state armed groups in South Sudan, the Central African Republic, Côte d'Ivoire, Libya, Mali, and Niger.



SPLA-N soldiers standing near a captured Toyota Land Cruiser in Um Serdiba, June 2016

IN A NUMBER OF CASES, SUDAN APPEARS TO HAVE REPACKAGED AMMUNITION OR OTHERWISE MASKED SHIPPING INFORMATION APPLIED TO AMMUNITION BOXES IN ORDER TO CONCEAL ITS PROVENANCE.

The newness and condition of some of this materiel, in addition to testimonies and contextual evidence provided to CAR, suggest that Sudan has supplied it directly to non-state groups—at least during the period 2014–15.

In a number of cases, Sudan appears to have repackaged ammunition or otherwise masked shipping information applied to ammunition boxes in order to conceal its provenance. This is notably the case for large quantities of Chinese ammunition. One probable reason for this is Sudan's attempts to disguise its retransfer of Chinese-supplied ammunition to non-state groups beyond its borders, which would constitute a clear violation of its end-user agreements—and specifically their non-retransfer clauses—with the Chinese government.

The analysis of captured weapons and ammunition contained in this report provides a glimpse into Sudanese weapon stockpiles, supply lines, and sources of external support. These findings provide a significant measure of the effectiveness and impact of arms embargo restrictions, and highlight the continued efforts on the part of the Sudanese government to conceal violations of end-user agreements made with supplier states and its support for non-state armed groups.

CAR bases its findings exclusively on materiel documented in the field and supported by contextual interviews with those in possession of the materiel at the time of documentation. CAR never bases its findings on reports or images presented on social media, due to the difficulties of verifying the provenance of the reports or the materiel depicted in them.



KEY FINDINGS

- Despite international pressure to end the conflicts in South Kordofan and Blue Nile, SAF has little difficulty in acquiring weapons and ammunition of recent manufacture (both domestically manufactured and imported) and deploying them in the South Kordofan theatre.
- While the composition of SAF stockpiles has remained relatively consistent in recent years, CAR notes recent additions to SAF's arsenal, including commercially available Chinese unmanned aerial vehicles (UAVs) or drones, a T-85 main battle tank, and a Chinese-manufactured anti-materiel rifle.
- Sudan continues to rely on imported military technology from several foreign countries, most notably China, to expand the production and assembly capabilities of its state-owned Military Industry Corporation (MIC).
- Sudan continues to benefit from relatively unrestricted access to military imports, as well as to dual-purpose and civilian equipment, which it routinely repurposes for military use. This includes Chinese commercial UAVs and European-manufactured dual-purpose transport vehicles—supplies of which are arguably less vulnerable to external diplomatic pressure than exclusively military commodities.
- With the valuable assistance of the Dutch government, CAR has determined that SAF continues to procure military and dual-purpose transport vehicles of European manufacture, exported in particular from the Netherlands. In response to CAR and investigative partners reporting Sudan's military use of these vehicles, the Dutch government has revised its export rules to better control exports of heavy logistics vehicles. However, these revised rules do not cover some of the Dutch-manufactured heavy vehicles that SAF has procured and deployed in South Kordofan.



TOP: Boxes of 125 mm Chinese-manufactured (2011) tank ammunition, documented in Jeghaiba, June 2016.
BOTTOM: Abandoned T-55-pattern tank near Um Serdiba, June 2016.

- With the assistance of the Toyota Motor Corporation, CAR has identified four private distributors in the Middle East that have bulk purchased almost all of the Toyota Land Cruisers documented in use by SAF since 2009.³ CAR does not suggest any wrongdoing on the part of these distributors or implies that they supplied vehicles directly to SAF. However, the fact that supplies of Land Cruisers to SAF originate from such a small group of distributors indicates the potential ease with which due-diligence procedures might be enforced to address Sudan's diversion of commercial vehicles to military uses.
- Despite longstanding US sanctions on Sudan (only recently and partially lifted), the purchaser of at least one SAF vehicle documented on the South Kordofan battlefield is a US citizen. The person concerned purchased the vehicle from a Gulf State distributor more than three years prior to the current investigations. CAR continues to investigate the vehicle's onward transfer to SAF.
- Sudan continues to conceal the origins of foreign-made ammunition. It does so primarily by repackaging newly produced Chinese ammunition into Sudanese-manufactured ammunition boxes. This must be viewed in light of Sudan's continued violation of its end-user obligations—particularly non-retransfer clauses—to the Chinese government. This trend is further evidenced by CAR's documentation of large quantities of newly produced Chinese ammunition captured from the Sudan People's Liberation Army in Opposition (SPLA-iO) in South Sudan.
- CAR also documented 1970s-era Soviet-manufactured small arms ammunition repackaged in cartons consistent with Ethiopian industry standards.
- The weapon types and lot/serial number sequences of captured SAF materiel documented in the Nuba Mountains correlates with weapons and ammunition captured from non-state armed groups in the Central African Republic, Côte d'Ivoire, Libya,⁴ Mali, and Niger.⁵ These correlations support allegations that Khartoum continues to divert weapons and ammunition to state and non-state forces across the northern half of the African continent.



INTRODUCTION

For more than half a decade, Sudan has waged a war of attrition against the SPLA-N in South Kordofan's isolated Nuba Mountains region and adjacent Blue Nile State.⁶ This conflict was characterised by intense seasonal fighting and aerial bombardment campaigns until June 2016, when the Sudanese government announced a unilateral ceasefire.⁷ While fighting has significantly reduced, humanitarian access remains challenging and the Sudanese government has so far failed to introduce a political process to address the core grievances of armed and unarmed opposition groups in Sudan.

As of June 2016, the SPLA-N controlled significant territory beyond the SAF-controlled garrison towns of Abu Jubaiha, Al Abbasiya, Dilling, Kadugli, Keilak, Kologji, Lagawa, Rashad, and Talodi. In particular, SAF has been unable to capture Kauda, the de facto capital of SPLA-N-controlled areas in the Nuba Mountains. The town has been the target of successive aerial bombardment campaigns. These attacks are indiscriminate in that they often target civilian areas, including schools, hospitals,

and farmland. For its part, the SPLA-N has been unable to dislodge SAF from its garrison towns.

The military stalemate on the battlefield has contributed to an impasse in AU-led negotiations. In August 2016, the 12th round of negotiations ended without agreement on either a permanent ceasefire or a political roadmap.⁸ One of the main sticking points for the Sudan People's Liberation Movement-North (SPLM-N)—the political wing of the military movement—was the lifting of the blockade on cross-border humanitarian assistance. Sudan insists on humanitarian supplies being centralised through Khartoum in order to prevent the SPLM-N from using aid routes to resupply its forces.⁹

Heavy fighting in the Nuba Mountains between March and May 2016 enabled the SPLA-N to capture significant new weapons, vehicles, and other equipment from SAF and its affiliated militias. In June 2016, CAR documented substantial quantities of this and other captured materiel, including significant weapon stockpiles (Image 1).

Image 1
SPLA-N store in Mandi, June 2016.



ANALYSIS OF CAPTURED EQUIPMENT

This report covers materiel from seven different locations in the Nuba Mountains, including Dabbi, Heiban, Jeghaiba, Kauda, Mandi, Tabanya, and Um Serdiba (see Map 1). Documented materiel includes vehicles, tanks, heavy machine guns, rockets, mortars, and large quantities of small-calibre ammunition. Four locations—Dabbi, Heiban, Mandi, and Um Serdiba—had experienced heavy fighting in the weeks prior to documentation.

SPLA-N forces captured SAF equipment at various locations, which are identified in red in Map 1. These seizures occurred mainly during fighting that took place in March and May 2016, although CAR also documented materiel captured before this period. The SPLA-N typically seizes SAF weapons and ammunition through battlefield capture or by ambushing resupply convoys moving between SAF garrison towns, which are marked in blue on Map 1 (see page 6).

I. WEAPONS AND AMMUNITION

CAR documented a wide variety of weapon and ammunition types. Much of the materiel was consistent with existing baseline data on Sudanese stockpiles and comprised predominantly materiel of Sudanese and Chinese origins. CAR also documented some Soviet-era equipment that is likely to have been in circulation for some time. Previously undocumented materiel includes a

T-85 main battle tank and a Chinese anti-materiel rifle. The quantity of weapons and ammunition documented by CAR supports the SPLA-N's claims that it can equip its forces effectively by capturing materiel from SAF and government-backed militias—although this does not preclude external supply to the group.

Tanks

The SPLA-N regularly captures SAF tanks. In 2016, it seized two T-85 'al-Bashir' main battle tanks, which researchers have not previously documented either in the Nuba Mountains or elsewhere in Sudan (Image 2).¹⁰ While the reliability of international arms trade data is questionable, Sudan reportedly acquired 25 Chinese Type-85-IIM tanks, which closely resemble the 'al-Bashir', between 2002 and 2006.¹¹ The SPLA-N states that it captured the first 'al-Bashir' in Ngarto and the second in Shatt, South Kadugli. CAR inspected the tank recovered from Ngarto (Image 2), but was unable to inspect the second vehicle.

CAR also examined a number of captured T-72 and T-55 tanks, which are more commonly deployed by SAF (Images 3 and 4).¹² Over the last decade, Khartoum has routinely imported T-55 and T-72 models from several different countries, including Belarus, China, the Russian Federation, and Ukraine.¹³ In September 2016, media reports stated that the Russian Federation had agreed to sell Sudan 170 T-72s.¹⁴ While some Sudanese experts

suggest that Khartoum may have the capacity to assemble tanks domestically, it is unlikely to produce T-55 and T-72 models, given the number of tanks it imports every year.¹⁵ In addition, CAR documented captured Chinese-manufactured 125 mm ammunition produced in 2011 (Image 5), which is compatible with the smoothbore gun mounted on the T-85 model tank documented by CAR (Image 2).

OVER THE LAST DECADE, KHARTOUM HAS ROUTINELY IMPORTED T-55 AND T-72 MODELS FROM SEVERAL DIFFERENT COUNTRIES, INCLUDING BELARUS, CHINA, THE RUSSIAN FEDERATION, AND UKRAINE.

Image 2

T-85 'al-Bashir' main battle tank with 125 mm smoothbore gun reportedly captured in Ngarto in March 2016, documented in the Mandi sector, June 2016.

**Image 3**

T-72-pattern main battle tank documented in Um Serdiba, June 2016.



Image 4

T-55 main battle tank reportedly captured in Daldako in March 2013, documented in Um Serdiba, June 2016.



Image 5

Boxes of 125 mm Chinese-manufactured (2011) tank ammunition, documented in Jeghaiba, June 2016.



Chinese D30A howitzer

CAR documented one Chinese-manufactured D30A towed howitzer—a copy of the original Soviet model (Images 6 and 7). The SPLA-N captured the weapon, together with a Ural 4320 6 x 6 truck

(Image 8), in Abu Karshola in April 2013. Arms trade reports suggest that Sudan purchased 18 D30 howitzers from China in 1992.¹⁶

Images 6 and 7

Chinese-manufactured Factory 57 D30A 122 mm towed howitzer captured by the SPLA-N in Abu Karshola in April 2013, documented in Heiban, June 2016.



Image 8

Ural 4320 6 x 6 truck used to tow the D30A 122 mm howitzer, documented in Heiban, June 2016.



Machine guns and cannons

CAR documented several Sudanese-, Chinese-, and Russian Federation-manufactured machine guns and cannon, including PKM-pattern, DShK-pattern, and ZU-23-2 models (Images 9 to 11). The Sudanese version of the DShK is designated the 'Khawad', which is a copy of the Chinese-made

W-85 machine gun (Image 9). These machine guns are typically mounted on Toyota Land Cruiser and KIA 'technicals'. Mobile units on both sides of the conflict rely heavily on technicals, and the SPLA-N considers them a particularly important battlefield capture.

Image 9

Russian Federation-manufactured PKM 7.62 x 54R mm mounted machine gun, documented in the Mandi sector, June 2016.



Image 10

Sudanese-manufactured (2014) 12.7 x 108 mm 'Khawad' heavy machine gun with serial number 0570, documented in the Mandi sector, June 2016.



