

THE DISTRIBUTION OF IRANIAN AMMUNITION IN AFRICA

EVIDENCE FROM A NINE-COUNTRY INVESTIGATION



CONFLICT ARMAMENT RESEARCH



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CONFLICT ARMAMENT RESEARCH

Conflict Armament Research identifies and tracks conventional weapons in contemporary armed conflicts. Established in 2011, it was created in response to the growing need for informed, on-the-ground reporting on weapons proliferation in modern wars and insurgencies.

The organisation prioritises two closely linked activities. First, it generates long-term information on global and local trends in weapons proliferation. In this regard it compiles and analyses data on the types of weapons circulating on illicit markets and their modes of transfer, including the entities involved, supply vectors and recipients. Second, it works to coordinate otherwise minimally connected international arms investigations. Conflict Armament Research's iTrace network now links a range of expert investigators working in conflict-affected regions across the globe. These two areas of activity recognise that the arms trade evolves constantly, requires continuous monitoring and operates globally, which necessitates simultaneous, interconnected and cross-regional investigations.

Conflict Armament Research's primary objective is to provide the monitoring and diagnosis needed for the development of international policy responses to conventional weapons proliferation. The international community currently devotes too few resources to on-the-ground investigations into weapons supplies to and within armed conflicts. Policymakers consequently have very limited detailed information on which to base targeted counter-proliferation strategies.

In response, Conflict Armament Research provides governments, international organisations and the wider research community with grounded, evidence-based reporting on all aspects of conventional weapons proliferation. It offers core technical expertise in a range of fields, including in-theatre investigation and analysis of armed conflict and weapons trafficking; the design, implementation and management of arms reduction initiatives; and advice on programming and policy. Conflict Armament Research also provides specific technical expertise in weapons identification and tracing, and support to criminal investigations and United Nations sanctions-monitoring groups.

CONFLICT ARMAMENT RESEARCH OFFERS CORE TECHNICAL EXPERTISE IN A RANGE OF FIELDS, INCLUDING IN-THEATRE INVESTIGATION AND ANALYSIS OF ARMED CONFLICT AND WEAPONS TRAFFICKING.

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ABBREVIATIONS AND ACRONYMS

AMIG

Ammunition and Metallurgical Industries Group

IRGC

Iranian Revolutionary Guard Corps

AQIM

al-Qaeda in the Islamic Maghreb

MIC

Military Industrial Corporation

BIC

Bureau International des Containers

NISS

National Intelligence and Security Services

DIO

Defence Industries Organisation

SAF

Sudanese Armed Forces

DRC

Democratic Republic of the Congo

YIC

Yarmouk Industrial Complex

FRR

Forces Républicaines Fédéralistes

INTRODUCTION

This report is the result of six years of collaborative investigations and documents the distribution of Iranian ammunition in Africa. It is the first comprehensive study of Iran's weapons 'footprint' in Africa and its findings are significant, not least because until very recently most international observers would have described Iran's role in this market as negligible to non-existent.

The report focuses primarily on small-calibre ammunition, which is an often-neglected—but operationally critical—component of the African arms trade. It also provides clear evidence of Iran's role in supplying a range of other ordnance to the continent, including mines, explosive light weapons, and larger conventional arms and ammunition.

The report presents findings from extensive field-based investigations conducted in nine African states between 2006 and 2012. These are states that have experienced protracted armed conflict, such as the Darfur region of Sudan, the Democratic Republic of the Congo (DRC) and South Sudan. Others, such as Côte d'Ivoire and Guinea, have recently experienced destabilising political turbulence or civil war. States such as Kenya, Niger and Uganda have either experienced prolonged intercommunal violence or find themselves sandwiched between conflict regions where weapons proliferate unchecked.

In all cases, the report documents Iranian ammunition either in the hands of state forces or in service with non-state factions, including rebel forces, foreign-backed militias, Islamist armed groups and warring civilian communities. The report's findings are significant from the perspective of regional security and provide important indications that the African arms market is changing in composition. They include the following:

- Conflict Armament Research has compiled 14 separate cases of Iranian ammunition in Africa. These cases are distributed in nine countries: Côte d'Ivoire, the DRC, Guinea, Kenya, Niger, Nigeria, South Sudan, Sudan and Uganda.
- Of the 14 cases, investigations documented only four instances of Iranian ammunition found in government service. The remaining ten cases involve Iranian ammunition circulating in African illicit markets.



**THE REPORT DOCUMENTS
IRANIAN AMMUNITION IN THE
HANDS OF STATE FORCES AND
NON-STATE FACTIONS.**

- Conflict Armament Research also documented a growing number of Iranian-manufactured weapons in Africa during the same investigations, ranging from rocket launchers and mortars to anti-personnel mines and larger-calibre ordnance, such as 107 mm rockets.
- Iran manufactured a majority of the ammunition documented in this report within the last decade, with most production concentrated in 2002–03. There is little evidence to suggest significant supply before this period.
- Iranian ammunition is in service with a range of entities, including government forces (Guinea, Côte d'Ivoire, Kenya and Sudan); warring civilian communities (Kenya, South Sudan and Uganda); and rebel, insurgent and militia groups (Côte d'Ivoire, Darfur, the DRC, South Sudan and Niger).
- African governments appear to be the main vectors in the supply of Iranian ammunition (and weapons) to illicit markets in Africa—whether as a result of loss, theft or deliberate policies of arming civilians and insurgent forces.
- The report highlights only one case (2010) in which there is clear evidence of direct, illicit supply by Iran to the continent. This contravenes the UN sanctions regime on Iran, which prohibits the export of Iranian weapons (effective since 2007).
- Transfers of Iranian ammunition also contravened UN sanctions on Côte d'Ivoire and plausibly violated UN embargoes on the DRC and Darfur. There is no evidence to suggest the direct involvement of Iran in these violations.

The report concludes that Iran is a recent supplier of ammunition to Africa. Despite this, its ammunition 'footprint' in the continent is widespread. The 14 cases presented in this report are evidence of this alone and indicate that ammunition circulates in conflict-affected regions stretching from East to West Africa.

The only case to suggest sustained, large-scale supply of Iranian materiel to African governments is that of Sudan. These transfers include a range of military weapons, ammunition and related equipment. There also appears to be increasing cooperation between Khartoum and Tehran in the defence sector, including in the field of weapons production. In three other cases Iranian ammunition found in service with African government forces appears to be the result of 'opportunistic' supply—delivery during a short period of time, with no evidence of subsequent transfers (although these findings remain subject to revision).

The report notes that African arms markets are evolving, with new suppliers and new supply vectors—both legal and illicit. However, the international community is currently hampered in its responses to illicit weapons proliferation, primarily because it lacks the monitoring capacity to understand illicit transfers fully and, on this basis, to develop appropriate counter-proliferation strategies. The report calls for international donors to invest greater resources in field-based investigations.

**THE REPORT NOTES THAT
AFRICAN ARMS MARKETS
ARE EVOLVING, WITH NEW
SUPPLIERS AND NEW SUPPLY
VECTORS — BOTH LEGAL AND
ILLICIT.**





**THE INTERNATIONAL
COMMUNITY IS CURRENTLY
HAMPERED IN ITS
RESPONSES TO ILLICIT
WEAPONS PROLIFERATION.**

PHYSICAL EVIDENCE OF IRANIAN **AMMUNITION** TRANSFERS

This section presents evidence derived from investigations conducted between June 2006 and November 2012. It documents the characteristics of Iranian small-calibre ammunition—including its packaging—from a range of investigations conducted in Africa. It also draws heavily on Iranian ammunition identified in cases outside Africa, including maritime interceptions of Iranian weaponry, and materiel circulating in Iraq and Afghanistan.

CARTRIDGES

Conflict Armament Research has gathered evidence of three types of Iranian-manufactured small-calibre ammunition circulating on the African continent. The first two types are 7.62 x 39 mm in calibre; the third is 7.62 x 54R mm in calibre. There are commonalities among the three types, including the composition of cartridge cases, marking formats and projectile (bullet) construction.

As Image 1 illustrates, the markings on the first 7.62 x 39 mm cartridge—known as the headstamp¹—

indicate a calibre designation ('7.62 x 39') and a date mark. In these examples the date mark '02' indicates manufacture in 2002. The cartridges feature a red primer annulus lacquer.

The second type of 7.62 x 39 mm cartridge features a lot number ('257') at the four o'clock position and a date mark ('06') at eight o'clock to form a three-entry headstamp (rather than the two entries in the type 1 examples in Image 1). The primer annulus lacquer is green rather than red (see Image 2).

Of the two types of cartridges illustrated above, Conflict Armament Research has documented the

Image 1

Iranian 7.62 x 39 mm cartridge, type 1



© Conflict Armament Research, 2012

Image 2

Iranian 7.62 x 39 mm cartridge, type 2

Notes: The cartridge is spent (i.e. the empty cartridge case alone), having been fired during the events in Conakry of 28 September 2009. See the case study on Guinea in this report for further information.



© Mike Lewis/Amnesty International, 2009

first type in seven African states, but only identified the second in Guinea. However, cartridges of the second type have been identified elsewhere in the world, including widespread distribution in Afghanistan.

With the exception of the headstamp configuration and primer annulus lacquer, the two types of cartridge are identical in construction, weight and physical dimensions. Each conforms to the manufacturing specifications of '7.62 x 39 ball' provided by the Ammunition and Metallurgical Industries Group (AMIG) of the Iranian Defence

Industries Organisation (DIO).² Annex 1 of this report provides technical information on physical samples held by Conflict Armament Research.

Headstamp analysis also indicates the identical stamping font of individual letters on the two ammunition types. Table 1 provides a visual cross-comparison of the two types of ammunition, including samples documented in Africa and Afghanistan. Although stamping quality³ differs, particular attention should be paid to the downward 'tick' on the horizontal part of the '7', the dimensions of the '6' and the relative size of the 'X'.

Table 1
Visual comparison of headstamp markings

No.	Close-up of marking characteristics	Cartridge information
1		Documented after recovery from the 28 September 2009 stadium massacre in Conakry, Guinea
2		Documented after recovery from Taliban forces in Nawa-I-Barakzayi District, Helmand Province, Afghanistan, January 2010
3		Recovered from an unspecified location in Afghanistan, date not provided
4		Documented in service with rebel forces in northern Côte d'Ivoire, 2009

Sources: (1) © Mike Lewis/Amnesty International, 2009; (2) © C. J. Chivers/New York Times, 2010; (3) © Russ Cornell, 2012; (4) © Conflict Armament Research, 2012

Image 3**Iranian 7.62 x 54R mm cartridge**

Notes: Precise date and place of documentation withheld for reasons of confidentiality. The ammunition is packed in quantities of 20 rounds into cardboard boxes. Each green battle bag contains ten such boxes, totalling 200 cartridges per bag.



