

CHAPTER 9

Analysing Arms Flows: Illicit weapons



Introduction

Tracking illicit arms flows is often significantly more difficult than tracking the authorized trade (see Chapter 8). There are no datasets comparable to UN Comtrade and the UN Register of Conventional Arms (UNROCA) for illicit weapons, and the data that is available on illicit arm flows is incomplete, often ambiguous, and frequently limited to anecdotal accounts of individual illicit transfers. These accounts are few and far between, and only rarely are they sufficient in quantity or detail to draw any conclusions about trafficking in a particular region.

Nonetheless, careful analysis of available data can reveal much about the types, origins, and recipients of illicit weapons and ammunition, and the methods and routes used by traffickers to smuggle these items across borders. This chapter looks at several prominent sources of data on illicit small arms, including data on weapons seized at border crossings (border seizures) and local seizures (weapons recovered at crime scenes and from arms caches). It also examines images and information available on social media.

For the purposes of this chapter, ‘border seizures’ are shipments of weapons and other items detained by authorities of the importing or exporting state at or near international borders. ‘Local seizures’ are incidents other than border seizures in which authorities take weapons into custody. It should be noted that the term ‘seizure’ can be a bit misleading in that some of these items are only temporarily detained or are voluntarily surrendered.

Analysing data on border seizures

Data on weapons and related items interdicted at or near border crossings is an important source of information on illicit arms flows. Depending on the level of detail and time frame, border seizure data can reveal the types of frequently trafficked weapons, the countries from which these weapons are trafficked, and the methods and routes used by traffickers. Data that covers seizures over several years may also reveal changes in trafficking patterns.

Table 9.1 shows records of border seizures compiled by US Customs and Border Protection (CBP) that were obtained under the US Freedom of Information Act. The records identify:

- The type and quantity of seized items and, in many cases, the make, model, and/or calibre.

- The date that the items were seized.
- The destination of the seized shipment.

The records also include information about the legal and physical status of the seizure and the statutory authority under which the weapons were seized, which is often as important as the information about the seized weapons themselves. Arms shipments are detained by customs agents for various reasons, ranging from minor paperwork issues to strong evidence of arms trafficking. Information about statutory and regulatory violations linked to the seized items and their administrative status provides important clues regarding the nature of the seizure. For example, CBP officials told the Small Arms Survey that weapons ‘transfer[red] to UFPD’ were probably seized for substantive reasons (including trafficking) while items that were ‘remitted’ were probably detained as a result of technical violations of applicable legislation rather than deliberate arms trafficking.²⁰⁸

These records highlight the importance of developing a clear working definition of ‘illicit’ that reflects the scope and purpose of the research. In some of the cases documented in these records, the shipper may have violated export laws with no nefarious intent. Examples include unlicensed shipments of firearms components by a licensed company to a legitimate foreign manufacturer of firearms. In the United States (and many other countries), shipments would be illegal since they violate national licensing requirements. But the impact on peace and security of such shipments is minimal compared to that of shipments of semi-automatic pistols and rifles to Mexican drug cartels, for example. As such, some recorded cases may not be relevant to a particular story or report. Whether it is possible to exclude specific types of cases depends on the data. Regardless, it is important for researchers to develop precise definitions for ‘illicit’ and other key terms, and to clearly present these definitions to their readers.

Analysing data on local seizures

Local seizures are another rich source of data on illicit small arms. Data on local seizures takes many forms and is generated by both non-governmental and governmental sources. In some cases, the seizure is summarized in detailed narratives that include photos of the seized weapons and maps of their location (see Image 9.1).

²⁰⁸ Phone interview with CBP official, July 2012.