Image 11

ZU-23-2 23 x 152B mm cannon mounted on a Toyota Land Cruiser, documented in Um Serdiba, June 2016.



Rear view of a T-72M1 main battle tank documented in Um Serdiba, June 2016.

Sudanese-manufactured mortars

Sudan manufactures 60 mm, 82 mm, and 120 mm mortars (Images 12 to 17), which its forces regularly deploy on the battlefield. Similar mortars have been documented in the service of non-state armed groups in South Sudan and Côte d'Ivoire. For example, the mortars inspected by CAR in the Nuba Mountains bear serial numbers close to those of mortars previously documented by the Small Arms Survey in South Sudan, which the South Sudan Defence Forces—a former

Khartoum-aligned militia—surrendered to the South Sudanese government.¹⁷ The UN Group of Experts on Côte d'Ivoire also documented mortars with serial numbers within the same sequence in the service of former Forces nouvelles rebels in Côte d'Ivoire in 2015, providing further evidence of diverted Sudanese materiel in West Africa.¹⁸ The proximity of serial numbers suggests that all of the abovementioned mortars formed part of the same production batch.

Images 12, 13, 14, and 15

Two Sudanese-manufactured 60 mm 'Nimir' mortars with serial numbers 1102485463 (left) and 1102485401 (right), both documented in Mandi, June 2016.¹⁹



Image 16

Unidentified 82 mm mortar with serial number 951452 and a mismatched baseplate, documented in Mandi, June 2016. The baseplate is Sudanese-manufactured (2012).

**Image 17**

Sudanese-manufactured 120 mm 'Ahmed' mortar with corresponding baseplate manufactured in 2015, documented in Mandi, June 2016.



Anti-tank and anti-materiel weapon systems

Between 2011 and 2016, the SPLA-N captured a range of anti-tank and anti-materiel weapon systems, which it has been unable to redeploy on the battlefield. Some of the systems require specialised training and ammunition to which the group does not have access. The Small Arms Survey previously documented some of these weapon systems in the possession of the SPLA-N in 2012.

CAR documented a Russian Federation-manufactured ‘Kornet’ anti-tank guided missile system and one of four 9M133-1 missiles that were reportedly captured from SAF in March 2015 (Image 18). The missile system was equipped with a 9P163M-1 tripod launcher and 1P45M-1 optical sight. Arms trade reports suggest the Russian Federation exported 100 such systems to Sudan in 2012.²⁰

CAR also documented a Chinese-manufactured TF8HTEM anti-tank guided missile, which is employed in the HJ-8 ‘Red Arrow’ system (Images

19 to 21).²¹ Markings on the crate indicate that the missile was the eighth in an order of 350 missiles supplied to Sudan under contract number SUD090218A.²² Accompanying factory documentation suggests that China manufactured the missiles in January 2011.²³ The SPLA-N has not deployed the missile since its capture in 2012.

CAR documented a Sudanese-manufactured ‘Soba’ SPG-9 73 mm recoilless rifle, which is similar to Bulgarian and Iranian models (Image 22).²⁴ The Sudanese MIC displayed a ‘Soba’ weapon at the International Defence Exhibition (IDEX) Convention in Abu Dhabi, United Arab Emirates (UAE), in 2015. The design features of this weapon were identical to the weapon documented by CAR and distinguish it from Bulgarian and Iranian models of the SPG-9.²⁵

CAR also documented a Chinese-manufactured M99 anti-materiel rifle—the first documented battlefield deployment of this weapon in Sudan (Images 23 and 24).

Image 18

Russian-manufactured ‘Kornet’ anti-tank guided missile launch system (left) and 9M133-1 missile (right), reportedly captured in Genizia in March 2015, documented in Tabanya, June 2016.



Images 19, 20, and 21

Chinese-manufactured TF8HTEM anti-tank missile used with the HJ-8 'Red Arrow' anti-tank guided missile system, documented in Jeghaiba, June 2016.

**Image 22**

Sudanese-manufactured 'Soba' SPG-9 73 mm recoilless rifle, documented in Dabbi, June 2016.



Images 23 and 24

Chinese M99 12.7 x 108 mm anti-materiel rifle captured in Keiga on 10 May 2016, documented in the Mandi sector, June 2016. This is the first reported documentation of a rifle of this type in Sudan.

**Ammunition, rockets, and mortar rounds**

While captured weapons may remain in the custody of the SPLA-N for years at a time, captured ammunition is usually quickly used. CAR inspected various ammunition types, including Chinese-manufactured 7.62 x 54R mm and 12.7 x 108 mm cartridges; Sudanese-manufactured PG-7 and

OG-7 rockets (Images 25 to 27); and Sudanese-manufactured 60 mm, 82 mm, and 120 mm mortar rounds (Images 29 to 34). While CAR also documented Bulgarian, Chinese, and Soviet mortar rounds, the Sudanese-manufactured types were by far the most prevalent.

Sudanese and Chinese rockets

Sudan manufactures its own 107 mm rockets and has also imported rockets from other suppliers, including China. In Mandi, CAR documented a crate that from its markings originally contained Sudanese-manufactured 107 mm rockets, produced in Factory 115 (Images 25 to 27). The UN Group of Experts on Côte d'Ivoire previously documented identical Sudanese-manufactured 107 mm rockets, but manufactured in different years and with different production lots, among stocks of former Forces Nouvelles combatants in Korhogo, Côte d'Ivoire, in 2015.²⁶ CAR understands

that international forces also documented rockets of this type in Mali in 2016.²⁷

In Mandi, unknown actors had removed the Sudanese-manufactured rockets from their box and replaced them with two Chinese-manufactured (1988) 107 mm rockets and two Chinese MJ-1 point-detonating fuses (Image 28). A second identical crate contained 12.7 x 108 mm ammunition repackaged in black plastic bags (discussed below, Image 65).

Images 25, 26, and 27

Sudanese-manufactured (2014) Factory 115 OG-7 rocket, documented in Dabbi, June 2016.

**Image 28**

A crate containing two Chinese-manufactured (1988) 107 mm rockets and two Chinese MJ-1 point-detonating fuses in green containers, documented in the Mandi sector, June 2016.



Sudanese mortar rounds

CAR documented several Sudanese-manufactured 120 mm, 82 mm, and 60 mm mortar rounds in the Nuba Mountains (Images 29 to 34). These rounds included items manufactured as recently as 2016.

Past investigations have documented rounds of the same type in service with non-state armed groups in South Sudan and Côte d'Ivoire (discussed below, Images 65 to 68).²⁸

Images 29, 30, and 31

One of 15 boxes of Sudanese-manufactured (2015) Factory 116 120 mm mortar rounds with Chinese MP-11B fuses, documented in Jeghaiba, June 2016.



Images 32 and 33

Crate corresponding to Sudanese-manufactured (2016) Factory 116 82 mm mortar rounds from lot 2, documented in the Mandi sector, June 2016.

**Image 34**

Sudanese-manufactured (2014) Factory 116 60 mm mortar rounds from lot 4, captured in Keiga on 10 May 2016, documented in Mandi, June 2016.



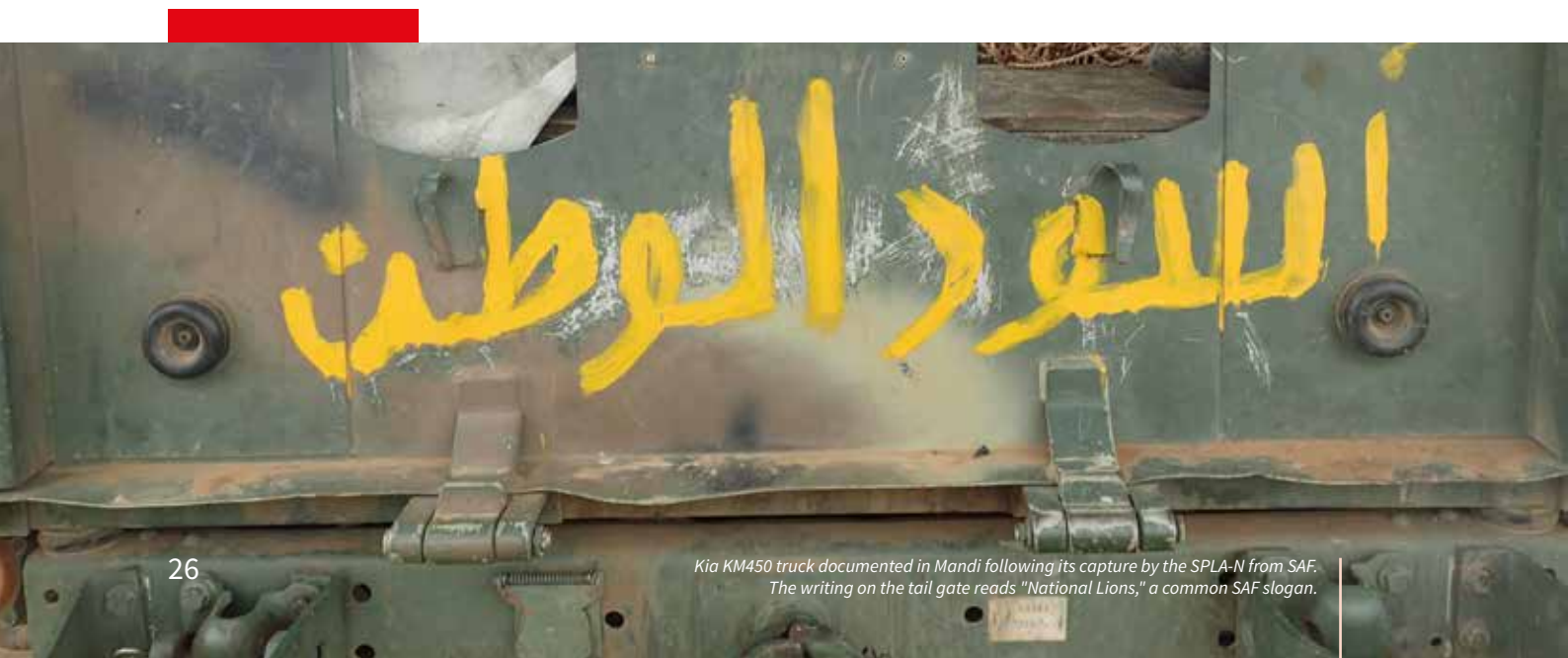
Repackaged Chinese 12.7 x 108 mm ammunition

China's Factory 41 manufactured the most common type of 12.7 x 108 mm ammunition documented by CAR (Images 35 and 36). Although its design and markings are consistent with Chinese production, its packaging—black plastic bags within wooden crates—is consistent with Sudanese packaging practices (Images 65 to 67, below). The production or assembly by Sudan of small-calibre ammunition with Chinese markings cannot be entirely ruled out. However, it is a near certainty that Sudan has simply repackaged

Chinese ammunition to conceal its origin. This practice would also accord with numerous past efforts by Sudan to conceal the origin of imported materiel—notably by painting ammunition boxes to obscure factory marks.²⁹ Systematically repackaging Chinese ammunition would not only hide the materiel's origin, but also mask violations by Sudan of its end-user agreements with China. In the past, these agreements have specifically prohibited the unauthorised retransfer of Chinese-supplied ammunition beyond Sudan's borders.³⁰

Images 35 and 36

Chinese-manufactured Factory 41 12.7 x 108 mm ammunition documented in Um Serdiba with headstamps 41_01 and 41_13, produced in 2001 and 2013, respectively. CAR documented cartridges from Factory 41 produced in 2001, 2007, 2010, 2012, 2013, and 2014 in Um Serdiba, Mandi, Heiban, and Dabbi, June 2016.



Shifting geopolitical alliances reflected in ammunition samples

The profile of foreign-supplied ammunition to Sudan can reveal shifts in geopolitical alliances and procurement trends. In previous years, Sudan was a significant supplier of Iranian ammunition to both state and non-state forces.³¹ During its mission

to the Nuba Mountains, however, CAR did not document any Iranian ammunition manufactured after 2010 (Images 37 to 39). This change may reflect a recognised shift away from Sudan's previous alliance with Iran.³²

Images 37 and 38

Iranian-manufactured 23 x 152B mm ammunition documented in Um Serdiba, with headstamps ص ر _069_06 and ص ر _069_10 , manufactured in 2006 and 2010, respectively.