Source: Confidential

The third type of ammunition is 7.62 x 54R mm in calibre and marked in the same format as the first type of 7.62 x 39 mm examples. As Image 3 illustrates, it also features a calibre designation ('7.62 x 54') at the 12 o'clock position and a date mark at six o'clock. In this example, the date mark '01' indicates manufacture in 2001.

The cartridge conforms to the manufacturing specifications of '7.62 x 54 heavy' provided by Iran's DIO.⁴ Annex 2 of this report provides technical information from physical samples held by Conflict Armament Research.⁵

None of the cartridges pictured above is marked with factory identifying information. While most Soviet-calibre ammunition (e.g. Russian or Chinese production) features a two- or three-digit code to indicate the factory of manufacture, the Iranian examples do not. This is the primary reason why, when first documenting these types of ammunition, investigators did not identify them as Iranian.

A second reason is that, although now beginning to grow in scope and detail, literature on Iranian ammunition was previously very limited.

Additionally, early investigations found most samples of this ammunition unboxed—whether found on the battlefield, repacked into bags or taken from the magazines of users. It was not until investigators began to document ammunition packaging in shipments proven to have originated in Iran that they were able to identify the cartridges as being of Iranian manufacture.

PACKAGING

Iranian small-calibre ammunition packaging—whether for 7.62 x 39 mm or 7.62 x 54R mm—consists of several components. These components are pictured in Image 4 and include an outer wooden box, green plastic 'battle bags' and cardboard sub-units.

Image 4**Iranian 7.62 x 39 mm ammunition box and contents**

Notes: The box contains 1,000 7.62 x 39 mm cartridges. The cartridges are identical in construction to those pictured in Image 1 and feature the headstamp markings '7.62 x 39' at the 12 o'clock position and '94' at six o'clock.



Source: Confidential

IN THE CASES DOCUMENTED TO DATE NEITHER THE OUTER WOODEN BOXES NOR THEIR CONTENTS HAVE SPECIFIED ANY INFORMATION THAT MIGHT IDENTIFY THE MANUFACTURER.

The outer wooden boxes differ greatly in design from other common types of Soviet-calibre ammunition box, including those of Bulgaria, China and Russia. Iranian boxes are approximately 10 cm taller and feature distinctive rope handles, while Bulgarian, Chinese and Russian examples employ wooden handles.

There are some small variations in Iranian ammunition box construction. For example, the box pictured in Image 4 has nailed joints, while other examples (including of 7.62 x 54R mm boxes documented in Africa) feature dovetail joints. However, these differences are minor and there are very few visual differences between Iranian 7.62 x 39 mm and 7.62 x 54R mm ammunition boxes.

In all documented cases, the outer wooden boxes contain five plastic battle bags, the colour of which is invariably green. In the case of 7.62 x 54R mm ammunition the bags feature markings that specify the quantity, calibre, lot and date of manufacture (see Image 5). Some examples of 7.62 x 39 mm bags documented by Conflict Armament Research feature only the quantity and calibre.⁶ Regardless

Image 5

Internal configuration of Iranian 7.62 x 54R mm ammunition packaging

Notes: Location and date of photograph withheld for reasons of confidentiality.



© Conflict Armament Research, 2012



Image 6

Extract from a US military report detailing weapons seizures in Baghdad, 6 November 2008

Notes: Markings on the bags indicate each contains 200 rounds of 7.62 x 54R mm ammunition. They include two lots: lot number 96 manufactured in 2006 and lot number 13 manufactured in 2007. Image kindly supplied by Matt Schroeder, manager of the Arms Sales Monitoring Project of the Federation of American Scientists. Image obtained through a Freedom of Information Act request 'for documents and photographs of weapons seized from arms caches in or near Baghdad from September 2008 until September 2009'; Matt Schroeder submitted the request to the US Central Command on 23 September 2009.

of calibre, each bag contains ten grey cardboard boxes (unmarked), each of which contains 20 cartridges.

In the cases documented to date neither the outer wooden boxes nor their contents have specified any information that might identify the manufacturer. For these reasons, Conflict Armament Research had to employ cross-case analysis—comparing ammunition and packaging documented in known Iranian shipments with ammunition and packaging discovered elsewhere—to identify the ammunition as Iranian in origin.

To summarise these investigations in brief, Conflict Armament Research observed ammunition packed in green battle bags in Kenya (2008) and Côte d'Ivoire (2010). It also documented complete packaging (outer wooden boxes and their contents) in Côte d'Ivoire in 2009 and 2012. In none of these cases did it find any evidence to indicate manufacture by Iran.

However, a review of known Iranian shipments or of confirmed Iranian ammunition identifies the same packaging. First, in October 2010 Nigerian authorities seized a consignment of weapons and ammunition in Apapa port, Lagos. Analysis of the bill of lading (see Annex 4) and investigations by Conflict Armament Research revealed that the shipment originated in Iran and contained Iranian-manufactured weapons. News media photographs of the seizure included pictures of

green ammunition bags identical to those observed in Kenya and Cote d'Ivoire.⁷

Second, Conflict Armament Research obtained documents compiled by US forces operating in Iraq documenting seizures of green ammunition bags, which US forces described as 'Iranian 7.62'. The bags are identical to those observed in Kenya, Côte d'Ivoire and Nigeria (see Image 6).

Third, in January 2002 the Israeli military seized a merchant ship, the *Karine A*, that was carrying a cargo of Iranian weapons.⁸ Among a range of other ordnance found on board, Israeli forces seized large quantities of Iranian ammunition in green bags of the type documented in Côte d'Ivoire, Iraq, Kenya and Nigeria.⁹

Finally, investigations by Conflict Armament Research identified ammunition packed in the same green bags on the US civilian market.¹⁰ The results of these investigations have allowed Conflict Armament Research to identify Iranian-manufactured cartridges and various items of packaging across Africa.

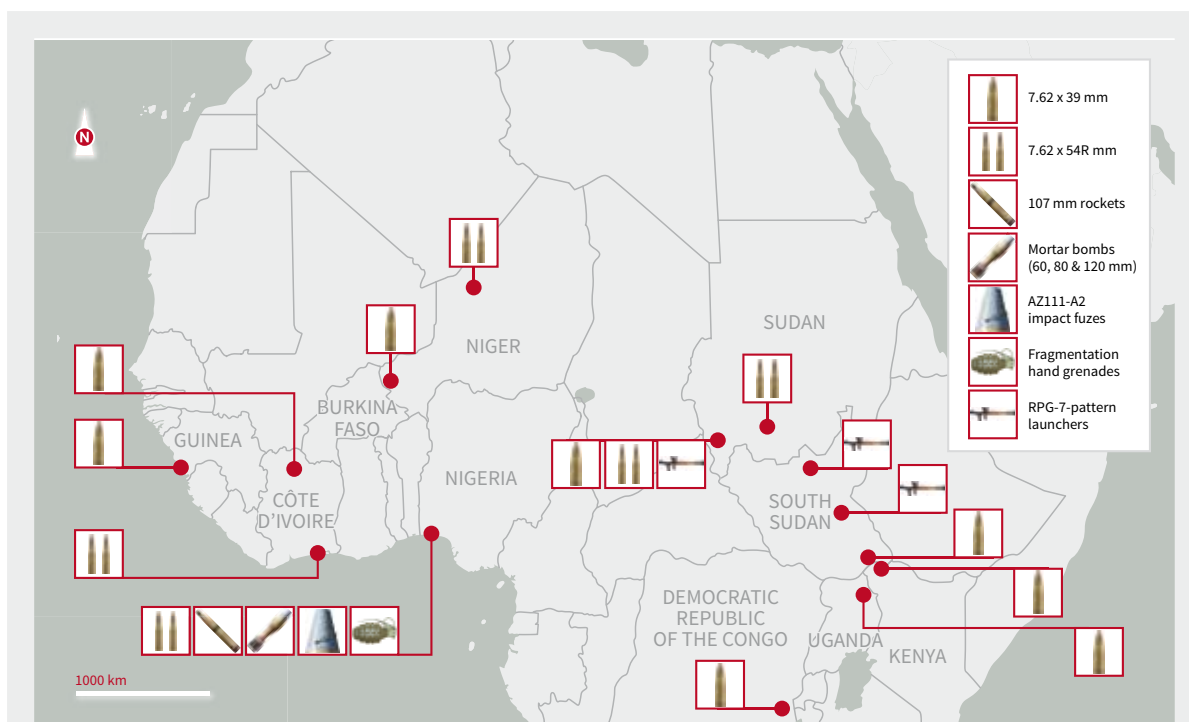


**AFRICAN GOVERNMENTS
APPEAR TO BE THE MAIN
VECTORS IN THE SUPPLY
OF IRANIAN AMMUNITION
[AND WEAPONS] TO ILLICIT
MARKETS IN AFRICA.**

IRANIAN AMMUNITION DISTRIBUTION IN AFRICA

Working with a network of independent investigators, Conflict Armament Research has documented 14 separate cases of Iranian weapons and ammunition in service with Africa security forces and non-state groups. Map 1 plots their distribution in nine African countries.

While the case studies in subsequent sections of this report provide detailed information on each of the cases, some general trends can be observed across them. These are presented below.



Map 1

The distribution of Iranian weapons and ammunition in Africa, findings from investigations in 2006-12

Notes: All sources are provided in the case study section of this report.

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YEARS OF MANUFACTURE AND DATES OF SUPPLY TO AFRICA

Iran manufactured a majority of the ammunition documented in this study within the past decade. Analysis of dates marked on cartridges and ammunition packaging indicate production in 2001 and later, with most production concentrated in the 2002–03 period. The last recorded date of manufacture is 2006.

The only exceptions to these observations are the 7.62 x 51 mm cartridges dated 1970 and 1971 documented in southern Sudan (now South Sudan) in the hands of civilian users in 2008 (see Image 7). Interviews with users suggest they date from the first Sudanese civil war (1955–72). Investigations have not publicly documented the cartridges elsewhere in Africa.¹¹

Dates of manufacture provide some indication of dates of supply. Table 2 lists the 14 cases in the study. In each case it notes the manufacturing dates of the cartridges observed and the date of observation. These dates bracket a range of potential supply dates—i.e. the ammunition cannot have been delivered before it was manufactured, nor could it have been delivered after the date on which investigators first observed it.