Table 9.1 Small arms taken into custody by US CBP, 2009–11

Nvtry Qty Amt	Prptry Typ Txt	Prptry Dsc Txt	Going To	Lgl Stus Txt	Plscl Stus Txt	Sezr Dt	Statu Titl 1 Txt	Statu Titl 2 Txt
1	PISTOL	HI-POINT PISTOL WITH MAGAZINE	CANADA	EVIDENCE - SINGLE STATUS	TURNED OVER TO ANOTHER AGENCY (PRE-FORFEITURE)	20 MAY 2010	19USCI497	
1	RIFLE-SHOTGUN COMBINATION	WINCHESTER SHOTGUN (12 GA)	PANAMA	ADMINISTRATIVELY FORFEITED	TRANSFER TO UFPD	24 FEBRUARY 2010	OTHERSEIZURE	18USC922
2	GRENADE	MK2 TYPE GRENADES	MEXICO	SEIZED	TURNED OVER TO ANOTHER AGENCY (PRE-FORFEITURE)	30 MARCH 2011	OTHERSEIZURE	18USC922
1	OTHER	HARRIS A2 ULTRALIGHT BI-POD LEGS	DOMINICAN REPUBLIC	EVIDENCE - SINGLE STATUS	REMITTED	08 JANUARY 2009	OTHERSEIZURE	18USC922(E)
1	OTHER	NIKON SCOPE	DOMINICAN REPUBLIC	EVIDENCE - SINGLE STATUS	REMITTED	08 JANUARY 2009	OTHERSEIZURE	18USC922(E)
2	OTHER	.45 CAL PISTOL MAGAZINE	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	TRANSFER TO UFPD	08 JANUARY 2009	OTHERSEIZURE	18USC922(E)
2	OTHER	9MM PISTOL MAGAZINES	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	TRANSFER TO UFPD	08 JANUARY 2009	OTHERSEIZURE	18USC922(E)
1	PISTOL	AMT SEMI-AUTO PISTOL .45CAL (RECEIVER)	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	TRANSFER TO UFPD	08 JANUARY 2009	OTHERSEIZURE	18USC922(E)
1	OTHER	MAGAZINE	NEW ZEALAND	SEIZED	HELD BY CUSTOMS	10 JUNE 2011	19USCI436	19CFRI 23.91
1	RIFLE	RIFLE	NEW ZEALAND	SEIZED	HELD BY CUSTOMS	10 JUNE 2011	19USCI436	19CFRI 23.91
1	RIFLE	RIFLE	NEW ZEALAND	SEIZED	HELD BY CUSTOMS	10 JUNE 2011	19USCI436	19CFRI 23.91
1	RIFLE	RIFLE	NEW ZEALAND	SEIZED	HELD BY CUSTOMS	10 JUNE 2011	19USCI436	19CFRI 23.91
1	RIFLE	RIFLE	NEW ZEALAND	SEIZED	HELD BY CUSTOMS	10 JUNE 2011	19USCI436	19CFRI 23.91
2	MAGAZINE	9 MM MAGAZINE	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	30 NOVEMBER 2010	19USCI305	19USCI 497
2	MAGAZINE	MAGAZINE	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	30 NOVEMBER 2010	19USCI305	19USCI 497
1	PISTOL	FN HERSTAL	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	30 NOVEMBER 2010	19USCI305	19USCI 497
1	PISTOL	GLOCK 17	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	30 NOVEMBER 2010	19USCI305	19USCI 497

Nvtry Qty Amt	Prptry Typ Txt	Prptry Dsc Txt	Going To	Lgl Stus Txt	Phscl Stus Txt	Sezr Dt	Statu Trfl 1 Txt	Statu Trfl 2 Txt
1	PISTOL	GLOCK 19	DOMINICAN REPUBLIC	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	30 NOVEMBER 2010	19USCI305	19USCI1497
12	AMMUNITION	40 CAL AMMUNITION	VENEZUELA	ADMINISTRATIVELY FORFEITED	TRANSFER TO UPDP	07 JUNE 2009	OTHERSEIZURE	19USCI595A
1	OTHER	SIG PRO MAGAZINE	VENEZUELA	ADMINISTRATIVELY FORFEITED	TRANSFER TO UPDP	07 JUNE 2009	OTHERSEIZURE	19USCI595A
1	RIFLE	BUSHMASTER M4 RIFLE/SCOPE/FLASHLIGHT	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	31 AUGUST 2010	19USCI595A(A)	19USCI595A(C)
6224	AMMUNITION	AMMO .22 CAL	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
20	AMMUNITION	AMMO .243 CAL (20 ROUNDS)	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
40	AMMUNITION	AMMO .243 WINCHESTER (40 ROUNDS)	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
40	AMMUNITION	AMMO .270 CAL (40 ROUNDS)	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
100	AMMUNITION	AMMO .38 CAL SUPER AUTO+P	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
250	AMMUNITION	AMMO .40 CAL (250 ROUNDS)	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
100	AMMUNITION	AMMO .45 CAL (100 ROUNDS)	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
100	AMMUNITION	AMMO 9MM LUGER (100 ROUNDS)	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	03 JULY 2010	19USCI497	19USCI595A(D)
1	PISTOL	LOADED S&W REVOLVER 38 CAL	MEXICO	ADMINISTRATIVELY FORFEITED	HELD BY CUSTOMS	01 DECEMBER 2009	19USCI595A(A)	19USCI595A(D)
1	RIFLE	POLY TECHNOLOGIES 7.62X39 ASSAULT RIFLE	MEXICO	SEIZED	HELD BY CUSTOMS	19 APRIL 2011	19USCI497	19USCI595A(D)
1	OTHER	MAGAZINE	UNITED STATES	SEIZED	REMITTED	09 SEPTEMBER 2009	19USCI497	19USCI595A(D)

Note: The information in this table is taken verbatim from the source to reflect the original data.