Image 39

Iranian-manufactured 7.62 x 54R mm ammunition documented in Um Serdiba, with headstamp 7.62 x 54_00, manufactured in 2000.



CAR documented unmarked Ethiopian-manufactured 7.62 x 54R mm ammunition (Image 40), which is recognisable by its construction characteristics, including case composition, weight and dimensions, bullet shape, and primer annulus.³³ While the year of manufacture is unknown, Ethiopia's Homicho Ammunition Engineering Industry (HAEI) has previously acknowledged the sale of ammunition to both Sudan and South Sudan, despite longstanding tensions between Sudan and Ethiopia.³⁴

In addition, CAR documented Soviet-manufactured 7.62 x 39 mm ammunition with the headstamp 60_73 (Images 41 to 44), which appears to have been repackaged into white cardboard cartons and green crates with yellow stencilling that are consistent with Ethiopian arms industry packaging. Joint investigations by CAR and the Small Arms Survey previously documented similar ammunition in service with Khartoum-backed rebels in South Sudan in 2011, 2012, and 2013.³⁵

Image 40

Unmarked Ethiopian-manufactured 7.62 x 54R mm ammunition documented in Um Serdiba, June 2016.



Images 41, 42, 43, and 44

Soviet-manufactured 7.62 x 39 mm ammunition with headstamp 60_73 repackaged in white cardboard boxes and restencilled green crates consistent with Ethiopian industry standards, documented in Mandi, June 2016.



II. VEHICLES

Logistics vehicles are high-value military assets, whether specifically designed or modified for military use, or repurposed commercial models. Their supply chains often reveal wider modalities of illicit military procurement.

CAR documented vehicle identification numbers (VINs) from a range of captured vehicles in South Kordofan. These included Toyota Land Cruiser (Image 45) and KIA (Image 46) ‘technicals’, in addition to various brands of heavier vehicle, including DAF (Image 51), MAN (Images 47 and 48), and URAL (Image 8) 4 x 4 and 6 x 6 trucks. Some of these are specifically designed for military use, while others are commercial vehicles repurposed by SAF for military use. The trucks are of German, Dutch, Japanese, and South Korean manufacture. CAR’s investigations suggest that, from 2009 to 2014, a relatively small group of European and Middle Eastern suppliers exported most of the vehicles subsequently used by SAF. Although CAR has no evidence to suggest that the suppliers were aware prior to export of Sudan’s intention to use the vehicles for military purposes, there are several public reports on their subsequent use by

SAF.³⁶ As explained below, EU member states have interpreted the scope of the EU embargo on Sudan and the definition of ‘military vehicle’ differently. During 2015, the Netherlands and Germany each revised export regulations on heavy logistics vehicles, partly in response to the Sudanese procurement chains outlined below.

CAR also documented two additional trucks that the Sudanese GIAD Industrial Group probably assembled from parts: one Renault KERAX 6 x 6 model (Image 49) and one Chinese Shaanxi 6 x 6 vehicle (Image 50). Sudan has attempted to expand GIAD’s capacity to produce and assemble vehicles, despite several international measures designed to restrict the group’s military production capacity. In 2007, the United States placed the GIAD group on its sanctions list. Several European heavy-vehicle producers have also ended co-production agreements with the group. These latter measures responded to controversy over SAF’s use in Darfur of heavy vehicles that were originally provided by European suppliers as unassembled ‘knocked-down’ kits for subsequent assembly by GIAD.³⁷



Two captured Toyota Land Cruisers in Dabbi, June 2016.

TOYOTA STRICTLY PROHIBITS THE SALE OF VEHICLES TO POTENTIAL PURCHASERS WHO MAY USE OR MODIFY THEM FOR UNAUTHORISED MILITARY USE, AND HAS COOPERATED EXTENSIVELY WITH CAR.

Toyota Land Cruiser and KIA ‘technical’s

CAR documented 14 Toyota Land Cruisers and three KIA trucks that the SPLA-N had captured from SAF. SAF had modified some of these vehicles for military use, with the addition of PKM and DShK machine guns and ZU-23-2 cannon.

Toyota strictly prohibits the sale of vehicles to potential purchasers who may use or modify them for unauthorised military use, and has cooperated extensively with CAR.³⁸ In a rapid response to CAR’s requests to trace the VIN numbers, Toyota reported that it sold the 14 Land Cruisers to four different distributors between March 2009 and April 2014: Saud Bahwan Automotive LLC (Oman), Automotive & Machinery Trading Centre (Yemen), Abdul Latif Jameel Co. Ltd (Saudi Arabia), and Al-Futtaim Motors Co. LLC (UAE) (see Annex B).

Previous investigations by CAR, the Small Arms Survey, and the UN Panel of Experts on Sudan have identified all four vendors as the initial distributors in a supply chain leading to SAF.³⁹ Toyota vehicles originally supplied by the four firms and modified by SAF for military uses comprise a majority of captured Toyota vehicles documented following SAF offensives in Darfur and the Two Areas since 2009.⁴⁰

However, there is no evidence of direct supply by these distributors to SAF and none of the four distributors is located in Sudan.⁴¹ Following CAR’s requests for information, two of the distributors confirmed that they sold the vehicles to other UAE- and Saudi-based distributors or to private citizens, including the sale of one vehicle to a US citizen of Sudanese origin (Image 45 and Annex B).⁴²

CAR continues to investigate these supply chains. Their consistency over several years and the centrality of a small group of foreign distributors demonstrate the potential for supply restrictions to prevent SAF’s exploitation of ostensibly commercial exports. The growing volume of publicly available information on the origins of these vehicles arguably makes the exercise of due diligence by major vehicle manufacturers and regional suppliers much easier.

Of the three KIA trucks documented by CAR, two had illegible VINs. CAR sent a trace request, including the VIN number and date of manufacture (2011) of the third truck, to the KIA Motor Corporation. KIA did not respond to this request.

Local production and assembly of heavy trucks

The SPLA-N recently captured a number of trucks that GIAD may have assembled under licence, including a Renault KERAX 6 x 6 truck (Image 49) and two MAN trucks carrying the ‘GIAD’ acronym on the cab door (Image 47).⁴³ There is no indication that these were built from kits and components recently supplied to Sudan.

GIAD’s current capacity to import and assemble heavy trucks from knocked-down kits is unclear. In 2005, GIAD reportedly signed a contract with the MAN Company for the supply of such kits. MAN subsequently suspended its relationship with GIAD in April 2007 after the UN Panel of Experts on Sudan identified MAN trucks in military service in Darfur. One of these trucks, which had been

assembled in Khartoum, was fitted with quad-mounted 23 mm cannon.⁴⁴

CAR also documented one Shaanxi (aka ‘Shacman’) SX2190 6 x 6 truck (Image 50) that Sudanese companies may have assembled from imported Chinese parts. A website ostensibly operated by the Shaanxi Heavy Duty Truck Company claims that the company won a contract to supply the ‘Military of Sudan’ on an unspecified date.⁴⁵ A second website, which appears to be that of the Shaanxi Automobile Group Co. Ltd claims that the company had established ‘localization production’ in Sudan, among other countries.⁴⁶ Shaanxi Automobile Group Co. did not respond to CAR’s request to trace the truck.

EU exports of dual-purpose trucks

Despite an EU arms embargo on Sudan that has been in force since 1994 and covers arms, military vehicles, and related materiel of all types, SAF has acquired European-manufactured heavy logistics trucks as recently as 2014.

Controversy over SAF's use of GIAD-assembled European trucks in its Darfur operations, coupled with political pressure following the US sanctioning of GIAD in May 2007, effectively ended MAN's and Renault's cooperation with GIAD, in 2007 and 2008 respectively. However, in 2012, investigations by the Small Arms Survey revealed that Khartoum had nonetheless acquired a large number of surplus MAN military trucks through a Dutch vehicle export company, Van Vliet Handelsonderneming BV, between 2010 and 2012. Van Vliet supplied the trucks to a Sudanese company, Concept Developments Co. Ltd, which shares the same Khartoum address as GIAD Investments, a GIAD subsidiary (see Annex B).⁴⁷ CAR also documented similar MAN military trucks that Van Vliet sold to Concept Developments Co. Ltd, and which SAF subsequently re-exported to Séléka rebel forces in the Central African Republic (Image 53).⁴⁸

CAR has since determined that the supply of Van Vliet trucks to SAF continued until at least late 2014, despite researchers and the Dutch government itself having notified the company in 2012 that its vehicles had been identified in military use in Sudan.⁴⁹

In South Kordofan, CAR inspected three DAF trucks that the SPLM-N had captured from SAF during 2016 (Image 51). The Dutch government confirmed to CAR that Van Vliet exported the three vehicles as part of larger shipments made between January 2012 and December 2014. The last shipment of 50 DAF YA4440 military trucks which CAR has identified left the port of Amsterdam on 17 December 2014, bound for Port Sudan and consigned to an ostensibly civilian Sudanese company, Harees International Group Ltd.⁵⁰ The Dutch government reports that the consignment was intended to provide Harees with a fleet of trucks for a planned rubbish collection service in Khartoum and did not require a Dutch export licence, because the Dutch government deemed that the trucks' military features had been removed prior to export (see Annex B).⁵¹



Data plate from a Dutch-manufactured DAF YA4440 DT 405 truck documented in Dabbi following its reported capture from SAF in March 2016.

According to the Dutch government, in light of previous research revealing the diversion of Van Vliet trucks in Sudan, Van Vliet had sought the advice and permission of the Dutch government prior to exporting these ‘rubbish collection’ trucks to Harees International Group Ltd, despite the Dutch government not formally requiring an export licence. The Dutch government gave its consent ‘on condition that the cabins would be repainted and Harees International Group LTD would send confirmation of their use in the garbage collection’.⁵² Harees International Group subsequently provided the Dutch exporter with photographs of one DAF 1800/YA4440 truck—of indeterminate chassis number—ostensibly collecting rubbish (see Annex B).⁵³

CAR’s investigations prove that Sudan repurposed at least one of these trucks for military use, and deployed it in South Kordofan. While there is no evidence that Van Vliet knew that these vehicles were destined for such a role, the Government of

Sudan has clearly continued to exploit commercial supply lines to repurpose vehicles for military use.

As a result of previous investigations, the Dutch government revised its export rules to improve oversight over the end use of exported vehicles. Individual export licences are now required to supply military-adapted vehicles to Sudan, in line with the policy of the German government.⁵⁴ For vehicles that are licensable, the approval or denial of export licences will depend on the due diligence of the Dutch government and exporting companies regarding the end use of the vehicles. These export controls remain based on the vehicles’ specific technical features, rather than their suitability for military use and the prior track record of the exporter and consignee. For instance, a 4 x 4 DAF YA4440 heavy truck of the kind used by SAF does not require a Dutch export licence for export to Sudan, while types of MAN heavy trucks also used by SAF now require export licences on the basis that their cab size is adapted for rail transport.⁵⁵

Image 45

Toyota Land Cruiser ‘technical’ mounted with a DShK-pattern machine gun, documented in Heiban in June 2016, following its reported capture in December 2015. This particular vehicle was sold to a US citizen of Sudanese origin, according to the records provided by the Oman-based distributor.



Image 46

KIA 'technical' mounted with a ZU-23-2 cannon, documented in Mandi, June 2016.

**Image 47**

Locally assembled MAN truck with the 'GIAD' acronym on the cab door, documented by the SPLA-N in Kodi, December 2015.



Image 48

German-manufactured MAN KAT-1 6 x 6 truck, documented by the SPLA-N in Kodi, December 2015.



Image 49

Renault KERAX 6 x 6 truck, documented in Heiban, June 2016.



Image 50

Chinese Shaanxi (aka 'Shacman') SX2190 6 x 6 truck, documented in Mandi, June 2016.

**Image 51**

Dutch-manufactured DAF type YA4440 DT 405 truck, documented in Dabbi following its reported capture in Agab on 30 March 2016.