While these supply date ranges may appear very broad, in all probability they are narrower, for two reasons. First, lead times between production in

Iran and delivery to an African country could run to months, not to mention the fact that ammunition may have been stored in the factory for some time before shipping. Second, the date on which investigators documented the ammunition was unlikely to be the one on which the ammunition entered service. For example, in the Kenya investigation interviews conducted in June 2006 suggest that the Iranian ammunition had been observed in service with Kenya Police units at least a year before (i.e. in or before June 2005).¹²

In summary, some of the supply date ranges in Table 2, such as for Guinea and Kenya, are sufficiently narrow to date ammunition transfers from Iran to within a period of two or three years. In the case of Guinea it is worth noting that the earliest supply date is very close to the March 2007 UN Security Council sanctions on Iranian arms exports.¹³

LEAD TIMES BETWEEN PRODUCTION IN IRAN AND DELIVERY TO AN AFRICAN COUNTRY COULD RUN TO MONTHS.



Image 7

Farsi-marked Iranian ammunition dating from the 1970s, southern Sudan, 2008

Notes: The cartridges feature the manufacturer's name, Sazman Sanaye Defa (i.e. DIO) at the 12 o'clock position and date codes for 1970 (left) and 1971 (right) at the six o'clock position.

© James Bevan, 2008

Table 2

Documented Iranian ammunition in Africa, 2006–12, including supply date ranges

Notes: All sources are provided in the case study section of this report.

Case	Country	Location	Most recent date of manufacture ^a	Earliest observation ^b	Supply date range	Circumstances
1	Côte d'Ivoire	Former rebel-held north of the country	2003	2009	2003–09	7.62 x 39 mm, supplied to former rebel forces from the territory of Burkina Faso
2	Côte d'Ivoire	Government forces	2001	2009	2001–09	7.62 x 54R mm, in service with former government forces
3	DRC	South Kivu	2003	2009	2003–09	7.62 x 39 mm, identified in service with the Forces Républicaines Fédéralistes operating in the Hauts Plateaux area of South Kivu
4	Guinea	Conakry	2006	2009	2006–09	7.62 x 39 mm, in service with Guinean government forces
5	Kenya	Turkana District	2003	2006	2003–06	7.62 x 39 mm, in service with Kenyan government forces; also supplied to non-state Turkana groups
6	Niger	North of Arlit	2002	2012	2002–12	7.62 x 54R mm, recovered during military engagements between the Nigerien military and al-Qaeda in the Islamic Maghreb (AQIM)
7	Niger	Burkina Faso–Niger border	2002	2012	2002–12	7.62 x 39 mm, intercepted shipment reportedly originating in the territory of Burkina Faso
8	Nigeria	Apapa port, Lagos	2006	2010	2010	7.62 x 54R mm, seized during the inspection of 13 shipping containers
9	Southern Sudan	Eastern Equatoria State	2003	2008	2003–08	7.62 x 39 mm, documented in service with civilians groups; originally in service with Kenyan security forces
10	South Sudan	Jonglei State		2012	N/A	Significant quantity of Iranian ordnance in service with Khartoum-backed forces; no small-calibre ammunition documented
11	South Sudan	Unity State		2011	N/A	Significant quantity of Iranian ordnance in service with Khartoum-backed forces; no small-calibre ammunition documented
12	Sudan	South Darfur	2003	2008	2003–08	7.62 x 39 mm, in service with Khartoum-backed forces
13	Sudan	South Kordofan	2001	2012	2001–12	7.62 x 54R mm, in service with Khartoum-backed forces
14	Uganda	Karamoja region	2003	2006	2003–06	7.62 x 39 mm, documented in service with civilians groups; originally in service with Kenyan security forces

^a Indicates the year of manufacture as marked on cartridge cases or packaging.

^b Indicates the year in which investigators first observed ammunition marked with a particular year of manufacture.

AMMUNITION USERS

Iranian ammunition is in service with a variety of users. These fall into three broad categories: national defence and security forces, rebel or insurgent groups, and civilians.

In the case of national defence and security forces, there is clear evidence that Iranian ammunition is in service with Guinean, Ivorian and Kenyan forces. There is also growing evidence to suggest that Sudan's security forces also deploy Iranian materiel—evidenced by extensive supplies to armed groups in Darfur and South Sudan, and ammunition found in positions vacated by the Sudanese Armed Forces (SAF) in southern Sudan (see the case study sections of this report).

Rebel and insurgent movements also deploy Iranian ammunition. The Darfur and South Sudan cases have already been noted, but this study also documents Iranian ammunition in service with former rebel forces in Côte d'Ivoire and factions aligned with AQIM operating in Niger. With the exception of Khartoum-aligned forces in Darfur and South Sudan, the regional sources of this ammunition are unclear. In the Côte d'Ivoire case, ammunition deliveries certainly transited the territory of Burkina Faso and match the types of ammunition circulating in Darfur, but it remains

unclear if they originated in another African country (see the case study sections of this report).

Civilians in several countries also possess Iranian ammunition. In Kenya, South Sudan and Uganda, supply clearly points to the Kenyan defence and security forces (see the case study sections of this report). The diversion of weapons and ammunition from government forces to civilian markets is a persistent and well-documented problem in Africa and the findings of this study add yet another layer of confirmation.

TRANSFERS OF IRANIAN AMMUNITION WITHIN AFRICA

This study primarily documents the *distribution* of Iranian ammunition rather than its transfer within Africa. This is for the simple reason that in many of the cases profiled in this report there is little firm evidence to elucidate any clear transfer dynamics. There are, however, some clear cases of intraregional ammunition transfers in East and West Africa. There is also some evidence that might indicate trans-Saharan/Sahelian trafficking between the two regions (see Map 1).

In East Africa transfers include supplies by Sudan (Khartoum) to various armed forces operating



EVIDENCE FROM NORTHERN NIGER SUGGESTS THAT IRANIAN AMMUNITION IS IN SERVICE WITH SAHARA-BASED GROUPS THAT ARE REPORTEDLY ALIGNED WITH AL-QAEDA IN THE ISLAMIC MAGHREB.

in Darfur and South Sudan. In some cases these supplies also include weapons, such as Iranian-manufactured rocket launchers, and other military materiel (see the case study sections of this report). A separate set of transfers can be identified in the Kenya–South Sudan–Uganda border region. These involve the retransfer by civilians of Iranian ammunition that was formerly in service with Kenyan defence and security forces. The transfers are very localised, but nevertheless significant (see the case study sections of this report).

In West Africa there is clear evidence of significant transfers from the territory of Burkina Faso to rebel forces operating in northern Côte d'Ivoire. In addition, reports from Niger suggest that Iranian ammunition has entered the country from Burkina Faso. Further evidence from northern Niger suggests that Iranian ammunition is in service with Sahara-based groups that are reportedly aligned with AQIM (see the case study sections of this report). While there may be no link whatsoever between these cases, the fact that Iranian ammunition appears to proliferate in the Sahara/Sahel region in addition to East and West Africa is noteworthy.

Moreover, when investigators discovered large quantities of Iranian ammunition in bags in northern Côte d'Ivoire, they also documented large quantities of Sudanese-manufactured ammunition stored in the same bags and in the same locations. The Iranian and Sudanese ammunition are of the same types as those documented together in Darfur and Southern Sudan. While there is no evidence to suggest transfers between these East and West African regions, this finding, together with documented Iranian ammunition in the Sahara/Sahel region, should be considered in future investigations.

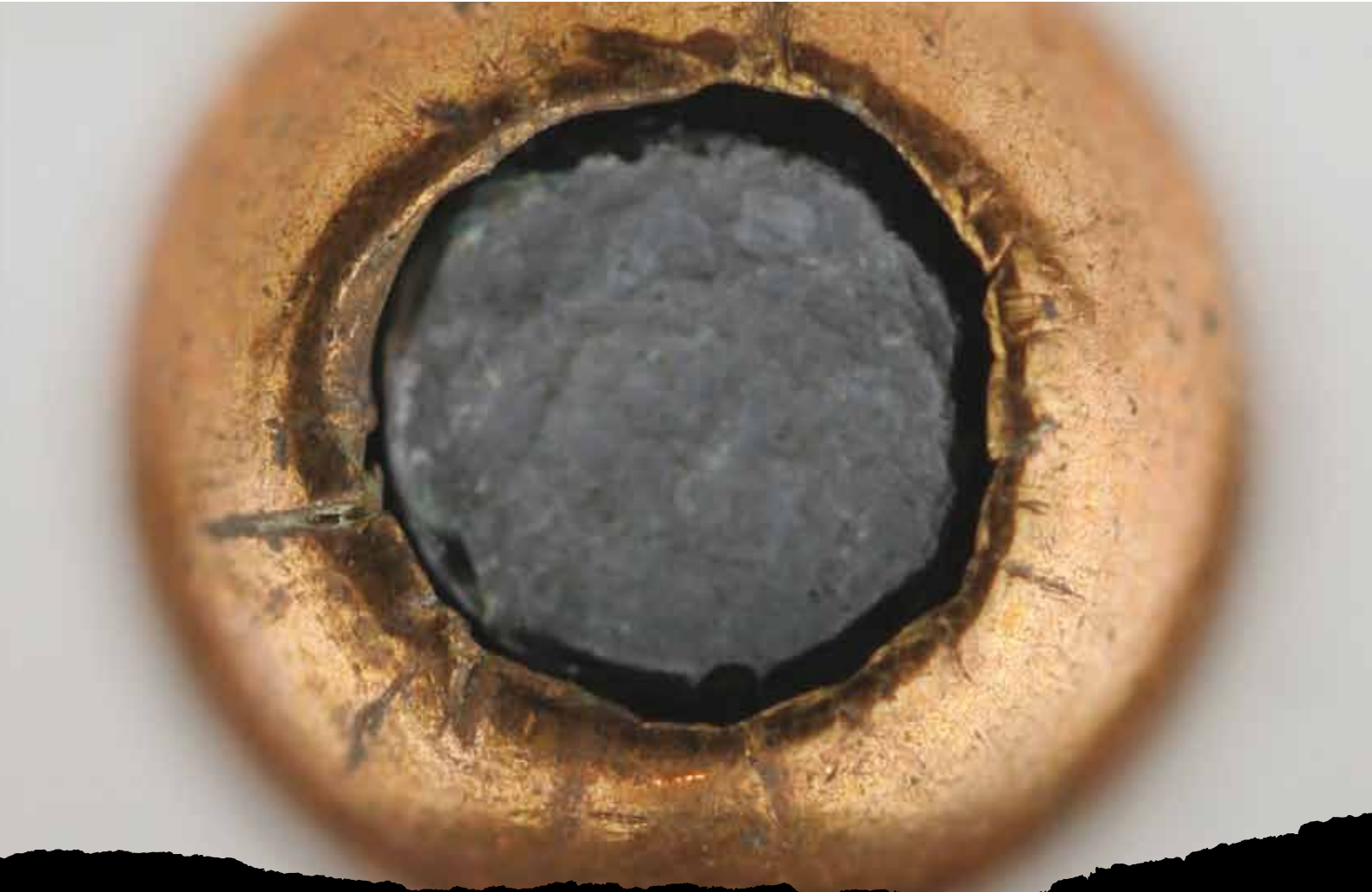
VIOLATIONS OF INTERNATIONAL SANCTIONS REGIMES

Supplies of Iranian ammunition to rebel forces in northern Côte d'Ivoire clearly contravened the arms embargo on Côte d'Ivoire imposed by UN Security Council Resolution 1572 (2004). It is unclear exactly which parties were responsible for the transfers, although UN reports implicate the Government of Burkina Faso in similar transfers to rebel forces in Côte d'Ivoire at the time (2005–11).