Source: US CBP (2011)

Image 9.1 Weapons seized in an arms cache, Afghanistan, 2011



Source: Schroeder (2015d)

In other cases, the data consists of large spreadsheets with thousands of records on weapons seized over several years. An example is provided in Table 9.2, which is a sample of records of more than 30,000 small arms and light weapons taken into custody by the Los Angeles Police Department (LAPD) (Schroeder, 2014b, p. 247). The data includes key details about each item, including the make, model, and calibre of the seized weapons. The records also note the circumstances under which the LAPD took possession of the items, which is critical for disaggregating data on illicit weapons from data on legally-owned weapons turned in to—or temporarily held by—the LAPD.

Data on local seizures often includes items that are not typically considered 'illicit'. Examples include firearms turned in at local police stations by lawful owners who no longer want them. Thus, to be useful, data on seizures must provide contextual information about the circumstances under which the items were taken into custody. However, even if the contextual information links individual weapons to specific crimes, not all of the weapons linked to a particular crime are the 'crime gun'. For example, the pistol linked to the crime type 'Murder-First Degree' in Table 9.2 could be the weapon used to commit the murder, or it may have been: (1) seized from a suspect at the time of his or her arrest; (2) found on the body of the murder victim; or (3) taken from a bystander. Without more information about this case, it is impossible to determine if the pistol identified in the record was actually used in a murder. This does not mean that such data is of no analytic value; it simply means that analysts must clearly define what they mean by 'illicit', exclude records that clearly do not fit this definition, and add caveats regarding any ambiguities in the remaining data.

To illustrate this point, the records displayed in Table 9.2 are colour-coded into groups of ‘crime types’ with similar categorization challenges:

- **Yellow:** The firearms in these records are clearly linked to one or more crimes but their role in the criminal activity is unclear. As noted above, a weapon linked to a first degree murder may or may not be the murder weapon. Without the case file, it is impossible to determine whether these weapons were illicitly possessed or used.
- **Blue:** These firearms are linked to gun crimes. If the weapon is the only one that was seized, it is likely that it is the ‘crime gun’ and can safely be considered ‘illicit’. However, if multiple weapons are linked to the same case, some may not be ‘illicit’; they may have been temporarily confiscated from the suspect at the time of arrest, or from lawful owners who were with the suspect when he or she was arrested.
- **Green and grey:** These weapons were taken from illicit end users—individuals who, by US law, are prohibited from owning firearms. Of all the weapons in the four subcategories identified here, these weapons are the most likely to be ‘illicit’. However, even in these cases, it is possible that some of the firearms were legally-owned weapons that were, for example, temporarily seized from individuals who were with the suspect at the time of arrest.

Table 9.2 also highlights the need for a nuanced understanding of the scope and completeness of the dataset. There are no light weapons (grenade launchers, mortars, recoilless guns, etc.) listed in this excerpt, and the full data file includes records on only 73 light weapons, or less than one per cent of all seized weapons. At first glance, the data appears to indicate that light weapons are almost never encountered by police officers in Los Angeles, but there are other possible explanations. In some US cities, police departments do not take custody of light weapons ammunition (or anything else that presents an explosive hazard). Such items are removed by specialized explosive ordnance disposal units, sometimes referred to as ‘bomb squads’. Because bomb squads are often not part of the agencies that log most seized arms, light weapons ammunition may not be reflected in police seizure data (Schroeder, 2014b, p. 250). Thus, before drawing conclusions about the types of items taken into custody in a given region, researchers should confirm that their data provides a full account of all seizures. Since most datasets do not include explanatory information about the data and how it was compiled, inter-