Images 52 and 53

(Top) Van Vliet export sticker on a DAF truck reportedly captured by the SPLA-N in Agab. (Bottom) For comparison, Van Vliet export sticker on a MAN truck documented by CAR on 24 August 2014 while in the custody of Séléka rebel forces cantoned in Bangui, Central African Republic.



III. AIR ASSETS AND CAPABILITIES

Sudan has deployed aircraft, air-delivered munitions, and UAVs as part of its operations in the Nuba Mountains. Although it possesses relatively sophisticated ground-attack aircraft, the Sudanese Air Force continues to use unguided bombs—both improvised and factory produced—in most of its aerial attacks. SAF's aerial bombardment campaigns often indiscriminately bomb civilian areas, including hospitals, schools, and farmland. These attacks have not substantially degraded the SPLA-N's military capabilities, but rather serve to disrupt the everyday lives and security of civilians in SPLA-N-controlled areas.

SAF operates from two airbases in the region: one in Kadugli, South Kordofan, and another in El Obeid, the capital of North Kordofan state. From these airbases, SAF deploys Sukhoi-25 close air support and MiG-29 fighter aircraft, Mi-24/35 helicopter gunships, and Antonov-12, -26, and -32 fixed-wing transport aircraft. SAF uses Antonov

aircraft and fighter jets to carry out high-altitude aerial attacks.

SAF's Antonov transport aircraft, in particular, often carry out bombing raids that, due to their high altitude and the rudimentary bombs used, are often indiscriminate. In addition, Sudan also employs Sukhoi-25 jet aircraft and Mi-24/35 helicopters for air-to-ground rocket attacks. Since 2014, Sudan has also deployed Sukhoi-24 ground-attack aircraft, which it acquired from Belarus in 2013, to deliver parachute-retarded bombs in South Kordofan, which are designed for low-altitude bombing.⁵⁶

In June 2016, CAR visited a number of unexploded ordnance (UXO) sites where Chinese- and Soviet-manufactured unguided bombs had failed to explode (Images 54 and 55). CAR also documented two recently captured UAVs.



Children play with a Chinese-manufactured DB-2 UAV shot down by the SPLA-N in Heiban, June 2016.

SAF'S ANTONOV TRANSPORT AIRCRAFT, IN PARTICULAR, OFTEN CARRY OUT BOMBING RAIDS THAT, DUE TO THEIR HIGH ALTITUDE AND THE RUDIMENTARY BOMBS USED, ARE OFTEN INDISCRIMINATE.

Documentation of UXO

CAR documented five unexploded aircraft bombs (Images 56 to 59), three within 100 metres of the Kauda Medical Centre, including one that landed just a few metres from the building (Image 56). The bombs appeared to be 1990s-manufactured general-purpose aircraft bombs—two with parachute tail attachments designed for low-altitude bombing (Images 57 and 58), reportedly dropped during attacks in May 2014, and one without a parachute. The local reporting

organisation Nuba Reports claims that Sudanese aircraft dropped more than 55 bombs on Kauda during a four-day bombing campaign allegedly targeting non-governmental organisations, schools, and medical facilities.⁵⁷

Sudan has denied access to civilian UXO teams in order for them to conduct safe disposal activities.⁵⁸ As a result, some UXO has remained on the ground for more than two years.

Image 54

Segment of a Chinese WS-1 'Weishi' 302 mm artillery rocket documented in Tabanya, June 2016.



Image 55

Soviet-manufactured OFAB-500ShR (500 kg) parachute-retarded bomb documented in Tabanya, June 2016.



Image 56

Unidentified general-purpose bomb with a low-altitude parachute tail documented at the Kauda Medical Centre, June 2016.



Images 57 and 58

Unidentified general-purpose bomb with a low-altitude parachute tail documented at the Kauda Medical Centre, June 2016.



Image 59

Unidentified aircraft bomb documented at the Kauda Medical Centre, June 2016. Note the intact fuse/failure to detonate.



Civilian-market UAVs

In addition to manned aircraft, SAF routinely deploys UAVs for reconnaissance. CAR inspected two captured UAVs in SPLA-N custody. The SPLA-N allegedly shot down one of these aircraft in Heiban in March 2016 (Image 60), and captured another close to Tabanya, in Abri, in 2014 (Image 61). Unlike the Iranian UAVs that investigators have previously documented in SAF's inventory,⁵⁹ both appear to be of Chinese manufacture, were intended for the civilian market, and employ commercial cameras (Images 63 and 64). This commercial supply line

may be less vulnerable to external diplomatic pressure than the acquisition of exclusively military UAVs.

CAR inspected two 'DB-2' commercial aerial surveillance models manufactured by the Chinese company DB UAV. The company states on its website that the DB-2 model has a cruising speed of between 100 and 110 km/h and a battery life of three hours.

Image 60

DB-2 UAV shot down on 15 March 2016, documented in Heiban, June 2016.



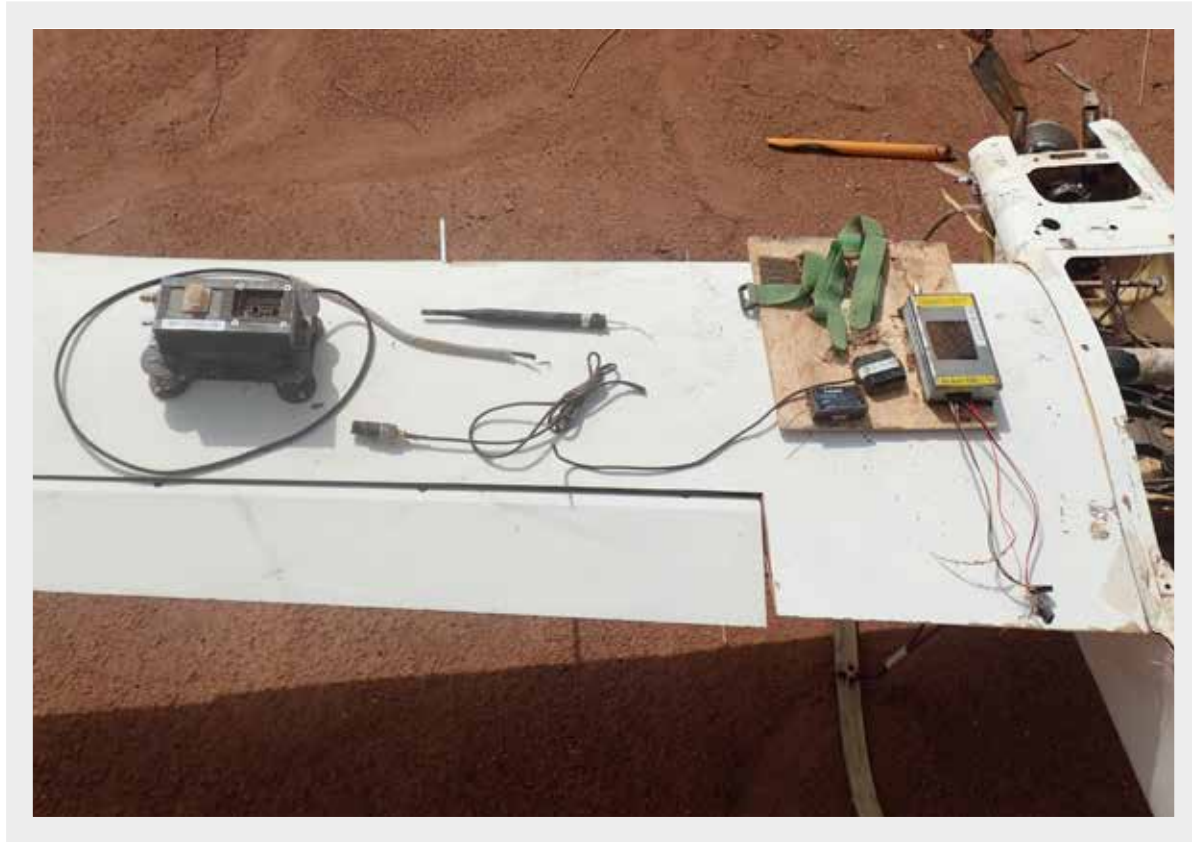
Image 61

DB-2 UAV captured in Abri in 2014, documented in Tabanya, June 2016.



Image 62

Components from a UAV captured in Abri in 2014, documented in Tabanya, June 2016.



Images 63 and 64

Canon EOS 5D camera carried by the DB-2 UAV captured in Abri in 2014, documented in Tabanya, June 2016.



SUDANESE DOMESTIC PRODUCTION CAPACITY

Over the past two decades, Sudan has sought to expand its own domestic production and assembly of military equipment under the state-owned MIC and its subsidiaries, including the Yarmouk production plant.⁶⁰ This expansion, which has accelerated substantially in the past ten years, is evident internationally in two ways.

Firstly, the MIC has made a concerted effort to market Sudanese-manufactured weapons—or weapons claimed by Sudan to be of Sudanese manufacture (see below)—through online marketing, printed export brochures, and successive participation in at least one major defence exhibition.⁶¹ The MIC's military equipment is largely based on Bulgarian, Chinese, Iranian, and Soviet models. It includes, but is not limited to, 60 mm, 82 mm, and 120 mm mortar bombs (Bulgarian-pattern), 107 mm rockets (Iranian-pattern), 'A30' RPG-7-pattern rocket launchers (Bulgarian-pattern), heavy machine guns (Chinese-pattern), and a variety of small-calibre ammunition types.

Secondly, there is a growing record of confirmed Sudanese-manufactured weapons and ammunition both in circulation with Sudan-backed non-state forces and legally transferred to other national governments. Since 2014, CAR has documented increasing numbers of recently manufactured Sudanese weapons and ammunition that have been recovered from non-state armed groups in South Sudan, the Central African Republic, Libya, and Syria.⁶² CAR has also documented Sudanese-manufactured weapons and ammunition that Khartoum has legally supplied to the governments of Djibouti, the Democratic Republic of the Congo (DRC), and Somalia.⁶³

Despite the existence of a UN arms embargo on Darfur, an EU arms embargo on Sudan, and US sanctions,⁶⁴ Sudan has managed to achieve sustained growth in its defence production sector. The MIC also continues to access civilian and dual-purpose components from commercial suppliers in Asia, the Middle East, and Europe.⁶⁵



Sudanese-manufactured 120 mm mortar bombs in grey wooden crates documented in Jeghaiba, June 2016.

REPACKAGING OF CHINESE AMMUNITION

Despite the expansion of its domestic production capacity, Sudan continues to rely on imports of ammunition calibres that are larger than 7.62 x 54R mm to resupply its forces, mainly from China.

In June 2016, CAR documented large quantities of Chinese 12.7 x 108 mm ammunition that had been repackaged into black plastic bags and wooden crates that are consistent with Sudanese packaging. The repackaging of Chinese ammunition has been common in Sudan since UN Security Council weapon monitors first documented the practice in Darfur in the late 2000s.⁶⁶ While this does not preclude domestic Sudanese production, the quality and headstamp design are consistent with known Chinese production standards.

There may be occasional logistical imperatives to repackage ammunition: for example, when loose ammunition has been issued to individual troops and later needs to be stored. However, measures such as this would be ad hoc and small in scale—usually employed by unit-level armouries. The sheer number of examples of Sudanese-supplied, repackaged Chinese ammunition—observed by

CAR in the Nuba Mountains, South Sudan, the Central African Republic, Côte d'Ivoire, the DRC, and Somalia—suggests this is not the case.

Moreover, there are clear reasons why repackaging would negatively affect the performance of ammunition. Chinese ammunition is factory packed into metal tins that seal the materiel from exposure to water and prevent excessive movement (and abrasion) during transport. The repackaged ammunition, by contrast, has been transferred loose into black polyethylene bags, which are then heat sealed and packed in wooden crates. The ammunition can move freely in the bags and would consequently be more vulnerable to damage during harsh movement or impact.

Together with repackaged ammunition, CAR has also documented other measures to conceal the provenance of both weapons and ammunition supplied by Sudan to a variety of non-state armed groups. These measures include grinding to remove weapon serial numbers and the application of black paint to mask shipping information on ammunition boxes (Images 74 to 77).



Given these factors, the most obvious reason for repackaging is to conceal violations of Sudan's end-user agreements with suppliers, including China.⁶⁷ Removing Chinese ammunition from its factory packaging conceals both consignor and consignee information, masking the materiel's provenance from a casual inspection.