Beyond this case there are reasonable grounds to conclude that Iranian ammunition, dated 2003, may have entered the DRC in violation of the UN arms embargo imposed by Resolution 1493 (2003) on armed groups and militias operating in North and South Kivu and Ituri. The origins of this ammunition (following manufacture in Iran) are not known.

Similarly, 2004-dated Iranian ammunition identified in the Darfur region of Sudan may have entered the region in violation of sanctions imposed by Resolution 1591 (2005). The date of manufacture is sufficiently close to the date on which the sanctions came into force to suspect this. Sudan continues to supply Iranian weapons and ammunition to the Darfur region.

The 2010 Nigerian case involving the direct supply of weapons and ammunition from Iran is a clear breach of UN sanctions on Iranian arms exports.



**IRANIAN WEAPONS AND
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SERVICE WITH FOREIGN-
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REBEL FORCES, ISLAMIST-
ORIENTED ARMED GROUPS
AND WARRING CIVILIAN
COMMUNITIES.**

CASE STUDIES

The following case studies present detailed evidence of Iranian ammunition identified in specific countries and regions of sub-Saharan Africa. In addition to ammunition, the cases also document Iranian weapons, which are also in service with government and non-state forces on the continent.

KENYA, SOUTH SUDAN AND UGANDA, 2006–08

Between May 2006 and January 2008 a researcher working for the Geneva-based Small Arms Survey documented 3,382 small-calibre cartridges in service with a range of state armed forces and non-state armed groups in the border triangle of Kenya, southern Sudan (now South Sudan) and Uganda.¹⁴ This ammunition included various calibres, but the most common type in circulation (approximately 75 per cent of the sample) was the Soviet-designed 7.62 x 39 mm cartridge. Although there was no evidence to suggest it at the time of the study, Conflict Armament Research has since identified more than 25 per cent of this 7.62 x 39 mm ammunition as having been manufactured in Iran (Image 8).

In 2006–08 no prior studies had documented this type of ammunition on the African continent. In addition, the ammunition in the sample was largely discovered loose (or loaded into magazines) rather than boxed in its original packaging. For this reason information such as factory markings or shipping labels that might have identified the ammunition as having originated in Iran was not available.

The study did, however, record one instance in which the ammunition was found packaged in sealed green polythene bags. The bags featured two moulded handles and had to be cut to gain access to the cartridges. Each bag contained 20 cardboard boxes, each packed with 20 cartridges. The bags

Image 8

Iranian 7.62 x 39 mm cartridge recovered from northern Kenya

Notes: The cartridge illustrated is one of several recovered from various locations in Eastern Equatoria (South Sudan), Karamoja (Uganda) and Turkana District (Kenya). The firing pin mark on the primer cap results from discharge in a weapon following the demilitarisation of the cartridge (by bullet pulling). Photograph of a physical sample held by Conflict Armament Research.



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were marked with yellow/gold lettering indicating the quantity of ammunition, the calibre, lot number and year of manufacture. Although the sensitive security environment prevented photography of the packaging,¹⁵ the bags were identical in construction and marking to Iranian ammunition ‘battle bags’ later found elsewhere on the continent (see the cases presented below).

The Small Arms Survey study concluded that Kenyan security forces were the primary source of the (then-unidentified) Iranian 7.62 x 39 mm ammunition circulating in the region—specifically the Kenya Police and Kenya Police Reserves. Evidence for these assertions included the following:

- In 2008 Iranian-manufactured ammunition of the type illustrated in Image 8 comprised 70 per cent of sampled 7.62 x 39 mm cartridges in service with the Kenya Police and Kenya Police Reserves.
- The study observed first-hand the Kenya Police supplying this type of ammunition to armed Turkana civilians in 2007 and 2008.
- Reports by those supplied with the ammunition confirmed that the Kenya Police and Kenya Police Reserves had distributed it.
- The prevalence of this type of ammunition diminished at greater distances from Kenya (and from the Kenya Police and Kenya Police Reserves that supplied it).¹⁶

Although not recognised in 2008 as having originated in Iran, it is clear that the Government of Kenya imported very large quantities of Iranian ammunition—probably in the range of millions of rounds.

Analysis of the date marks applied to cartridges indicate production in the years 2001, 2002 and 2003, with 97 per cent of the cartridges bearing 2003 date marks. A logical conclusion is that the cartridges cannot have been supplied prior to the date of manufacture (2001), nor can they have been supplied after the date they were observed (2008). Moreover, given that the majority of cartridges date from 2003 and that large-scale observation began in 2006, there are some grounds for concluding that the Government of Kenya acquired the ammunition between 2003 and 2006. This conclusion is arguably lent greater weight by the fact that UN Security Council prohibited the export of Iranian military materiel in March 2007, which should have deterred direct Kenyan ammunition acquisition from Iran after that date.¹⁷

However, these observations shed little light on the actual circumstances of Kenya’s acquisition of the ammunition. Without evidence to the contrary, supply by a third party (other than Iran) cannot be excluded. However, the time between manufacture and supply (plausibly as little as three years) would suggest a very rapid series of transfers between three parties—i.e. export from Iran to a third country and subsequent re-export to Kenya. Requests for clarification made to the Government of Kenya at the time of the initial investigation and since remain unanswered.¹⁸

DARFUR, SOUTHERN SUDAN AND SOUTH SUDAN, 2006–12

Iranian ammunition is in service with Khartoum-backed forces in the Darfur region of Sudan. It is also in service with SAF troops operating on the border with South Sudan. Although investigations have not documented supplies of Iranian ammunition to Khartoum-backed militias in South Sudan, they have identified Iranian weapons in all three regions—Darfur, southern Sudan¹⁹ and South Sudan.

There is also growing evidence to suggest that the Government of Sudan manufactures weapons of Iranian design, operates weapon production facilities with Iranian assistance and supplies Iranian-manufactured weapons to forces allied to it in the region.

Working in conjunction with independent investigators, Conflict Armament Research has documented two types of Iranian ammunition in service with Khartoum-backed militia forces in Darfur and southern Sudan. The first type is 7.62 x 39 mm in calibre and is identical in construction to the examples documented elsewhere in this report (see Image 9).

The second type of ammunition, documented in use in Darfur and southern Sudan, is 7.62 x 54R mm in calibre (see Image 10). The cartridge is also identical to Iranian ammunition identified elsewhere in this report. A third cartridge is 12.7 x 108 mm in calibre, resembles Iranian-manufactured

Image 9**Iranian 7.62 x 39 mm cartridge recovered from Darfur, 2008**

Notes: The cartridge case illustrated was one among a number of identical types found following a military action launched by Khartoum-backed militia forces in April 2008 (location withheld for reasons of confidentiality).

Source: Confidential



ammunition, but has not been identified positively (see Annex 3 for photographs).

Investigators have identified the two types of Iranian ammunition pictured in Images 9 and 10 among seizures of weapons from Khartoum-backed forces in Darfur or in abandoned SAF facilities—including Iranian 7.62 x 54R mm cartridges documented inside an abandoned SAF garrison in Tess, South Kordofan in May 2012.²⁰

It is unclear why investigators have not yet documented Iranian ammunition in service with Khartoum-supplied forces operating in South Sudan, particularly since these forces—like their counterparts in Darfur—field a range of weapons that are of Iranian manufacture or design.

For example, a growing number of Iranian weapons are in service with Khartoum-backed militia forces in Darfur and South Sudan, in addition to Iranian

weapons deployed by SAF troops operating in southern Sudan. They include numerous RPG-7-pattern rocket launchers of Iranian design (see Image 11),²¹ Iranian anti-personnel mines and a variety of other Iranian-manufactured military materiel.²² Interviews with captured or defecting militia leaders confirm that the weapons have been supplied directly from Khartoum, specifically by elements within the Sudanese National Intelligence and Security Services (NISS).²³

The manufacturing dates of Iranian ammunition identified in the region range from 2001 to 2004. The 2004-dated ammunition identified in Darfur (see Image 10) indicates potential supplies in violation of the UN Security Council arms embargo on the region (in place since 2004).²⁴ Although yet to be documented as being in service with Khartoum-backed forces in South Sudan, extensive Iranian weapons supplies to these forces suggest the probable supply of such ammunition.

Image 10**Iranian 7.62 x 54R mm cartridge recovered from South Darfur, April 2010**

Notes: The cartridge case illustrated was one among a number of identical types found following a military action launched by Khartoum-backed militia forces in Kalma internally displaced persons camp (near Nyala) and documented in April 2010.

Source: Confidential





Image 11

RPG-7-pattern rocket launcher of Iranian design recovered from Khartoum-supplied militia in South Sudan, 2012

Notes: The weapon is unmarked. It features a moulded pistol grip and a second, pillar-like grip to the rear of the trigger assembly. These characteristics are unique to Iranian-designed RPG-7-pattern launchers. It was seized in Mankien, South Sudan and viewed at the Sudan People's Liberation Army 4th Division headquarters in Rubkhona, Unity State on 27 January 2012.