Table 9.2 Firearms taken into custody by the LAPD, 2009

Type	Description	Manufacturer's name	Caliber	Crime type	Crime date
SHOTGUN	PUMP ACTION	ITHACA/ITHACAGUN	12 GAUGE	SPOUSAL BEATING	25/01/2009
PISTOL	REVOLVER	ROHM	.32 CALIBER	RECEIVING KNOWN STOLEN PROPERTY,<\$400	26/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	HI-POINT(HIGH) FIREARMS	.380 CALIBER	ATTEMPT - MURDER	27/01/2009
PISTOL	AUTOMATIC ACTION	GLOCK	9 MILLIMETER	MURDER:FIRST DEGREE	27/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	STERLING	.25 CALIBER	RECEIVE/ETC KNOWN STOLEN PROPERTY	27/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	BRYCO ARMS	9 MILLIMETER	BRING/POSSESS FIREARM ON SCHOOL GROUNDS	26/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	KIMBER	.45 CALIBER	CARRYING CONCEALED WEAPON WITHIN VEHICLE	26/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	RG (WITH NUMBERS)	.25 CALIBER	POSSESS LOADED WEAPON/PUBLIC	26/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	SIG-SAUER	.357 CALIBER	CARRY LOADED FIREARM IN PUBLIC PLACE	27/01/2009
PISTOL	REVOLVER	SMITH & WESSON	.45 CALIBER	POSSESSION OF UNREGISTERED FIREARM	27/01/2009
RIFLE	BOLT ACTION	RUGER	.223 CALIBER	MFG/SELL/IMPORT ASSAULT RIFLE	27/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	SPRINGFIELD ARMS CO.	.40 CALIBER	POSSESSION MARIJUANA FOR SALE	27/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	HI-POINT(HIGH) FIREARMS	.40 CALIBER	TRANSPORT/SELL/ETC CONTROLLED SUBSTANCE	27/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	COBRA	.380 CALIBER	POSSESSION CONTROLLED SUBSTANCE FOR SALE	28/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	COLT	.38 CALIBER	POSSESSION CONTROLLED SUBSTANCE FOR SALE	28/01/2009
PISTOL	REVOLVER	COLT	.38 CALIBER	POSSESSION CONTROLLED SUBSTANCE FOR SALE	28/01/2009
PISTOL	REVOLVER	COLT	.45 CALIBER	POSSESSION CONTROLLED SUBSTANCE FOR SALE	28/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	COLT	.38 CALIBER	POSSESSION CONTROLLED SUBSTANCE FOR SALE	28/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	COLT	.38 CALIBER	POSSESSION CONTROLLED SUBSTANCE FOR SALE	28/01/2009
PISTOL	REVOLVER	SMITH & WESSON	.357 CALIBER	FELON POSS WEAPON - MAND 6MO JAIL	27/01/2009
PISTOL	REVOLVER	ARMINIUS	.38 CALIBER	POSSESSION OF FIREARM BY FELON/ADDICT/ETC	27/01/2009
PISTOL	SEMI-AUTOMATIC ACTION	SMITH & WESSON	9 MILLIMETER	FELON POSS WEAPON - MAND 6MO JAIL	28/01/2009

Note: The information in this table is taken verbatim from the source to reflect the original data.

Source: LAPD (2013)

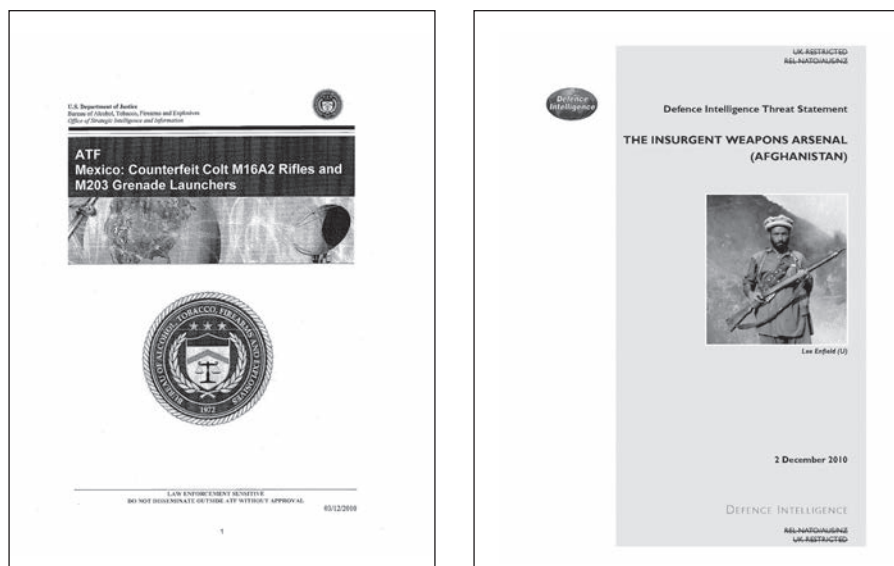
views with officials from the source agency are often the best—and sometimes the only—way to determine which, if any, seizures are not reflected in the data.