Such efforts may also conceal irregularities in military contracting and procurement, including domestic production capacity. At the 2015 IDEX in Abu Dhabi, UAE, for example, Sudan's MIC

displayed a range of 'domestic' products that included unattributed Chinese ammunition.⁶⁸ The MIC did so again at the 2017 IDEX fair.⁶⁹ These claims may simply be aspirational and intended to bolster the image of Sudan's arms industry. The quality of the ammunition on display was consistent with known Chinese production standards. The headstamp design on such ammunition, although marketed as MIC-produced materiel, was also consistent with ammunition of Chinese manufacture and distinct from that of Sudan.

Images 65 and 66

Chinese-manufactured 12.7 x 108 mm ammunition with the headstamp 41_14 repackaged into Sudanese wooden crates, documented in Mandi, June 2016.



Image 67

Chinese-manufactured 12.7 x 108 mm ammunition with the headstamp 41_14 in black plastic bags. CAR documented the crate, which previously contained Sudanese 107 mm rockets, in Mandi, June 2016.



DIVERSION OF SUDANESE MATERIEL TO NON-STATE FORCES IN SOUTH SUDAN AND CÔTE D'IVOIRE

The materiel documented in the Nuba Mountains in some cases matched equipment captured from non-state forces in South Sudan and Côte d'Ivoire, including marked and unmarked Sudanese-manufactured mortar rounds and Chinese-manufactured 12.7 x 108 mm ammunition. These findings provide further evidence of illicit diversion

by Sudan of both domestically manufactured and foreign-made items. The onward supply or diversion of Chinese ammunition may be in violation of Sudan's end-user conditions with China, specifically non-retransfer clauses contained in arms purchasing agreements previously documented by UN arms monitoring groups.⁷⁰

Mortar rounds supplied to non-state forces in South Sudan and Côte d'Ivoire

CAR has documented identical Sudanese-manufactured mortar rounds in South Kordofan, South Sudan, and Côte d'Ivoire (Images 68 and 70). In South Sudan, the SPLA 4th Division had captured the rounds from the SPLA-iO in Panakuach, Unity state, in June 2015. CAR

inspected the captured materiel at the 4th Division headquarters in Rubkona, Unity state, in May 2016. During the inspection, CAR's field investigation teams documented both marked (Image 68) and unmarked rounds (Image 69).

Image 68

Sudanese-manufactured 60 mm mortar rounds inspected in the custody of the SPLA 4th Division, Rubkona, South Sudan, May 2016.



Image 69

Unmarked Sudanese-manufactured 60 mm mortar rounds inspected in the custody of the SPLA 4th Division, Rubkona, South Sudan, May 2016.



In 2015, the UN Group of Experts on Côte d'Ivoire documented identical, although older, 60 mm mortar rounds in the possession of the former Forces Nouvelles rebel group (Image 70).⁷¹ During its inspection, the Group of Experts found

ammunition packed into grey-painted and unmarked crates that were identical to those inspected in Rubkona. A quality-control certificate in one of the crates further confirmed Sudanese manufacture (Image 71).



Soviet-manufactured tins containing 12.7 x 108 mm ammunition documented in Mandi, June 2016

Image 70

Sudanese-manufactured 60 mm mortar rounds inspected while in the possession of former Forces nouvelles rebels in northern Côte d'Ivoire by the Group of Experts on Côte d'Ivoire in 2015.⁷²



Image 71

Quality-control certificate found in one of the boxes of 60 mm mortar rounds (batch number 3 of the 2008-produced lot) inspected by the Group of Experts on Côte d'Ivoire.⁷³



Ammunition supplied to the SPLA-iO in South Sudan

In addition to the Sudanese mortar rounds documented in South Sudan and Côte d'Ivoire, CAR also documented 1,422 boxes of Chinese ammunition that the SPLA alleges Sudan's National Intelligence and Security Service (NISS) supplied to the SPLA-iO (Image 79). CAR inspected 190 boxes of 7.62 x 54R mm ammunition (Image 72), 1,117 sealed boxes of 12.7 x 108 mm API ammunition (Images 74 and 75), 77 sealed boxes of 14.5 x 114 mm ammunition (Images 76 and 77), and 38 boxes of 23 x 152 mm HEI ammunition (Image 78) at the SPLA 4th Division headquarters in Rubkona, Unity state, South Sudan, in May

2016.⁷⁴ The materiel was reportedly captured from SPLA-iO forces in Panakuach, Unity state, in June 2015. The ammunition was manufactured between 1978 and 2014. Despite the application of black paint to conceal obvious indicators of manufacturer and recipient, the information on one of the boxes (of 1978-manufacture 12.7 x 108 mm ammunition) was clearly visible, indicating that the intended consignee was Sudan's NISS (Image 73). The headstamp codes and designs of the other ammunition types are also consistent with Chinese manufacture.

Image 72

7.62 x 54R mm round. '945' identifies Chinese State Factory 945 as the manufacturer, '14' indicates the year of manufacture (2014).⁷⁵



Image 73

Left side of 12.7 x 108 mm ammunition box showing (light) over-painting, documented in Rubkona, Unity state, South Sudan, May 2016.



The inscription visible on the box (Image 73) reads:

14/0060

Description of Goods: 12.7 x 108mm API Cartridge

Qty per case: 170 PCS Dimension: 465 x 33?X147mm

Gross Weight: 2?KGS Case N°: 3999/5883

Destination Port: Port of Sudan

Importer: National Intelligence & Security Service

Image 74

12.7 x 108 mm ammunition captured from the SPLA-iO and examined at the SPLA 4th Division headquarters in Rubkona, Unity state, South Sudan, in May 2016.



THE ONWARD SUPPLY OR DIVERSION OF CHINESE AMMUNITION MAY BE IN VIOLATION OF SUDAN'S END-USER CONDITIONS WITH CHINA, SPECIFICALLY NON-RETRANSFER CLAUSES.

Image 75

Headstamp of 12.7 x 108 mm API round. '41' identifies Chinese State Factory 41 as the manufacturer, '78' indicates the year of manufacture (1978).



Image 76

14.5 x 114 mm ammunition crates captured from the SPLA-iO and documented at the SPLA 4th Division headquarters in Rubkona, Unity state, South Sudan, in May 2016. The boxes contained ammunition manufactured in 2013.



Image 77

14.5 x 114 mm round from crates in Image 76. '11' identifies Chinese State Factory 11 as the manufacturer, '13' indicates the year of manufacture (2013).



Image 78

Tin containing 23 x 152 mm HEI ammunition documented at the SPLA 4th Division headquarters in Rubkona, Unity state, South Sudan, in May 2016. '11' identifies Chinese State Factory 11 as the manufacturer, '14' indicates the year of manufacture (2014). '04' is the lot number.

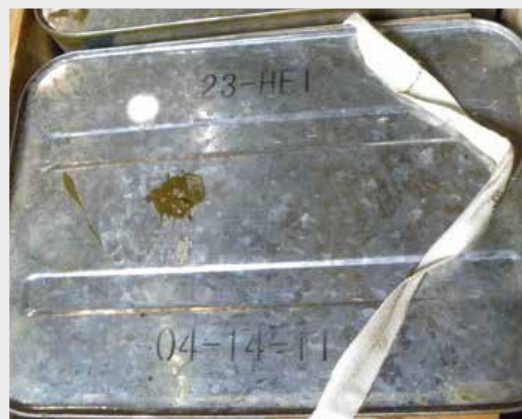


Image 79

Material captured from the SPLA-iO and documented at the SPLA 4th Division headquarters in Rubkona, Unity state, South Sudan, in May 2016. The tins of 23 x 152 mm HEI ammunition (Image 78) are visible on the far left.



CONCLUSIONS

Despite the current South Kordofan ceasefire, evidence contained in this report suggests that longstanding patterns of behaviour by Sudanese forces continue to challenge arms control and conflict resolution efforts in the region. This includes (i) Sudan's efforts to conceal the provenance of imported ammunition; (ii) the illicit supply of military equipment to non-state armed groups; and (iii) the exploitation of commercial supply lines for military procurement purposes.

CAR's investigations reveal that, while the composition of SAF stockpiles has remained relatively unchanged over time, Sudan continues to expand its domestic production and assembly capabilities under the MIC and GIAD Industrial Group state-owned entities. The military exploitation of commercial supply lines to access dual-use and military equipment highlights the limitations of arms embargo restrictions and failures on the part of suppliers to adequately enforce due-diligence standards.

Similarly, the issue of Sudanese diversion of weapons and ammunition to non-state armed groups, particularly of newly imported Chinese ammunition, raises serious questions about Sudan's compliance with end-user conditions—specifically non-retransfer clauses contained in its agreements with China.

Efforts to conceal the origin of Chinese ammunition may also obscure irregularities in military contracting and procurement, notably Sudanese domestic production capacity. At the 2015 and 2017 IDEX arms conventions in the UAE, Sudan displayed ammunition with Chinese factory codes marketed as domestically manufactured by Sudan. Whether Sudan manufactures these items

or not, China should at the very least oblige Sudan to change the headstamp design, which currently identifies the ammunition as Chinese.

Continuing to 'share' headstamps is particularly problematic in light of evidence of the systematic diversion of Chinese ammunition to non-state armed groups. Over the past 24 months, CAR and other investigators have documented weapons and ammunition originating in Sudanese stocks—including imported Chinese ammunition in its original, sealed boxes—in the possession of non-state armed groups in the Central African Republic, Côte d'Ivoire, the DRC, Libya, Mali, Niger, and South Sudan. In some cases, this materiel was manufactured or imported just months before its diversion.

Sudan's domestic production capacity has also expanded over the past decade, allowing it to sell weapons and ammunition on the commercial market, and supply its own materiel to non-state armed groups: including mortar rounds of recent Sudanese manufacture found in the possession of non-state armed groups in South Sudan and Côte d'Ivoire.⁷⁶ Sudanese-manufactured mortars, mortar rounds, and machine guns are largely based on Chinese, Iranian, and Bulgarian designs.

Finally, SAF has continued to acquire dual-purpose trucks of European manufacture through successive civilian front companies in Sudan, despite an EU arms embargo and the exposure of this supply route in 2013. These findings illustrate inadequate due-diligence measures resulting in exporters' continuing to export dual-purpose materiel to Sudan despite evidence that it is rapidly diverted and converted to military use.

THE MILITARY EXPLOITATION OF COMMERCIAL SUPPLY LINES TO ACCESS DUAL-USE AND MILITARY EQUIPMENT HIGHLIGHTS THE LIMITATIONS OF ARMS EMBARGO RESTRICTIONS AND FAILURES ON THE PART OF SUPPLIERS TO ADEQUATELY ENFORCE DUE-DILIGENCE STANDARDS.