© Mike Lewis/Small Arms Survey

Beyond the evidence presented above, there are growing (albeit fragmentary) indications of Iranian cooperation and technical assistance in the manufacture or retransfer of weapons in Khartoum. These indications are best listed rather than comprehensively analysed because, while they may suggest close cooperation between Iran and Sudan, they are not definitive:

- In January 2007 Iran and Sudan reportedly signed a military cooperation agreement and initiated discussions on the sale of Iranian weapons, including 'Iranian missiles, RPGs, UAVs and other equipment'.²⁵ Conflict Armament Research has received credible reports that the Yarmouk Industrial Complex (YIC) in Khartoum serves as a production/onward shipment facility for Iranian/Iranian-designed weapons.²⁶
- Conflict Armament Research has also received credible reports that personnel working in the YIC visit Tehran for regular technical training on weapons or ammunition production. The precise nature of this training has not been documented. Reports suggest two or three such visits in 2011–12.²⁷
- Images of weapons displayed on the Sudanese Military Industrial Corporation (MIC) website depict weapons of recognisably Iranian design.²⁸ The YIC operates under the umbrella of the MIC, which is controlled by the NISS.
- Documented cases of weapons transfers to Khartoum-backed militias operating in Darfur and South Sudan have involved the supply of Iranian weapons and also ammunition consigned to the YIC.²⁹ Interviews with militia commanders indicate that the Sudanese NISS organised the transfers.³⁰

- Israel targeted the YIC (although did not claim responsibility) with air strikes on 23 October 2012. Air attacks attributed to Israel and targeting vehicles bound from eastern Sudan to Sinai in January 2009 and April 2011 were reportedly orchestrated to disrupt shipments of Iranian weapons bound for Gaza.³¹

These reports do not constitute comprehensive evidence of Iran's role in the manufacture or redistribution of Iranian-designed weapons in or from Khartoum. However, viewed against the physical evidence of weapons documented in Darfur, southern Sudan and South Sudan, and in light of the proliferation of Iranian ammunition in the region, they point towards increasing Khartoum–Tehran cooperation in the defence sector.

GUINEA, 2009–10

In 2009 researchers working for Amnesty International documented numerous types of ammunition recovered from the 28 September 2009 stadium massacre in Conakry, Guinea and nearby parts of the city.³² These types included several 7.62 x 39 mm cartridges, of which an example is pictured in Image 12. The cartridges are identical in construction to Iranian 7.62 x 39 mm ammunition documented elsewhere in this report. However, in addition to a '06' date mark indicating production in 2006, the cartridges also feature lot marks, including '161' and (in Image 12) '257'.

Although the lot mark differentiates this ammunition from known Iranian ammunition documented elsewhere in Africa, its construction is identical. The cartridges are brass cased, while the projectiles are constructed of a lead core encased in a tombak jacket.³³ In each case the primer is secured with three 120-degree stab crimps.

In addition to sharing physical characteristics with Iranian ammunition identified elsewhere in Africa, it is identical to ammunition documented in

Afghanistan and attributed to Iran (see Image 13).³⁴ Although the lot numbers differ from the Guinean samples, the cartridge construction, primer annulus colour and headstamp font are the same.

Amnesty International concluded that the ammunition pictured in Image 12 was in service with Guinean security forces at the time of the stadium massacre. In March 2010 investigators with access to ammunition used by the Guinean security forces confirmed that the same type of ammunition remained in government service.³⁵

Production dates (2006) of the Iranian ammunition found in Guinea indicate post-2006 transfer to the country. This, and the fact that investigators first documented the ammunition as being in service with Guinean armed forces in September 2009, suggests acquisition by the Government of Guinea between 2006 and 2009. The circumstances of this acquisition are unclear. Any such transfer after March 2007 would have contravened UN Security Council sanctions on Iranian arms exports.³⁶

Image 12

Iranian 7.62 x 39 mm cartridge recovered from Conakry, Guinea on 28 September 2009

Notes: The cartridge is spent (i.e. the empty cartridge case alone), having been fired during the events of 28 September 2009.

© Mike Lewis/Amnesty International, 2009



Image 13

**7.62 x 39 mm
ammunition recovered
from Taliban forces
in Nawa-I-Barakzayi
District, Helmand
Province, Afghanistan,
documented in
January 2010**

Notes: The cartridge illustrated is one of a number documented during the New York Times investigation that conform to the physical characteristics of ammunition positively identified as Iranian in origin and documented in this report.

© C. J. Chivers/New York Times,
2010



CÔTE D'IVOIRE, 2009–12

Evidence compiled by Conflict Armament Research from a range of investigations indicates at least two, unconnected supplies of Iranian ammunition to Côte d'Ivoire. The first occurred between 2002 and 2009 and involved transfers of Iranian 7.62 x 39 mm ammunition to former rebel forces operating in northern Côte d'Ivoire. The second case suggests that former government forces acquired quantities of Iranian 7.62 x 54R mm ammunition after 2000, but plausibly since a November 2004 UN arms embargo on Côte d'Ivoire.

Iranian ammunition transfers to northern Côte d'Ivoire

In October 2009 The UN Group of Experts on Côte d'Ivoire³⁷ reported extensive transfers of ammunition from the territory of Burkina Faso to rebel forces in the north of the country. These transfers violated the UN Security Council arms embargo on Côte d'Ivoire imposed by Resolution 1572 (2004).

The transfers consisted of large numbers of cartridges—then estimated to be in excess of 0.5 million rounds—a substantial proportion of which the Group of Experts was unable to identify.³⁸

Conflict Armament Research has since obtained samples of the unidentified ammunition and confirmed that it is Iranian in origin (see Image 14). The cartridges are identical in construction, markings and date of manufacture to numerous examples identified in East Africa (see the cases presented above).³⁹

The Group of Experts found no examples of the Iranian ammunition in its original, factory packaging. Instead, it noted that the ammunition had been repacked into hessian bags (see Image 15). The Group of Experts concluded that the removal of ammunition from its packaging increased the risks of damage from environmental exposure and handling, and served no military purpose beyond concealment.⁴⁰

Conflict Armament Research's findings support this conclusion. First, many of the hessian bags contained only one type of identically marked Iranian ammunition. This suggests the unpacking of homogeneous ammunition straight from its original factory packaging. Second—and supporting this argument—some of the cartridges had been packed into small black plastic bags, each containing exactly 20 rounds of ammunition.⁴¹



Image 14

Iranian 7.62 x 39 mm cartridge recovered from northern Côte d'Ivoire, documented in 2009

Notes: Photographed *in situ*. Date and place of documentation withheld for reasons of confidentiality.

Source: Confidential



Image 15

Bagged ammunition in northern Côte d'Ivoire, documented in 2009

Notes: Photographed *in situ*. Date and place of documentation withheld for reasons of confidentiality.

Source: Confidential



Image 16

Sudanese-manufactured 7.62 x 39 mm ammunition in northern Côte d'Ivoire, documented in 2011

Notes: The cartridges pictured on the left and right are date-marked '04', indicating production in 2004. The cartridge pictured in the centre dates from 2003. The three cartridges feature the number '39'. This is the second part of the calibre designation (i.e. 7.62 x 39 mm), which is typical of Sudanese-manufactured ammunition. More information on Sudanese marking practices can be found in Small Arms Survey (2011).

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Factory-packaged Iranian ammunition is supplied in 20-round cartons, which again suggests deliberate repackaging directly from factory boxes.

Although these findings suggest deliberate attempts to conceal the origins of the ammunition, reports by successive Groups of Experts on Côte d'Ivoire firmly implicate the territory of Burkina Faso in ammunition supplies to Ivorian rebel forces.⁴² These reports suggest the delivery by truck of bagged ammunition across the border between the two countries.⁴³ Nonetheless, the absence of ammunition packaging (and potential evidence such as lot markings and shipping documents) prevents identifying the chain of custody before arrival in the territory of Burkina Faso and onward shipment to Côte d'Ivoire.

There are, however, some indications that the ammunition may have transited a third African country. First, there is no documented record of Burkina Faso having procured Iranian ammunition (although there are records of Burkina Faso's procurement of other types of ammunition found in Côte d'Ivoire).⁴⁴ More significantly, Groups of Experts documented Sudanese ammunition, also stored in hessian bags, together with the Iranian cartridges (see Image 16).⁴⁵

This finding may suggest a possible link between the bagged ammunition found in Côte d'Ivoire and regions where Iranian and Sudanese ammunition proliferates in similar quantities.

For example, Conflict Armament Research's analysis of ammunition in Darfur presented in this report may suggest some link between the two regions—raising the prospect of trans-Saharan/Sahelian land transfers. However, at present there is insufficient evidence to draw firm conclusions.

Iranian ammunition in service with former government forces

In addition to the Iranian 7.62 x 39 mm ammunition identified in service with former rebel forces, Conflict Armament Research has comprehensively documented Iranian 7.62 x 54R mm cartridges in Côte d'Ivoire. As the following account describes, evidence suggests that, while some of the ammunition may have entered the country prior to the November 2004 UN arms embargo, efforts to conceal box markings on other examples suggests possible post-embargo shipment to Côte d'Ivoire.

Investigators initially documented Iranian 7.62 x 54R mm ammunition held by rebel forces in 2010.⁴⁶ They observed the ammunition in very limited quantities (about 2,000 cartridges) in only one rebel-controlled location (see Image 17). Unlike the 7.62 x 39 mm Iranian ammunition in service with rebel forces and repacked into hessian bags, this ammunition remained in its original green factory-packed battle bags. The fact that it had not been repacked and no effort appeared to have been made to conceal its origins suggested a different source of supply.



Image 17

Iranian 7.62 x 54R mm ammunition in service with rebel forces in northern Côte d'Ivoire, documented in 2010

Notes: Precise date and place of documentation withheld for reasons of confidentiality. The ammunition is packed in quantities of 20 rounds into cardboard boxes. Each green battle bag contains ten such boxes, totalling 200 cartridges per bag.

Source: Confidential

The date of manufacture (2001) pre-dates the arms embargo (November 2004) on Côte d'Ivoire by approximately three years. It also pre-dates the division of the country after a military mutiny in September 2002, which left rebel forces in control of the north of Côte d'Ivoire. This, and the fact that rebel arsenals included arms captured from government forces, may suggest that the Iranian ammunition had been in government service before 2002. If this is the case, its supply to the Government of Côte d'Ivoire would have been legal, contravening neither the 2004 embargo on Côte d'Ivoire nor the 2007 sanctions on exports of Iranian weapons.⁴⁷

An analysis of Iranian ammunition in service with former government forces would appear the easiest way to resolve this puzzle. However, this is complicated by two pieces of contradictory evidence.