Other sources of government data

There are several additional sources of government data on illicit weapons, many of which are not readily available in the public domain but can be acquired in some countries via freedom of information requests. Declassified government intelligence reports are a good example. Some government agencies compile detailed reports on the conventional weapons acquired and used by armed groups, particularly in countries where their troops are deployed. While these reports are often classified, some governments release redacted copies in response to freedom of information requests (see Image 9.2). In recent years, the Small Arms Survey has used redacted intelligence reports acquired in this way to:

- identify trends in illicit proliferation not documented elsewhere;
- establish baseline inventories of illicit SALW in specific countries;

Image 9.2 Redacted intelligence reports obtained from the US government (left) and UK government (right) via freedom of information requests



Sources: UK Defence Intelligence (2010); ATF (2010)

- improve understanding of the physical characteristics and capabilities of specific weapons; and
- assess the effectiveness of commonly-used control measures, such as weapons collection programmes.²⁰⁹

While these documents are often valuable reference guides, one should not assume that their content is completely accurate. Even reports from government agencies that specialize in conventional weapons identification occasionally contain errors. As with all sources, information in intelligence reports should be verified and corroborated with information from other sources whenever possible.

Shipping and storage documents

Shipping documents are another rich source of information. Manifests, bills of lading, customs declarations, and other shipping documents are useful for identifying the shipper and other parties to the transfer; the date(s) and route of the shipment; and the destination. Image 9.3 features excerpts from a manifest found on the FRAN-COP, which was transporting thousands of Iranian weapons to Syria when it was intercepted by the Israeli Navy in 2009.

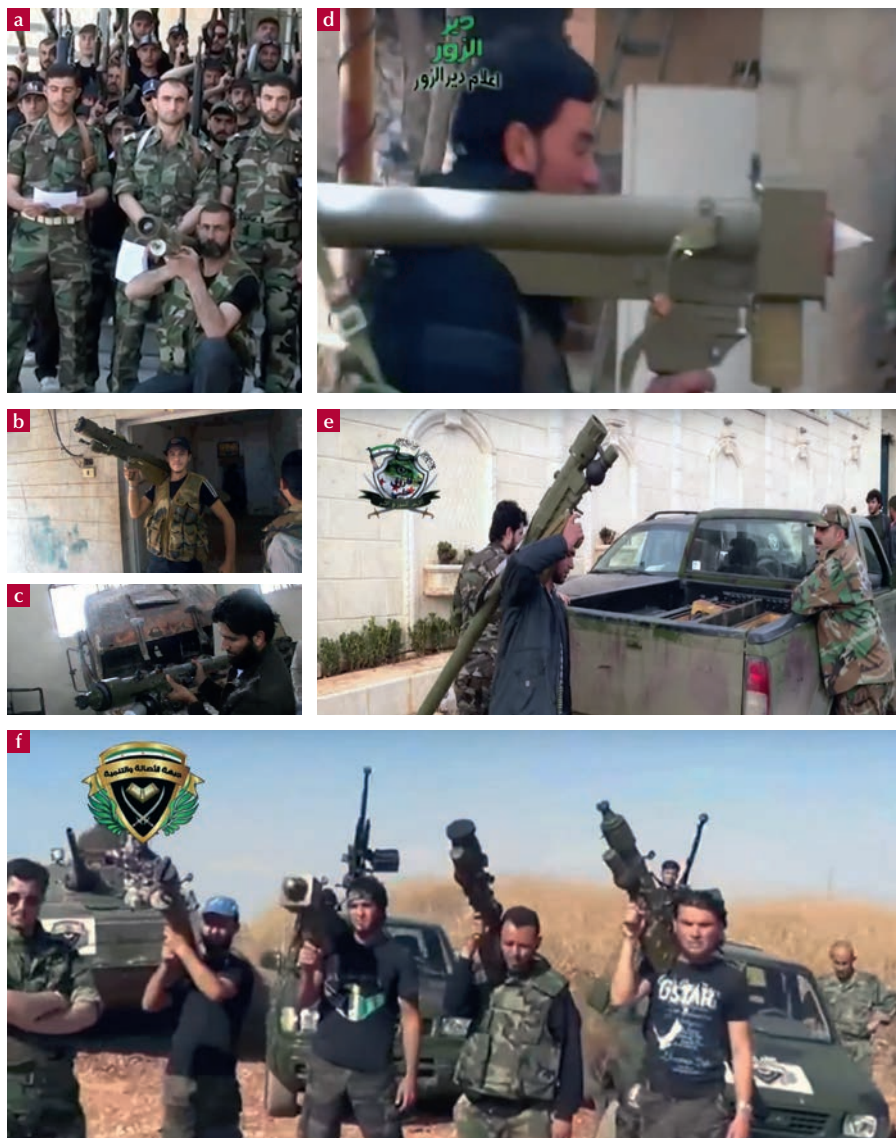
Since smugglers often falsify cargo lists and other information on shipping documents, the data found on these documents should be corroborated with other sources.