ANNEX A

TABLES OF INSPECTED WEAPONS, AMMUNITION, AND VEHICLES BY TYPE

MACHINE GUNS AND CANNON

Type/calibre	Country of manufacture	Quantity	Location	Notes
M80 7.62 x 54R mm	China	3	Dabbi, Heiban	Sometimes mounted on Toyota Land Cruisers
PKM 7.62 x 54R mm	Soviet Union	2	Mandi, Um Serdiba	Sometimes mounted on Toyota Land Cruisers
'Khawad' 12.7 x 108 mm	Sudan	10	Dabbi, Heiban, Mandi, Um Serdiba	Sudanese copy of Chinese W-85 machine gun sometimes mounted on Toyota Land Cruisers
Type-54 12.7 x 108 mm	China	1	Heiban	
Type-85 12.7 x 108 mm	China	1	Mandi	Captured with 'al-Bashir' tank
ZU-23-2 23 x 152 mm	Soviet Union	3	Mandi, Um Serdiba	Mounted on Toyota Land Cruisers and KIA KM 450

SMALL ARMS AND LIGHT WEAPONS

Type/calibre	Country of manufacture	Quantity	Location	Notes
12.7 x 108 mm anti-materiel sniper rifle, M99	China	1	Mandi	First time documented in South Kordofan
35 mm automatic grenade launcher, QLZ 87	China	1	Jeghaiba	Same weapon (141807) documented by Small Arms Survey in 2012
RPG-7-pattern launcher	Iran	2	Heiban, Dabbi	Markings scratched off and new serial number applied
RPG-7-pattern launcher, 'Sinnar'	Sudan	1	Mandi	
60 mm mortar 'Nimir'	Sudan	3	Mandi, Dabbi	
60 mm mortar, Type-31	China	1	Mandi	
73 mm recoilless gun, SPG-9 'Soba'	Sudan	1	Dabbi	Identical to SPG-9s advertised by MIC at IDEX in 2015
81/82 mm mortar, (possibly W87 81 mm mortar)	China (possible)	1	Dabbi	Unidentified mortar tube paired with base plate marked '81 mm'
82 mm mortar, unknown	China (possible)	1	Mandi	Unidentified mortar tube paired with Sudanese base plate
120 mm mortar 'Ahmed'	Sudan	1	Mandi	
Anti-tank guided missile system, 'Kornet'	Russia	1	Tabanya	One of four 9M133-1 missiles captured with 9P163M-1 tripod launcher and 1P45M-1 optical sight
Anti-tank guided missile, TF8HTEM 'Red Arrow'	China	1	Jeghaiba	One missile captured without tripod launcher
Anti-tank mine, TMRP-6	Former Yugoslavia	1	Dabbi	

SMALL-CALIBRE AND CANNON AMMUNITION

Calibre	Headstamp	Country of manufacture	Date of manufacture	Location
7.62 x 39 mm	15_40	–	–	Dabbi
7.62 x 39 mm	60_73	Soviet Union	1973	Mandi
7.62 x 54R mm	10_75	Bulgaria	1975	Um Serdiba
7.62 x 54R mm	60_73	Soviet Union	1973	Mandi
7.62 x 54R mm	60_87	Soviet Union	1987	Heiban
7.62 x 54R mm	61_11	China	2011	Dabbi
7.62 x 54R mm	61_78	China	1978	Um Serdiba
7.62 x 54R mm	7.62 x 54_00	Iran	2000	Um Serdiba
7.62 x 54R mm	71_99	China	1999	Um Serdiba
7.62 x 54R mm	811_14	China	2014	Mandi
7.62 x 54R mm	945_10	China	2010	Dabbi, Mandi
7.62 x 54R mm	945_12	China	2012	Dabbi
7.62 x 54R mm	945_13	China	2013	Dabbi
7.62 x 54R mm	No headstamp	Ethiopia	Unknown	Um Serdiba
12.7 x 108 mm	۷۱ _ دفاع _ سازمان	Iran	1971	Dabbi
12.7 x 108 mm	۷۳_۷۳_۱۲۰۷	Sudan	1973	Dabbi
12.7 x 108 mm	*_188_*_79	Soviet Union	1979	Dabbi, Um Serdiba
12.7 x 108 mm	*_3_*_79	Soviet Union	1979	Dabbi
12.7 x 108 mm	11_10	China	2010	Dabbi, Heiban, Mandi
12.7 x 108 mm	12.7_98	Iran	1998	Dabbi, Um Serdiba
12.7 x 108 mm	3_85	Soviet Union	1985	Dabbi

Table Continues >

SMALL-CALIBRE AND CANNON AMMUNITION (CONTD)

Calibre	Headstamp	Country of manufacture	Date of manufacture	Location
12.7 x 108 mm	41_01	China	2001	Mandi, Um Serdiba
12.7 x 108 mm	41_07	China	2007	Dabbi, Mandi
12.7 x 108 mm	41_10	China	2010	Dabbi, Mandi
12.7 x 108 mm	41_12	China	2012	Heiban
12.7 x 108 mm	41_13	China	2013	Dabbi, Heiban, Mandi, Um Serdiba
12.7 x 108 mm	41_14	China	2014	Heiban, Mandi
12.7 x 108 mm	IK_88	Yugoslavia	1988	Dabbi
23 x 152B mm	ص ر _069 _033	Iran	Unknown	Um Serdiba
23 x 152B mm	ص ر _069 _06	Iran	Unknown	Um Serdiba
23 x 152B mm	ص ر _069 _09	Iran	Unknown	Um Serdiba
23 x 152B mm	ص ر _069 _10	Iran	Unknown	Um Serdiba
23 x 152B mm	_80	Soviet Union	1980	Um Serdiba
23 x 152B mm	*_88	Bulgaria	1988	Um Serdiba
23 x 152B mm	*_88.	Bulgaria	1988	Um Serdiba
23 x 152B mm	10*_82	Bulgaria	1982	Um Serdiba
23 x 152B mm	10_Δ_82	Bulgaria	1982	Um Serdiba

MEDIUM- AND LARGE-CALIBRE AMMUNITION

Type/calibre	Lot/serial no.	Country of manufacture	Quantity	Location
OG-7 rocket, 40 mm	??-15-115	Sudan	1 rocket	Mandi
OG-7 rocket, 40 mm	05-15-115	Sudan	1 rocket	Dabbi
OG-7 rocket, 40 mm	–	Sudan (probable)	1 rocket	Dabbi
OG-7 rocket, 40 mm	06-14-115	Sudan	1 rocket	Dabbi
PG-7 rocket, 40 mm	101-01-10	Sudan	1 rocket	Mandi
PG-7 rocket, 40 mm	((11))-13-88	Bulgaria	1 rocket	Dabbi
PG-7 rocket, 40 mm	–	Sudan*	1 rocket	Dabbi
PG-7 rocket, 40 mm	–	Unknown*	4 rockets	Dabbi
PG-7 rocket, 40 mm	–	Sudan (probable)*	1 rocket	Dabbi
PG-7 rocket, 40 mm	101-02-15	Sudan	1 rocket	Dabbi
DZT02-40 thermobaric rocket, 40 mm	1-12-2?	China	1 rocket	Dabbi
High-explosive incendiary rocket, 40 mm	?-14-23	China	1 rocket	Dabbi
M302 WP smoke mortar round, 60 mm	–	US	1 round	Dabbi
M83 illumination mortar round, 60 mm	–	US	1 round	Dabbi
Mortar round, 60 mm	04-14	Sudan	1 crate of 10 rounds	Mandi
Mortar round, 60 mm	–	Iran	1 round	Dabbi
PG-9 anti-tank rocket, 73 mm	*_188_*_79	Soviet Union	1979	Dabbi, Um Serdiba

Table Continues >

MEDIUM- AND LARGE-CALIBRE AMMUNITION (CONTD)

Type/calibre	Lot/serial no.	Country of manufacture	Quantity	Location
	56-44-73	Soviet Union	2 rockets	Dabbi
Mortar round, 82 mm	01-15	Sudan	11 rounds in wooden crate	Mandi
Mortar round, 82 mm	163-45	Soviet Union	1 round	Dabbi
Mortar round, 82 mm	36-99	Bulgaria	10 rounds	Dabbi
Mortar round, 82 mm	–	Sudan	2 crates of 10 rounds each	Jeghaiba
Rocket, 107 mm	5-88-64	China	2 rockets	Mandi
Mortar round, 120 mm	33-09-71	China	1 round	Mandi
Mortar round, 120 mm	01-15	Sudan	8 rounds	Mandi
Mortar round, 120 mm	02-15	Sudan	15 crates of 2 rounds each	Jeghaiba
OF-26 tank shell, 125 mm	–	Soviet Union	1 shell	Um Serdiba
Tank shell, 125 mm	1-11-74	China	10 boxes of 1 shell each	Jeghaiba

* Markings were too worn to permit proper identification.

LIGHT VEHICLES

Make/model	Country/date of manufacture	VIN	Location/date captured	Documented in	First recipient: name/location	First recipient: delivery date	Second recipient: name/location	Second recipient: delivery date
KIA KM-450	South Korea, 2011 (delivered)	2011KM48000033280	Habila, Mar. 2015	Heiban	No response received			
KIA KM-450	South Korea, unknown	-	Unknown	Mandi	No trace request sent			
KIA KM-450	South Korea, unknown	-	Jaw, 2011	Heiban	No trace request sent			
Toyota Land Cruiser	Japan, Feb. 2009	JTFLB71J098020942	Unknown	Tabanya	Abdul Latif Jameel Co. Ltd, Saudi Arabia	Mar. 2009	M/s New Oasis Cars, Saudi Arabia	10 Oct. 2009
Toyota Land Cruiser	Japan, Aug. 2013	JTFLB71J0E8043194	Unknown, Nov. 2014	Dabbi	Automotive & Machinery Trading Centre, Yemen	Aug. 2013	No response	
Toyota Land Cruiser	Japan, Oct. 2012	JTFLB71J1D8038374	Heiban, Dec. 2015	Heiban	Al-Futtaim Motors Co. LLC, UAE	Oct. 2012	No response	
Toyota Land Cruiser	Japan, Apr. 2014	JTFLB71J1E8045942	Keiga, 10 May 2016	Mandi	Abdul Latif Jameel Co. Ltd, Saudi Arabia	Apr. 2014	M/s Rolling Wheels establishment, Saudi Arabia	13 Jul. 2014
Toyota Land Cruiser	Japan, Oct. 2012	JTFLB71J2D8038125	Jebel Haluf, Apr. 2016	Heiban	Al-Futtaim Motors Co. LLC, UAE	Oct. 2012	No response	
Toyota Land Cruiser	Japan, Dec. 2012	JTFLB71J3D8039168	Agab, 30 Mar. 2016	Dabbi	Al-Futtaim Motors Co. LLC, UAE	Dec. 2012	No response	
Toyota Land Cruiser	Japan, Dec. 2013	JTFLB71J3E8044470	Unknown	Mandi	Saud Bahwan Automotive LLC, Oman	Dec. 2012	M/s BAM General Trading, UAE	Unknown (over 2.5 years ago)

Table Continues >

LIGHT VEHICLES (CONTD)

Make/model	Country/date of manufacture	VIN	Location/date captured	Documented in	First recipient: name/location	First recipient: delivery date	Second recipient: name/location	Second recipient: delivery date
Toyota Land Cruiser	Japan, Jan. 2011	JTFLB71J4B8027513	Unknown	Mandi	Al-Futtaim Motors Co. LLC, UAE	Jan. 2011	No response	
Toyota Land Cruiser	Japan, Aug. 2013	JTFLB71J7E8043192	Daldako, Dec. 2015	Um Serdiba	Automotive & Machinery Trading Centre, Yemen	Aug. 2013	No response	
Toyota Land Cruiser	Japan, May 2013	JTFLB71J8D8040638	Unknown, Nov. 2014	Dabbi	Saud Bahwan Automotive LLC, Oman	May 2013	M/s Western Auto, UAE	Unknown (over 3 years ago)
Toyota Land Cruiser	Japan, Jul. 2011	JTFLB71J9B8029676	Jaw, 2011	Heiban	Al-Futtaim Motors Co. LLC, UAE	Jul. 2011	No response	
Toyota Land Cruiser	Japan, Jan. 2012	JTFLB71J9C8032756	Heiban, Dec. 2015	Heiban	Saud Bahwan Automotive LLC, Oman	Jan. 2012	Private individual with US passport	Unknown (over 3 years ago)
Toyota Land Cruiser	Japan, unknown	-	Daldako, Dec. 2015	Um Serdiba	No trace request sent			
Toyota Land Cruiser	Japan, unknown	-	Daldako, Dec. 2015	Um Serdiba	No trace request sent			

HEAVY LOGISTICS TRUCKS

Make/model	Country of manufacture	Date of manufacture	Date captured	Captured in	Documented in
DAF YA4440 DT 405	Netherlands	Unknown	30 Mar. 2016	Agab	Dabbi
DAF YA4440 DT 405	Netherlands	Unknown	2016	–	Jeghaiba
DAF YA4440 DT 405	Netherlands	1981	2016	–	Jeghaiba
URAL 4320 6 x 6	Russia/Sudan	Unknown	Apr. 2013	Abu Karshola	Heiban
URAL 4320 6 x 6	Russia/Sudan	Unknown	30 Mar. 2016	Agab	Dabbi
MAN KAT-1 4 x 4	Germany	Unknown	Feb. 2014	Dandor	Heiban
MAN KAT-1 6 x 6	Germany	1979	–	–	–
MAN/GIAD FE 420 A	Germany/ Sudan*	Unknown	–	–	–
MAN/GIAD TGA 40.410	Germany/ Sudan*	Unknown	–	–	–
Renault KERAX 6 x 6	France/ Sudan*	Unknown	–	Heiban	Heiban
Shaanxi SX2190	China/Sudan	Unknown	–	–	Mandi

* Presence of 'GIAD' lettering on the truck cab indicates vehicle was probably assembled under licence in Sudan.