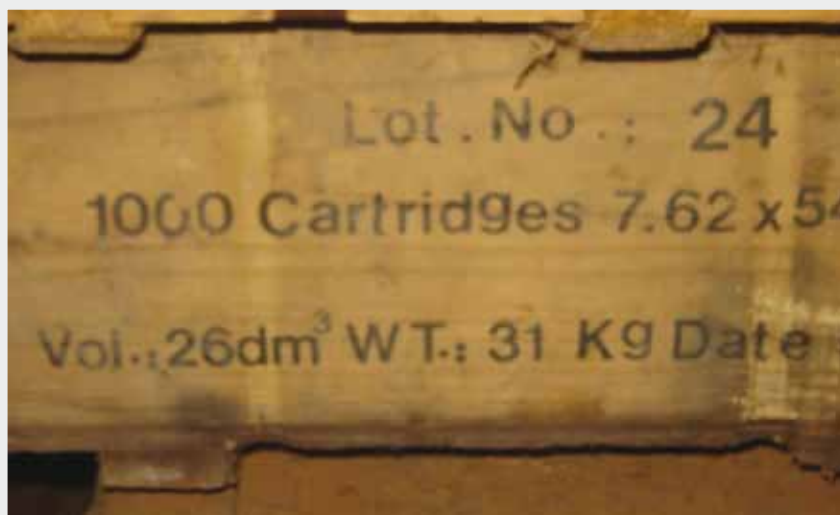
First, in 2009 an observer in Côte d'Ivoire photographed part of an Iranian ammunition box (see Image 18).⁴⁸ The box was then under the control of forces loyal to the former president, Laurent Gbagbo (who was deposed on 11 April 2011). Although the photograph indicates no date of manufacture, it is clear that no attempt has been made to erase and conceal the markings on the box.

Image 18

Partial information on an Iranian 7.62 x 54R mm ammunition box in service with government forces in Côte d'Ivoire, documented in 2009

Notes: Precise date and place of documentation withheld for reasons of confidentiality. The date of manufacture is not visible in the above photograph due to the misaligned camera angle.

Source: Confidential





Second, in 2011 and 2012 investigators discovered Iranian 7.62 x 54R ammunition boxes in several separate locations in Côte d'Ivoire.⁴⁹ These boxes had been in service with forces loyal to the former government. But, unlike the box observed in 2009 (Image 18), they had been systematically painted to conceal marks applied to their sides (see Image 19). In all cases, and despite having been observed in different locations, the mode and colour of painting were consistent—light blue paint applied only to the marked sides of the boxes.

Because it is difficult to imagine someone taking the trouble to paint out the markings on only some boxes in an ammunition shipment, these findings suggest two separate shipments of Iranian ammunition to the former Government of Côte d'Ivoire. In one shipment there was no attempt to

conceal the markings on the ammunition boxes, plausibly because the transfer was legal. In the second shipment the markings were deliberately concealed, perhaps because it violated either the 2004 embargo on Côte d'Ivoire or the 2007 embargo on Iranian weapons exports.

Without further evidence, this conclusion remains a hypothesis. Similarly, available evidence to date does not establish a chain of custody and there is no information marked on—or found in—the ammunition boxes to indicate how and when they entered the country. Ammunition identified thus far dates from 2000 and 2001—well before the aforementioned embargoes, but the efforts to conceal markings on the boxes still provide the firmest evidence to suggest quasi-legal or illegal transfer at some point in the ammunition's history.



Image 19

Iranian 7.62 x 54R mm ammunition boxes with concealed markings and their contents, documented in 2012

Notes: Precise date and place of documentation withheld for reasons of confidentiality. Clockwise from top left: (1) typical Iranian ammunition box construction with rope handles; (2) blue paint applied to box sides to conceal factory markings; (3) battle bag containing 200 rounds, lot-marked '18' and manufactured in 2001.

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ON OPENING THE CONTAINERS, THE NIGERIAN AUTHORITIES DISCOVERED THAT CIVILIAN BUILDING MATERIALS, INCLUDING STONE SLABS AND GLASS FIBRE INSULATION PANELS, HAD BEEN STACKED IN FRONT OF THE WEAPONS AND AMMUNITION TO CONCEAL THEM.

NIGERIAN WEAPONS AND AMMUNITION SEIZURE, 2010

On 26 October 2010 Nigerian security forces seized 13 shipping containers in the port of Apapa in Lagos, Nigeria. In the containers they found 240 tonnes of ammunition, including 107 mm rockets; 60, 80 and 120 mortar bombs; grenades; and 7.62 x 54R mm Iranian-manufactured ammunition dated 2006 and packed in green battle bags.⁵⁰ The ammunition and the green battle bags were identical to the types described elsewhere in this report. Iran's ambassador to Nigeria confirmed that the shipment had originated in Iran, specifically the port of Bandar Abbas.⁵¹

The history of this case indicates various efforts on the part of entities operating from Iran, Nigeria and possibly Gambia to conceal the shipment. In September 2010 an African government intelligence service⁵² received information that entities in Gambia had ordered a consignment of weapons and ammunition from Iran.⁵³ The intelligence service contacted a third party requesting that it attempt to trace 13 containers featuring container identification codes with the prefix 'SOLE'. This was reportedly not possible because the containers were 'shipper owned' and not registered with the Bureau International des Containers (BIC).⁵⁴

The chain of events that led to the seizure of the consignment becomes unclear from this point forward. The consignment that arrived in Apapa port (offloaded at Tin Can Island port on 15 July 2010) was not destined for Gambia, but for Nigeria.⁵⁵ The original bill of lading consigned the shipment to a person and address in Nigeria. After some time (precise duration unknown) the owner of the goods

instructed the shipper to forward the containers to Gambia. It was at this stage that Nigerian security forces inspected and seized the consignment.

The only firm conclusions that can be drawn from this case are that there was an attempt to conceal the contents and that the shipment originated in Iran. First, the bill of lading issued on 2 June 2010 does not describe the contents of the shipment (see Annex 4). On opening the containers, the Nigerian authorities discovered that civilian building materials, including stone slabs and glass fibre insulation panels, had been stacked in front of the weapons and ammunition to conceal them.

Second, reports indicate that the freight forwarder, Behineh Trading, is a front company for the Iranian Revolutionary Guard Corps (IRGC) and had been involved in earlier shipments of Iranian weapons (seized outside Africa).⁵⁶ In addition, one member of the IRGC was reportedly involved in organising the shipment from Nigeria.⁵⁷ Confidential reports citing statements by Iran's ambassador to Nigeria suggest that this was not only a direct shipment from Iran, but was preceded by two similar shipments.

The intended recipient of the shipment is unclear. Originally consigned to Nigeria, but later to Gambia, it could plausibly have been destined for any number of recipients—including regional governments. The fact that the shipment contravened the UN sanctions on Iranian arms exports (in force since 2007) would justify concealment, regardless of whether the recipient was a national government or non-state group.

ADDITIONAL CASES

Investigations compiled by Conflict Armament Research also document Iranian ammunition in eastern DRC and the West African state of Niger. While there is very little evidence to indicate sources of supply in each case, they nevertheless provide important additional information on the distribution of Iranian ammunition in countries other than those described above.

DRC, 2009

In 2009 investigators documented Iranian 7.62 x 39 mm Iranian ammunition of the type pictured in Image 1 at the beginning of this report. Reports by the user suggest that the ammunition was in service with the Forces Républicaines Fédéralistes (FRR), a Banyamulenge armed group operating in the Hauts Plateaux region of South Kivu, eastern DRC.⁵⁸

Investigators also documented Sudanese-manufactured ammunition together with the Iranian types. There is no available evidence to suggest from where the FRR acquired the ammunition.

Niger, 2011-12

Reports from Niger indicate two interceptions of Iranian ammunition by Nigerien security forces. In September 2011 Nigerien military forces recovered weapons and ammunition in northern Niger following an engagement with forces reportedly aligned with AQIM. The seizure included Iranian 7.62 x 54R mm ammunition dated 2002 and of the type documented elsewhere in this report (see Image 20).

In May 2012 Nigerien authorities intercepted a small shipment of weapons close to the border with Burkina Faso. The seizure included 2002-dated Iranian 7.62 x 39 mm ammunition of the type pictured in Image 1 at the beginning of this report. Information obtained from Niger suggests that the shipment entered Nigerien territory from Burkina Faso, but may have originated in Côte d'Ivoire.⁵⁹



Image 20

Iranian 7.62 x 54R mm, unspecified location in northern Niger, 2011

Source: Confidential

EXPORT REFERENCES



CMA CGM

CARRIER: CMA CGM - Société Anonyme au Capital
Head Office: 4, quai de France - 13001
Tel: (33) 4 88 91 90 00 - Telex: (33) 4 88 91 90 00
B 562 04 122 R.C.S. M

PLACE OF RECEIPT

FREIGHT TO BE PAID AT

NUMBER

TEHRAN

THREE

**THE ONLY PROVEN
CASE INVOLVING DIRECT
SUPPLY BY IRAN TO
ENTITIES OTHER THAN
AFRICAN GOVERNMENTS
IS THE 2010 SEIZURE OF
IRANIAN WEAPONS AND
AMMUNITION IN NIGERIA.**

CONCLUSION

Iran is a recent supplier of ammunition to Africa. There is only trace evidence of supply before 2001, but Iranian ammunition manufactured in 2002–03 and later-dated examples are in widespread circulation across the continent.

Iranian ammunition is in service with four African governments: Côte d'Ivoire (until 2011), Guinea, Kenya and Sudan. Although the circumstances of acquisition are unclear, the quantities involved in the Sudan, Guinea and Kenya cases suggest direct supply by Iran. A question mark hangs over the Ivorian case because of clear attempts to conceal the shipment.

Ten additional investigations find Iranian weapons and ammunition in service with a variety of non-state entities, including foreign-backed insurgents, rebel forces, Islamist-oriented armed groups and warring civilian communities. The sources of this materiel are difficult to ascertain. All indications suggest that direct supply by Iran is unlikely and that retransfer or diversion from African government forces is the most likely source.

This is certainly the case for Iranian ammunition (and weapons) supplied by Sudan to forces in Darfur and South Sudan. Ammunition transfers to former rebel forces in Côte d'Ivoire also suggest indirect supply by entities other than Iran, evidenced by the fact that the same transfers include non-Iranian ammunition. Kenyan security forces are the confirmed source of Iranian ammunition that is in widespread circulation in the border regions of Kenya, South Sudan and Uganda.

The only proven case involving direct supply by Iran to entities other than African governments is the 2010 seizure of Iranian weapons and ammunition in Nigeria. In the remainder of cases, African governments appear to be the primary vectors in the supply of Iranian ammunition to Africa's illicit markets.

In terms of its role in the African arms market, although a recent entrant, Iran's ammunition

'footprint' is widespread. The 14 cases presented in this report are evidence of this alone. Iranian ammunition circulates in conflict-affected regions from East to West Africa. But it is important to recognise that, despite extensive circulation, Iranian ammunition and weapons are small in number in comparison to materiel supplied from former Soviet-bloc countries and, increasingly, China.