ARMoured VEHICLES AND ARTILLERY

Make/model	Country of manufacture	Date of manufacture	Date captured	Captured in	Documented in
D30A 122 mm towed howitzer	China	Unknown	Apr. 2013	Abu Karshola	Heiban
T-55-pattern MBT*	Unknown	Unknown	Mar. 2013	Daldako	Um Serdiba
T-55-pattern MBT	Unknown	Unknown	Dec. 2015	Daldako	Um Serdiba
T-72-pattern MBT	unknown	Unknown	Dec. 2015	Daldako	Um Serdiba
T-85IIM MBT	China/Sudan	Unknown	Mar. 2016	Ngarto	Mandi

* Main battle tank.

ANNEX B

FULL DETAILS OF TRACED ITEMS

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J098020942

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J098020942, the subject of CAR's request, in 2009; (2) it exported the vehicle in March 2009 to Abdul Latif Jameel Co. Ltd (Amir Majed Street, PO Box 3327 Al Safa, District Jeddah, 21471 Kingdom of Saudi Arabia); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

On 11 November 2016, Abdul Latif Jameel Group responded promptly to a formal trace request issued by CAR on 2 November 2016. This response confirms that: (1) Abdul Latif Jameel Group sold the Toyota Land Cruiser with VIN number JTFLB71J098020942, the subject of CAR's request, to M/s New Oasis Cars, Jeddah, Kingdom of Saudi Arabia; (2) the invoice for the aforementioned vehicle was dated 10 October 2009; (3) Abdul Latif Jameel Group sold the vehicle as part of a consignment of 15 vehicles (VIN numbers: JTFLB71J298020084; JTFLB71JX98020088; JTFLB71J898020574; JTFLB71J298020831; JTFLB71J098020844; JTFLB71J498020863; JTFLB71J098020892; JTFLB71J698020895; JTFLB71J998020969; JTFLB71J998020924; JTFLB71J198020917; JTFLB71J398020949; JTFLB71J698020976; JTFLB71J298020702), which were delivered to the recipient on an unspecified date; and (4) Abdul Latif Jameel Group has no further information regarding any subsequent vehicle retransfer.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J0E8043194

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J0E8043194, the subject of CAR's request, in 2013; (2) it exported the vehicle in August 2013 to Automotive & Machinery Trading (AMTC Building, Nada, Sultan Street, Iran Street, Haddah, Sana'a, Republic of Yemen), Yemen; (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J1D8038374

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J1D8038374, the subject of CAR's request, in 2012; (2) it exported the vehicle in October 2012 to Al-Futtaim Motors Co. LLC (PO Box 11052, Dubai Festival City, UAE); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles

to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J1E8045942

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J1E8045942, the subject of CAR's request, in 2014; (2) it exported the vehicle in April 2014 to Abdul Latif Jameel Co. Ltd (Amir Majed Street, PO Box 3327 Al Safa, District Jeddah, 21471 Kingdom of Saudi Arabia); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

On 11 November 2016, Abdul Latif Jameel Group responded promptly to a formal trace request issued by CAR on 2 November 2016. This response confirms that: (1) Abdul Latif Jameel Group sold the Toyota Land Cruiser with VIN number JTFLB71J1E8045942, the subject of CAR's request, to M/s Rolling Wheels Establishment, Jeddah, Kingdom of Saudi Arabia; (2) the invoice for the aforementioned vehicle was dated 13 July 2014; (3) Abdul Latif Jameel Group sold the vehicle as part of a consignment of 14 vehicles (with VIN numbers JTFLB71J8E8045890; JTFLB71J6E8045905; JTFLB71J6E8045841; JTFLB71J6E8045788; JTFLB71J5E8045944; JTFLB71J4E8045899; JTFLB71J4E8045885; JTFLB71J4E8045787; JTFLB71J3E8045876; JTFLB71J3E8045831; JTFLB71J3E8045795; JTFLB71J2E8045951; JTFLB71J0E8045835), which were delivered to the recipient on an unspecified date; and (4) Abdul Latif Jameel Group has no further information regarding any subsequent vehicle re-transfer.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J2D8038125

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J2D8038125, the subject of CAR's request, in 2012; (2) it exported the vehicle in October 2012 to Al-Futtaim Motors Co. LLC (PO Box 11052, Dubai Festival City, UAE); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J3D8039168

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J3D8039168, the subject of CAR's request, in 2012; (2) it exported the vehicle in December 2012 to Al-Futtaim Motors Co. LLC (PO Box 11052, Dubai Festival City, UAE); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J3E8044470

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J3E8044470, the subject of CAR's request, in 2013; (2) it exported the vehicle in

December 2013 to Saud Bahwan Automotive LLC (PO Box 3168, Ruwi, Postal Code 112, Sultanate of Oman); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

On 30 November 2016, Saud Bahwan Automotive LLC responded promptly to a formal trace request issued by CAR on 2 November 2016. This response confirms that Saud Bahwan Automotive LLC sold the Toyota Land Cruiser with VIN number JTFLB71J3E8044470 to the company M/s BAM General Trading (Dubai, UAE) over 2.5 years ago.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J4B8027513

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J4B8027513, the subject of CAR's request, in 2011; (2) it exported the vehicle in January 2011 to Al-Futtaim Motors Co. LLC (P.O Box 11052, Dubai Festival City, UAE); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J7E8043192

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J7E8043192, the subject of CAR's request, in 2013; (2) it exported the vehicle in August 2013 to Automotive & Machinery Trading (AMTC Building, Nada, Sultan Street, Iran Street, Haddah, Sana'a, Republic of Yemen), Yemen; (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J8D8040638

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J8D8040638, the subject of CAR's request, in 2013; (2) it exported the vehicle in May 2013 to Saud Bahwan Automotive LLC (PO Box 3168, Ruwi, Postal Code 112, Sultanate of Oman); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

On 30 November 2016, Saud Bahwan Automotive LLC responded promptly to a formal trace request issued by CAR on 2 November 2016. This response confirms that Saud Bahwan Automotive LLC sold the Toyota Land Cruiser with VIN number JTFLB71J8D8040638 to the company M/s Western Auto (PO Box 5239, Dubai, UAE) over three years ago.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J9B8029676

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser

with VIN number JTFLB71J9B8029676, the subject of CAR's request, in 2011; (2) it exported the vehicle in July 2011 to Al-Futtaim Motors Co. LLC (PO Box 11052, Dubai Festival City, UAE); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

TOYOTA LAND CRUISER WITH VIN NUMBER JTFLB71J9C8032756

On 7 September 2016, Toyota Motor Corp. responded promptly to a formal trace request issued by CAR on 7 September 2016. This response confirms that: (1) Toyota Motor Corp. manufactured the Toyota Land Cruiser with VIN number JTFLB71J9C8032756, the subject of CAR's request, in 2012; (2) it exported the vehicle in January 2012 to Saud Bahwan Automotive LLC (PO Box 3168, Ruwi, Postal Code 112, Sultanate of Oman); (3) Toyota Motor Corp. is unable to provide any further information regarding any third parties without obtaining prior consent, except when necessitated by law; and (4) Toyota Motor Corp. has a strict policy not to sell vehicles to potential purchasers who may use or modify them for paramilitary or terrorist activities and that the company has procedures and contractual commitments in place to help prevent its products from being diverted for unauthorised military use.

On 30 November 2016, Saud Bahwan Automotive LLC responded promptly to a formal trace request issued by CAR on 2 November 2016. This response confirms that Saud Bahwan Automotive LLC sold the Toyota Land Cruiser with VIN number JTFLB71J9C8032756 to a private individual with a US passport over four years ago.

DAF YA4440 DT 405 WITH VIN NUMBER 221082

On 16 December 2016, the Government of the Netherlands responded to a formal trace request issued by CAR on 5 September 2016. This response confirms that: (1) Van Vliet Handelsonderneming BV (Nieuwenkerk a/d Ijssel), located in the Netherlands, exported the DAF YA4440 DT 405 truck with VIN number 221082, the subject of CAR's trace request; (2) it sold the vehicle to Concept Development Co., Ltd (Arkweet, Africa Street, villa no. 3, block 46, Khartoum, Sudan), subject to invoice no. 361146 dated 31 January 2012; (3) this truck was sold as part of a consignment of 194 vehicles; (4) the consignment was shipped aboard the MV *Transfer* on 28 January 2012; and (5) the vehicle in question did not at that time require an export licence, due to the Government of the Netherlands not regarding it as a military vehicle as defined by item ML6 of the (EU) Common Military List.

DAF YA4440 DT 405 WITH CHASSIS NUMBER 00193865

On 16 December 2016, the Government of the Netherlands responded to a formal trace request issued by CAR on 5 September 2016. This response confirms that: (1) Van Vliet Handelsonderneming BV (Nieuwenkerk a/d Ijssel), located in the Netherlands, exported the DAF military truck with chassis number 00193865, the subject of CAR's trace request; (2) Van Vliet Handelsonderneming BV sold the vehicle to Harees International Group Ltd (PO Box 7091, H. no. 94 block 11, Elriyadh, Khartoum, Sudan), subject to invoice no. 365626 dated 18 December 2014; (3) this truck was sold as part of a consignment of 50 similar DAF YA4440 DT 405 vehicles; (4) the intended use of these trucks was for a garbage collection service being introduced by Harees in Khartoum, Sudan; (5) the consignment was shipped aboard the MV *Gran Bretagna* on 17 December 2014; (6) the Government of Netherlands enforcement unit visited Van Vliet Handelsonderneming BV on 1 November 2016 to assess administration procedures; (7) the vehicle in question did not at the time of export require a Dutch export licence, due to not being classified as a military vehicle as defined in item ML6 of the (EU) Common Military List; and (8) due to previous questions relating to exports of military trucks by Van Vliet to Sudan, Van Vliet nonetheless consulted the Office of Export Control and Strategic Goods in the Ministry of Foreign Affairs of the Netherlands prior to exporting the vehicles to Harees International Group Ltd. The Office of Export Control and Strategic Goods agreed that 50 DAF trucks could be supplied to Harees subject to their cabins being repainted and Harees International Group Ltd providing confirmation of their use in garbage collection. Harees subsequently supplied Van Vliet with four undated photographs showing a white DAF YA4440 truck—chassis number unconfirmed—ostensibly being used for garbage collection.

DAF YA4440 DT 405 WITH CHASSIS NUMBER 00216397

On 16 December 2016, the Government of the Netherlands responded to a formal trace request issued by CAR on 5 September 2016. This response confirms that: (1) Van Vliet Handelsonderneming BV (Nieuwenkerk a/d IJssel), located in the Netherlands, exported the DAF military truck with chassis number 00218397, the subject of CAR's trace request; (2) Van Vliet Handelsonderneming BV sold the vehicle to Harees International Group Ltd, (PO Box 7091, H. no. 94 block 11, Elriyadh, Khartoum, Sudan), subject to invoice no. 365626 dated 18 December 2014; (3) this truck was sold as part of a consignment of 50 similar SAF YA4440 DT 405 vehicles; (4) the intended use of these trucks was for a garbage collection service being introduced by Harees in Khartoum, Sudan; (5) the consignment was shipped aboard the MV *Gran Bretagna* on 17 December 2014; (6) the Government of the Netherlands enforcement unit visited Van Vliet Handelsonderneming BV on 1 November 2016 to assess administration procedures; (7) the vehicle in question did not at the time of export require a Dutch export licence, due to not being classified as a military vehicle as defined in item ML6 of the (EU) Common Military List; and (8) due to previous questions relating to exports of military trucks by Van Vliet to Sudan, Van Vliet nonetheless consulted the Office of Export Control and Strategic Goods in the Ministry of Foreign Affairs of the Netherlands prior to exporting the vehicles to Harees International Group Ltd. The Office of Export Control and Strategic Goods agreed that 50 DAF trucks could be supplied to Harees subject to their cabins being repainted and Harees International Group Ltd providing confirmation of their use in garbage collection. Harees subsequently supplied Van Vliet with four undated photographs showing a white DAF YA4440 truck—chassis number unconfirmed—ostensibly being used for garbage collection.