The only case to indicate the sustained—and potentially escalating—supply of Iranian materiel is Sudan. In this case there is growing evidence to indicate large-scale supplies of weapons and ammunition from Iran to Sudan and Iranian technical assistance in Sudanese weapons production. This trend appears to result from the close political alignment of Khartoum and Tehran.

In all other cases, Iranian ammunition found in service with African government forces appears to be the result of 'opportunistic' supply. Acquisitions by Guinea, Kenya and (possibly) Côte d'Ivoire involved large quantities of ammunition, but,

TEN ADDITIONAL INVESTIGATIONS FIND IRANIAN WEAPONS AND AMMUNITION IN SERVICE WITH A VARIETY OF NON-STATE ENTITIES, INCLUDING FOREIGN-BACKED INSURGENTS, REBEL FORCES, ISLAMIST-ORIENTED ARMED GROUPS AND WARRING CIVILIAN COMMUNITIES.

THE AFRICAN ARMS MARKET IS CHANGING, WITH THE INVOLVEMENT OF NEW SUPPLIERS AND THE APPEARANCE OF NEW SUPPLY VECTORS, BOTH LEGAL AND ILLICIT.

unlike Sudan, they do not appear to have involved the transfer of Iranian weapons. Moreover, dates of manufacture suggest that these transfers took place within a relatively short time period and do not appear to have been repeated—although this cannot be ruled out.

Finally, this report's findings have wider implications for weapons and ammunition proliferation in Africa. First, relatively recent supplies of Iranian ammunition emphasise the evolving nature of the market. The African arms market is changing, with the involvement of new suppliers and the appearance of new supply vectors, both legal and illicit. Exporters such as China (and to a lesser extent Iran) appear to be heavily involved in the supply of weapons to African states that are embroiled in armed conflicts. Countries such as Sudan are not simply end users of foreign-manufactured materiel, but intensive redistributors.

Second, the findings re-emphasise the critical role that African governments play in feeding weapons and ammunition to illicit markets. Investigations in this report profile ongoing problems associated with either the loss or theft of weapons from government arsenals or deliberate government arms supplies to neighbouring insurgencies. These two factors make African governments the primary indirect source, not only of Iranian ammunition circulating on illicit markets, but arms and ammunition from a host of other manufacturers.

Third, these findings suggest severe weaknesses in the international community's capacity to monitor—and subsequently address—illicit weapons flows. Although Iranian ammunition

transfers to Africa are relatively recent, they still encompass a decade of activity. The fact that this is the first major report to note Iran's decade-long involvement indicates a worrying lack of capacity devoted to monitoring illicit proliferation. Despite millions of dollars spent on international diplomatic initiatives, such as the UN Programme of Action on Small Arms or the Arms Trade Treaty process, the resources allocated to field investigations remain slight in the extreme.

Interested members of the international community stand a far greater chance of assisting—or pressuring—African governments to curtail unchecked arms transfers than they have of persuading emerging arms producers to abandon newly found market opportunities. But to do this, the international community must invest in the necessary diagnostic side of arms control. The problem cannot be adequately addressed unless it is fully understood. Donor governments need to act quickly and provide the appropriate resources to field-based investigations.

ANNEXES

ANNEX 1: TECHNICAL SPECIFICATIONS OF IRANIAN 7.62 X 39 MM CARTRIDGES⁶⁰

The ammunition is 7.62 x 39 mm in calibre and has a brass cartridge case. The projectile (bullet) weighs 8.1 grams, is 24.6 mm in length and boat-tailed in design, with a lead core encased in a tombak jacket.⁶¹ Numerous documented examples indicate that the primer annulus colour varies from red to green (including various shades of the two). The primer is secured with three 120-degree stab

crimps. The headstamp follows a standard format displaying the full calibre designation ('7.62 x 39') at the 12 o'clock position and an abbreviated date code at the 6 o'clock position ('03' for 2003). The dimension and weight specifications of this cartridge are consistent with those provided by the Iranian DIO's AMIG.

Notes: Photographs of a physical sample held by Conflict Armament Research. Clockwise from top left: (1) full profile of the cartridge; (2) cartridge headstamp; (3) base of the projectile; (4) full profile of the projectile.



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ANNEX 2: TECHNICAL SPECIFICATIONS OF IRANIAN 7.62 X 54R MM CARTRIDGES⁶²

The ammunition is 7.62 x 54R mm in calibre and has a brass cartridge case. The projectile weighs 11.2 g, is 31.3 mm in length and boat-tailed in design, with a lead core encased in a tombak jacket.⁶³

All documented cartridges feature a green primer annulus (various shades). The primer is secured with three 120-degree stab crimps. The headstamp follows a standard format displaying the full calibre designation ('7.62 x 54') at the 12 o'clock position and an abbreviated date code at the 6 o'clock position ('01' for 2001). The dimension and weight specifications of this cartridge are consistent with those provided by the Iranian DIO's AMIG.

The DIO lists two types of 7.62 x 54R in production. The first is described as '7.62 x 54 Light', which has a bullet weight of 9.7 g. The cartridge conforms to standard Soviet cartridges intended for use in weapons such as the PKM-pattern machine gun, which is in widespread service in Africa. DIO describes the second type as '7.62 x 54 Heavy'. The ammunition presented here is of this type. It has a heavier bullet weight (11.2 g) and was designed for use in weapons that are now largely obsolete, including the Maxim M1910 and SG-43 machine guns (dating from the first half of the 20th century). Although this cartridge can be fired from PKM-pattern weapons, its ballistic characteristics differ from the '7.62 x 54 Light' variant. The result is that accurate firing would be impaired, primarily because PKM-pattern weapon sights are not configured for this type of ammunition.

Notes: Photographs of a physical sample held by Conflict Armament Research. Clockwise from top left: (1) full profile of the cartridge; (2) cartridge headstamp; (3) base of the projectile; (4) full profile of the projectile.



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ANNEX 3: SUSPECTED IRANIAN 12.7 X 108 MM AMMUNITION

Source: Confidential

ANNEX 4: NIGERIAN WEAPONS AND AMMUNITION SEIZURE, OCTOBER 2010: BILL OF LADING DATED 2 JUNE 2010

ORIGINAL
BILL OF LADING

SWS41S
BILL OF LADING NUMBER
IR1253655

Behineh Trading
989 195382365

CONSIGNEE
TO ORDER
KANTALAHAMS STATE HOUSE
P.O. BOX 1432
BANJUL GAMBIA
TEL: +220 7760666

EXPORT REFERENCES
CMA CGM

NOTIFY PARTY: Carrier not to be responsible for failure to notify
MR. ALI ABBAS USMAN JEGA
SUITE 68, MANGAL PLAZA
NOUNKHOFF STREET, WUSE ZONE 1
ABUJA-NIGERIA
TEL: 00234-8033346722 & 08088999990

CARRIER: CMA CGM - Société anonyme au capital de 175 000 000 euros
Head Office: 4, quai de la Jolande - 13002 Marseille - France
Tel: (33) 4 88 91 90 00 - Fax: (33) 4 88 91 90 95 - Telex: 401 667 F
B 562.C 4 22 R.C.S. Marseille

PRE CARRIAGE BY	PLACE OF RECEIPT	FREIGHT TO BE PAID AT	NUMBER OF ORIGINAL BILLS OF LADING
	TEHRAN		THREE (3)
OCEAN VESSEL	PORT OF LOADING	PORT OF DISCHARGE	FINAL PLACE OF DELIVERY
CMA CGM KALAS	SHAHID RAJAEI PORT PERSIAN GULF	APAPA	

MARKS AND NOS CONTAINER AND SEALS	NO AND KIND OF PACKAGES	DESCRIPTION OF PACKAGES AND GOODS AS STATED BY SHIPPER SHIPPER'S LOAD, STOW AND COUNT	GROSS WEIGHT	TARE	MEASUREMENT
			KGS	KGS	CUB
SOLE7866531 SEAL 8328791	1 x 20ST	58 PACKAGE(S) Shippers Owned Container	19116.000	2000	
SOLE7866674 SEAL 8328792	1 x 20ST	58 PACKAGE(S) Shippers Owned Container	19117.000	2000	
SOLE7866819 SEAL 8328793	1 x 20ST	58 PACKAGE(S) Shippers Owned Container	19117.000	2000	
SOLE7867707 SEAL 8328794	1 x 20ST	58 PACKAGE(S) Shippers Owned Container	19117.000	2000	
SOLE7868318 SEAL 8328795	1 x 20ST	58 PACKAGE(S) Shippers Owned Container	19117.000	2000	
SOLE7868370 SEAL 8328796	1 x 20ST	58 PACKAGE(S) Shippers Owned Container	19117.000	2000	
SOLE7868431	1 x 20ST	58 PACKAGE(S) Shippers Owned Container	19117.000	2000	

Continued on Next Sheet Sheet 1 of 3

ABOVE PARTICULARS DECLARED BY SHIPPER, CARRIER NOT RESPONSIBLE

ADDITIONAL CLAUSES

and to contain
2. Stowage, lashing, load and count
4. Cargo at port of receipt, expenses and responsibility
5. PFI
77. THC at destination payable by consignee as per airport tariff
84. Ground handling charges as per POD for Consignee's account according to port rates.
184. For the purpose of the present carriage, clause 14(C) shall exclude the application of the York/Antwerp rules, 2004.
202. Demurrage and detention payable by the Merchant as per CMA CGM tariff available on the web site www.cma-cgm.com, or in any of CMA CGM agency
213. Neither the shipping line nor the line agent are responsible for missing or incorrect forms number and the responsibility remains with the Merchant. Any fine or penalty levied against the Carrier is for accounts of the Merchant.
215. Mis-declaration of cargo weight endangers crew, port workers and vessels' safety. Your cargo may be weighed at any place and time of carriage and any mis-declaration will impose you to claims for all losses, expenses or damages whatsoever resulting thereof and be subject to freight surcharge.
225. The shipper acknowledges that the Carrier is authorized to carry the goods described in this bill of lading on the deck of any vessel and in taking possession of this bill of lading the Merchant (including the shipper, the consignee and the holder of the bill of lading, as the case may be) confirms his express acceptance of all the terms and conditions of the bill of lading and expressly confirms his unconditional and irrevocable consent to the carriage of the goods on the deck of any vessel.

RECEIVED BY THE CARRIER FROM THE SHIPPER IN APPARENT GOOD ORDER AND CONDITION (unless otherwise noted herein) the total number or quantity of Containers or other packages or packages indicated above stated by the shipper to comprise the cargo specified above for transportation, subject to all the terms hereof (including the terms on page one) from the place of receipt at the port of loading, whichever is applicable, to the port of discharge or the place of delivery, whichever is applicable. Delivery of the Goods will only be made on payment of all freight charges. On presentation of this document (if duly entered) to the Carrier, or on behalf of the holder, the rights and liabilities arising in accordance with the terms hereof shall not be prejudiced to any such extent. Actions against the Merchant under the contract of Carriage evidenced by this Bill of Lading shall be brought before the Tribunal de Commerce de MARSEILLE or, by the Carrier's option, before the Tribunal de Commerce de MARSEILLE or, by the Carrier's option, before the Tribunal de Commerce de MARSEILLE or, by the Carrier's option, before the Tribunal de Commerce de MARSEILLE or, by the Carrier's option, before the Tribunal de Commerce de MARSEILLE.

(OTHER TERMS AND CONDITIONS OF THE CONTRACT ON PAGE ONE)

PLACE AND DATE OF ISSUE TEHRAN 02 JUN 2010

SIGNED FOR THE SHIPPER
"APPLICABLE ONLY WHEN THIS DOCUMENT IS USED AS A COMBINED
TRANSPORT BILL OF LADING"

SIGNED FOR THE CARRIER CMA CGM S.A.
BY JAHAN DARVA Shipping Agency (Iran)
as agents for the carrier CMA CGM S.A.
Jahan Darva Shipping Agency (Ltd)

Source: Confidential

ENDNOTES

- 1 The headstamp is applied to the cartridge during manufacture. Specifically, it is applied during a process known as ‘drawing’ or ‘extrusion’. In the drawing process a machine forces a cup-shaped piece of brass into a mould or ‘die’ to form the initial, elongated shape of the cartridge case. A hardened steel plug, called a ‘bunter’, then punches a hole (the primer pocket) in the base of the cartridge and simultaneously impresses the headstamp on the cartridge base.
- 2 See DIO (2012) for technical specifications.
- 3 In the examples given in Table 1 the stamping quality differs primarily due to the condition of the bunter used to impart the headstamp. The bunter features raised markings. After continuous use the bunter becomes worn and the markings imparted to the cartridge head become less well defined and shallower. Variations in the quality and depth of markings on the headstamps pictured in Table 1 are the result of this process.
- 4 See DIO (2012) for technical specifications.
- 5 Conflict Armament Research has also documented a fourth type of cartridge that may be Iranian in origin. The cartridge is 12.7 x 108 mm in calibre and features a similar headstamp configuration to the cartridges described above. See Annex 3 for details.
- 6 Information obtained in email and telephone discussions with US-based cartridge collectors, May–June 2012.
- 7 Agence France Press photographs of the shipment displaying the green battle bags can be found at <<http://www.gettyimages.co.uk/detail/news-photo/security-official-arranges-arms-removed-from-a-crate-off-news-photo/106216924>>.
- 8 For detailed photographs, see IMFA (2002).
- 9 See IMFA (2002) for images of the seized ammunition.
- 10 US-based ammunition collectors report that the ammunition first appeared on the US market in the late 1990s, described as ‘Portuguese ammunition’ (information obtained in email and telephone discussions, May–June 2012).
- 11 Observations and interviews by James Bevan in Eastern Equatoria State, (then) southern Sudan, February 2008.
- 12 Interviews conducted by James Bevan in November and December 2006 with civilian users of the Iranian ammunition in Turkana North District, Kenya.
- 13 See UNSC (2007).
- 14 For a full presentation of the findings, see Bevan (2008a; 2008b).
- 15 Observations made by James Bevan in Lokichoggio, northern Kenya in January 2008.
- 16 See Bevan (2008a, pp. 46–51) for a presentation of the methodology and findings.

- 17 See UNSC (2007, para. 5) for the text of the resolution, which prohibits the supply, sale or transfer of arms and related materiel from the territory of Iran or by Iranian nationals.
- 18 The Small Arms Survey questioned government ministers at the time of the study as to the origins of the ammunition, but received no adequate response. In 2009 the UN Group of Experts on Côte d'Ivoire reportedly requested information on the ammunition concerned, but apparently received no response from the Government of Kenya. Back-channel inquiries by Conflict Armament Research within the Kenyan defence establishment did not achieve a definitive response. Additionally, in November 2012 Conflict Armament Research addressed a letter to the Government of Kenya (via the Permanent Mission of the Republic of Kenya to the UN in New York) requesting clarification on the origins of the ammunition. It still awaits a response.
- 19 South Kordofan and Blue Nile States.
- 20 Information provided by Claudio Gramizzi in correspondence, November 2012.
- 21 Some of the RPG-7-pattern launchers are marked with the designation A-30, while others feature no markings. Investigators have documented one A-30 (source and location withheld) with a packing list indicating production at the Yarmouk Industrial Complex (YIC) in Khartoum. Comparing known Iranian examples and A-30 types indicates the poorer-quality construction of A-30 models. This may suggest that Iranian-designed RPG-7-pattern launchers are manufactured at the YIC—particularly given the information found on the abovementioned packing list.
- 22 See Small Arms Survey (2012a, p. 3; 2012c).
- 23 Interviews conducted with defecting militia leaders by Conflict Armament Research and the Small Arms Survey in South Sudan, September 2012.
- 24 See UNSC (2004b; 2005) for the text of the relevant resolutions on Darfur.
- 25 See reports of the visit of Sudanese defence minister, Abdelrahim Hussein, to Tehran in January 2007, reported in the *Sudan Tribune* (2007a; 2007b).
- 26 Confidential exchange with a source connected to the YIC (date and location withheld for reasons of confidentiality).
- 27 Confidential exchange with a source connected to the YIC (date and location withheld for reasons of confidentiality).
- 28 First reported by the Small Arms Survey's Sudan Human Security Baseline Assessment Project (see Small Arms Survey, 2012c). The Sudanese MIC website lists three weapons that closely resemble Iranian types: the 'Sinar' RPG-7-pattern rocket launcher, the 'Karar' general-purpose machine gun and the 'Dinar' assault rifle. The Arabic version of the website provides greater detail than the English pages. See MIC (2012) for more information.
- 29 See, for example, ammunition boxes consigned to the YIC documented in Small Arms Survey (2012b, p. 7).
- 30 Interviews conducted with defected militia leaders by Conflict Armament Research and the Small Arms Survey in South Sudan, September 2012.
- 31 International news media widely reported the attacks. See also reports by the Meir Amit Intelligence and Terrorism Information Center (MAITIC, 2009, pp. 8–10; 2011, pp. 16–17). Conflict Armament Research has received credible information implicating Israel in the 23 October 2012 incident. It also bases its analysis on Israeli assertions of Iran's role in Sudan, as expressed in confidential interviews with representatives of the Government of Israel at various meetings in 2012.

- 32 See Amnesty International (2010, pp. 28–29) for details of the sample collected.
- 33 Tombak is a brass alloy with a high copper content. Investigations in 2010 ascertained with the use of a magnet that the projectiles contained no ferrous material (source and circumstances of observation withheld for reasons of confidentiality).
- 34 Interviews with British and US military observers in Afghanistan indicate concerns that the late date of production of this ammunition, together with documented supplies of military materiel from Iran to Taliban forces found together with it, suggest Iranian manufacture.
- 35 Source and circumstances of observation withheld for reasons of confidentiality.
- 36 See UNSC (2007).
- 37 Group of Experts on Côte d'Ivoire established pursuant to paragraph 11 of Security Council Resolution 1842 (2008).
- 38 See UNSC (2009, paras. 135–51) for details, including photographs of the cartridges, which are presented beneath para. 137. Reports from Côte d'Ivoire in 2011–12 suggest that, with rebel forces having gained control of Côte d'Ivoire in April 2011, the ammunition in question is now distributed across the country. In 2009–10 the ammunition was confined to rebel-held territory in the north of the country (confidential interviews with observers in Côte d'Ivoire conducted in 2011 and 2012).
- 39 A physical examination conducted by Conflict Armament Research of recovered samples from the two regions demonstrates the following: the materials and construction; the headstamp design, font and tool markings; and the bullet composition and weights are all identical. In each case the technical characteristics of the cartridges recovered from the two regions conform to data presented by Iran's DIO (see DIO, 2012).
- 40 Identifying information on or in factory boxes—detailing manufacturer, lot numbers or consignees—could otherwise have been used to establish a chain of custody (and the immediate supplier).
- 41 Source and circumstances of observation withheld for reasons of confidentiality.
- 42 UNSC (2011, paras. 92–110) presents additional evidence of weapons and ammunition transfers from the territory of Burkina Faso, including from Burkinabé security forces. UNSC (2012, paras. 24–26; Annexes 6a, 6b) provides evidence of Romanian ammunition initially shipped to the Government of Burkina Faso having been diverted into what was then rebel-held northern Côte d'Ivoire.
- 43 See UNSC (2009, paras. 145–49).
- 44 See UNSC (2012, paras. 24–26).
- 45 The 2009 Group of Experts on Côte d'Ivoire (UNSC, 2009, Table 4) identified some 7.62 x 39 mm cartridges as being of Sudanese manufacture. Additional analysis by Conflict Armament Research of a second type of cartridge (described by the Group of Experts as having headstamp markings 1_39_04) confirms that this ammunition is also manufactured in Sudan.
- 46 Confidential report from northern Côte d'Ivoire provided to Conflict Armament Research in 2011.
- 47 See the respective UN Security Council resolutions (UNSC, 2004a; 2007).
- 48 Confidential information reported to Conflict Armament Research in 2011 concerning observations made at a military facility in 2009.

- 49 Information supplied by an independent observer in Côte d'Ivoire to Conflict Armament Research in 2011 and 2012. Confidential source.
- 50 The ammunition is marked with the calibre designation (7.62 x 54), a date code (06) and a lot number (128). The lot number 128 is also marked on the green battle bags (confidential source).
- 51 Confidential source.
- 52 Reportedly in conjunction with a Western intelligence service (precise details unknown) (confidential source).
- 53 Confidential source.
- 54 See BIC for more details: <<http://www.bic-code.org/presentation-of-the-bic-codes.html>>.
- 55 The consignment was later diverted to Tin Can Island port and from there to an inland container terminal under the authority of Apapa port, reportedly due to congestion at Apapa (confidential source).
- 56 Confidential source.
- 57 Confidential source.
- 58 Information supplied to Conflict Armament Research by a confidential source, including photographic evidence. The photographs have not been reproduced here for reasons of confidentiality.
- 59 Confidential source.
- 60 Technical analysis kindly provided by Alexander Diehl; see DIO (2012) for technical specifications.
- 61 See endnote 33 for an explanation of 'tombak'.
- 62 Technical analysis kindly provided by Alexander Diehl; see DIO (2012) for technical specifications.
- 63 See endnote 33 for an explanation of 'tombak'.

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