KAT-1 4 X 4 MILITARY TRUCK

On 11 April 2017, the Government of Germany responded to a formal trace request issued by CAR on 7 September 2016. The German authorities stated that they have no records of export or transfer authorisation for the KAT-1 4 x 4 military truck that was the subject of CAR's trace request.

FE 420 A MILITARY TRUCK

On 11 April 2017, the Government of Germany responded to a formal trace request issued by CAR on 7 September 2016. The German authorities stated that they have no records of export or transfer authorisation for the FE 420 A military truck that was the subject of CAR's trace request.

TGA 40.410 A MILITARY TRUCK

On 11 April 2017, the Government of Germany responded to a formal trace request issued by CAR on 7 September 2016. The German authorities stated that they have no records of export or transfer authorisation for the TGA 40.410 A military truck that was the subject of CAR's trace request.

KAT-1 6 X 6 MILITARY TRUCK

On 11 April 2017, the Government of Germany responded to a formal trace request issued by CAR on 7 September 2016. The German authorities stated that they have no records of export or transfer authorisation for the KAT-1 6 x 6 military truck that was the subject of CAR's trace request.

MAN/GIAD TRUCKS DOCUMENTED IN SOUTH KORDOFAN, SUDAN, JUNE 2016

On 15 May 2017, MAN SE forwarded to Conflict Armament Research two letters from a Dutch law firm to Van Vliet Handelsonderneming. These letters confirm that vehicles exported by Van Vliet to Sudan, including those manufactured by MAN SE, were exported lawfully to a private entity in Sudan, without requiring an export licence, and that the Dutch government had stated that there was no evidence that Van Vliet was knowingly involved in their possible resale. The letters also note the change in Dutch export regulations governing military trucks in May 2016, but state that this is not relevant to Van Vliet because in April 2015 the company decided to end its business with Sudan, and made their final shipment of MAN trucks to Sudan in November 2015. The letters note that Dutch authorities initially suspended this final shipment but subsequently released it, having determined that the MAN trucks were purely civilian items.

ENDNOTES

- 1 The EU arms embargo covers ‘weapons designed to kill and their ammunition, weapon platforms, non-weapon platforms and ancillary equipment. The embargo also covers spare parts, repairs, maintenance and transfer of military technology.’ See EU (1994).
- 2 The UN sanctions regime, which includes an embargo on technical military assistance and a ban on the use of military assets to conduct offensive operations, applies only to Darfur. It neither prevents the Sudanese government from importing arms and ammunition, nor from conducting military operations in territories other than Darfur. In this respect, the UN arms embargo on Darfur does not aim to reduce or ban Sudan’s access to military imports, but only to prevent the country from transferring them to or using them in Darfur. This has posed particular challenges to enforcing the embargo. See UNSC (2005).
- 3 Previous investigations by the UN Panel of Experts on Darfur and the Small Arms Survey identified the same individual suppliers confirmed to CAR by Toyota for the export of the specific vehicles documented in the Nuba Mountains in June 2016. See also Gramizzi, Lewis, and Tubiana (2012); Gramizzi and Tubiana (2013).
- 4 See CAR (2016).
- 5 Confidential information exchange conducted in Mali and Niger.
- 6 War in the Nuba Mountains is not new. Fighters from what is now the SPLA-N fought alongside the Southern SPLA throughout the Second Sudanese Civil War from 1983 to 2005, in a conflict that led to South Sudan’s independence in 2011. The current iteration of the Nuba Mountains conflict has, however, been more isolated and vulnerable to political intervention by Sudan and South Sudan, and also by neighbouring states—reflecting in particular regional power dynamics between Sudan, Uganda, and Ethiopia. These power dynamics and the inability of the SPLA-N to pose a significant military challenge to the regime in Khartoum have collectively downgraded the conflict to a war of attrition—one in which the Sudanese government has resorted to targeting civilian populations, notably by blocking humanitarian access to the region.
- 7 See Al Jazeera (2016).
- 8 The Sudan Call is a coalition of armed and unarmed opposition groups in Sudan, including the SPLM/A-N. See Eljak (2012); see also *Sudan Tribune* (2014).
- 9 The Sudanese government and the SPLM-N reached an impasse in negotiations over humanitarian access from Ethiopia. See *Sudan Tribune* (2016).
- 10 These tanks may either be assembled or produced in Sudan by MIC and have been documented previously in military parades in Khartoum. MIC has displayed its copy of the Chinese Type 85-II at IDEX. See HSBA (2014); see also Army Recognition (2017).
- 11 See SIPRI (n.d.).
- 12 See Gramizzi and Tubiana (2013, pp. 19–20, 33, 35); HSBA (2013, p. 10).
- 13 See UNODA (n.d.).

- 14 See Alrakoba.net (2017).
- 15 CAR interviews with Sudanese and South Sudanese experts, Nairobi, Kenya, September 2016.
- 16 According to SIPRI arms trade data, Belarus exported 24 D30 howitzers to Sudan in 2002. See SIPRI (n.d.).
- 17 See Leff and LeBrun (2014).
- 18 See UNSC (2016, Annex 9e).
- 19 See HSBA (2015, p. 4).
- 20 See SIPRI (n.d.).
- 21 The Small Arms Survey had previously documented two Red Arrows, including this one, in December 2012. See HSBA (2013).
- 22 See Leff and LeBrun (2014, p. 56).
- 23 See Leff and LeBrun (2014, p. 56).
- 24 In 2012, the Small Arms Survey documented four seemingly new SPG-9 recoilless rifles, although their provenance is unknown. See HSBA (2013, p. 9).
- 25 See HSBA (2015, p. 4).
- 26 UNSC (2016, Annex 9u).
- 27 Confidential source.
- 28 See Leff and LeBrun (2014, pp. 73–77). See also UNSC (2016, Annexes 9e, 9f, 9g).
- 29 See UNSC (2016), Leff and Lebrun (2014).
- 30 See Gramizzi, Lewis, and Tubiana (2012).
- 31 CAR (2012, p. 20).
- 32 Sudan has pivoted from its historically close ties with Iran towards increasing engagement with Saudi Arabia, and has assisted in Saudi coalition attacks on Houthi rebels in Yemen in exchange for Saudi investments and loans. See *The Guardian* (2016); Cafiero (2015).
- 33 CAR has recovered numerous samples of this ammunition type, including cartridges removed from clearly labelled boxes. It has conducted various comparative tests, which include assessments of propellant characteristics and the internal construction of bullets (observed by cutting the bullet laterally).
- 34 Despite historic political tensions between Sudan and Ethiopia, HAEI has publicly stated that it has provided ammunition to both Sudan and South Sudan. During the protracted civil war in the Nuba Mountains, ammunition may be captured and recaptured more than once, making it difficult to determine the stockpile from which the materiel originally emanated. Furthermore, in the absence of shipping and packaging materials, it is impossible to determine the intended consignee. In the case of Ethiopian ammunition, the cartridge heads are unmarked, which also makes it impossible to determine the year of manufacture by physical examination alone. See HAEI (n.d.).
- 35 See Leff and LeBrun (2014).

- 36 Gramizzi (2013); UNSC (2009), para. 158.
- 37 See HSBA (2016).
- 38 Communication from Toyota to CAR, 4 October 2016.
- 39 Gramizzi (2013); UNSC (2009); CAR (2016).
- 40 See Gramizzi (2013, pp. 52–53).
- 41 Communication from Toyota to CAR, 4 October 2016.
- 42 Communication from Saud Bahwan Automotive LLC to CAR, 30 November 2016.
- 43 The absence of ‘GIAD’ lettering on the cab does not rule out the possibility that the truck could have been produced or assembled under licence in Sudan. CAR documented two MAN trucks that had ‘GIAD’ lettering on the cab, while a third truck documented had a Van Vliet sticker on the windshield. The third truck was clearly manufactured in Europe and imported to Sudan.
- 44 See UNSC (2009, pp. 43–44, 51).
- 45 Shaanxi Heavy Duty Truck (n.d.).
- 46 Shaanxi Automobile Group Co., Ltd (n.d.)
- 47 See Gramizzi (2013, p. 38).
- 48 See Gramizzi (2013, p. 38).
- 49 Correspondence between Small Arms Survey and Van Vliet, September 2012.
- 50 We refer to the DAF YA4440 and MAN KAT-1 trucks as ‘military trucks’ because both have features specifically designed for military use, as detailed in note 2 to category ML6a of the common EU Military List: DAF YA4440 trucks usually have reinforced cabs suitable for subsequent weapon mounts. The German government has stated that the MAN KAT-1 trucks exported by Van Vliet to Sudan without needing a Dutch export licence are ‘specially designed for military use’ and their export therefore ‘requires a licence’ if exported directly from Germany (correspondence between Small Arms Survey and German government, July 2012).
- 51 Communication from Dutch government to CAR, 16 December 2016.
- 52 Communication from Dutch government to CAR, 16 December 2016.
- 53 Communication from Dutch government to CAR, 16 December 2016.
- 54 See Netherlands (2015).
- 55 Communication from Dutch government to CAR, 31 January 2017.
- 56 For more information on SAF’s air capabilities and supply chain, see HSBA (2016).
- 57 See Nuba Reports (2014).
- 58 CAR interviews with humanitarian actors, Kauda, Sudan, June 2016.
- 59 See Hutson (2012).
- 60 See HSBA (2014).

- 61 In 2012, the MIC upgraded its website to include a number of ostensibly Chinese and Iranian weapon types, in addition to weapons and ammunition that CAR has identified during the course of field investigations as being of Sudanese manufacture. In addition, MIC has produced a number of brochures that feature a wide range of confirmed Sudanese-manufactured weapon types, in addition to foreign-manufactured models, which are aimed at the export market. Investigations by CAR into MIC weapons displayed at international arms exhibitions (notably IDEX 2013 and materiel destined for IDEX 2015) identified a mixture of Sudanese domestically manufactured items and foreign imports—the latter notably comprising Chinese weapons and ammunition. See also DefenseWebTV (2015).
- 62 See CAR (2016).
- 63 See CAR (2012; 2014; 2015a; 2015b).
- 64 The United States first imposed sanctions on Sudan in 1997, under US Executive Order 13067. In 2006, the United States expanded sanctions to cover those individuals believed to be most responsible for the conflict in Darfur. See OFAC (2013); see also United States (1997).
- 65 See HSBA (2014; 2015).
- 66 See UNSC (2011).
- 67 For weapons and ammunition, end-user conditions certify that the buyer is the final end user and will not transfer the materiel to another recipient. This allows the legal chain of custody to be carefully documented and traced. Nevertheless, governments and manufacturers do not always adhere to or enforce end-user conditions. See Bromley and Griffiths (2010).
- 68 See HSBA (2015).
- 69 Physical inspection of weapons and ammunition on display at the MIC stand conducted by CAR staff, IDEX, Abu Dhabi, 6 March 2017.
- 70 See Gramizzi, Lewis, and Tubiana (2012).
- 71 See UNSC (2016, Annex 9u).
- 72 See UNSC (2016, Annex 9u).
- 73 See UNSC (2016, Annex 9u).
- 74 The importance of the volume of captured small- and medium-calibre ammunition (7.62 mm, 12.7 mm, and 14.5 mm), the homogeneity of the stockpile, the fact that ammunition was captured while it was still packed in original and sealed boxes, and the date of manufacture/first delivery of the equipment (2014) indicate an immediate and deliberate transfer to the SPLA-iO. Such a substantial stockpile is not the result of small-scale trafficking, theft, or accidental diversion.
- 75 The white colour of the headstamp code is due to the use of white chalk, with the purpose of increasing the visibility of the marking codes.
- 76 CAR (2015a). See also Leff and Lebrun (2014, pp. 73–77); UNSC (2016, Annexes 9e, 9f, 9g).

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