Packing lists and other documents that accompany exported weapons also provide important information. Image 9.4 shows a packing list found in a crate of man-portable air defence systems (MANPADS) looted from a depot in Libya. The list identifies the exporter, the export year, the model of exported missiles, and size of the shipment—information that is extremely useful for generating (or corroborating) baseline inventories of small arms and light weapons in conflict zones, failed states, and other countries where weapons are vulnerable to theft, loss, or diversion. Using packing lists and similar documents found in depots after the revolution in Libya, journalists and government contractors were able to piece together a fairly comprehensive overview of MANPADS imported by the Libyan government over a 40-year period.²¹⁰

209 See, for example, Schroeder and King (2012) and Schroeder (2015b; 2016).

210 See Schroeder (2015a, pp. 3–5).

Image 9.5 Social media images of MANPADS acquired by armed groups in Syria, 2012–13



Notes: (a) Syrian rebel with Strela-2-pattern launch tube; (b) Rebel with complete SA-7-pattern MANPADS; (c) Rebel with Igla-1-pattern launch tube; (d) Rebel with FN-6 MANPADS; (e) Rebel with an Igla-5 MANPADS and (f) Rebels with four generations of MANPADS.

Sources: Mhmad Mhmad (n.d.); Chivers (2012c); Higgins (2012); Rebels Deir al-Zour (n.d.); Hazzm Movement's Troop Nine (n.d.); Syri Anwa (n.d.)

weapons. In some cases, these images also provide essential details about the provenance, age, condition, and recipients of illicit weapons. In regions where social media coverage is extensive, these images often provide important clues regarding the quantity of illicit weaponry and changes in proliferation patterns over time.

The immense potential of social media to track illicit weapons proliferation is illustrated by images of MANPADS acquired and used by armed groups during the Syrian civil war. Image 9.5 chronicles the unprecedented proliferation of MANPADS since 2012, when the first early-generation Strela-2 pattern launch tubes were spotted in Syria (via videos posted on YouTube).²¹² Over the next year,

Box 9.1 MANPADS and social media

MANPADS receive a lot of attention on social media. New videos and photos featuring the missile systems are widely circulated and discussed. The net effect of this attention is positive. Images of recently imported and trafficked MANPADS are available more quickly and in greater numbers than ever before, allowing analysts to track their proliferation in near-real time. The decentralized and instantaneous flow of information on social media is dual-edged, however. The Internet does not discriminate on the basis of accuracy; false and misleading information circulates just as quickly and as widely as well-informed analysis.

The sources of misinformation on MANPADS are many and varied. Some erroneous postings are disinformation—deliberately forged or doctored images used to advance a particular strategic or political agenda. An example is the fake ‘Stinger missile’ purportedly discovered by anti-government militia members in Ukraine. Video footage of the ‘discovery’ was posted online, where analysts quickly identified physical anomalies and erroneous markings, the most obvious of which was the misspelling of ‘Tracking Trainer’ as ‘Tracking Rainer’ on the launcher (see Image 9.6). Based on this misspelling, analysts concluded that the designer of the fake missile had based it on an image of the Stinger MANPADS from the video game *Battlefield 3* (Mezzofiore, 2015).

While forgeries and other forms of disinformation are occasionally posted on social media, most misinformation stems from inadvertent errors made by individuals who lack technical knowledge about small arms and light weapons. A common example is the use of specific model designations to refer to entire groups of weapons, including MANPADS. The FIM-92 Stinger is a US-designed MANPADS made famous by the Afghan Mujahideen, who used them to great effect against Soviet aircraft in the 1980s. Their high-profile role in Afghanistan garnered a lot of attention, and ‘Stinger’ became a synonym for ‘MANPADS’, including missile systems of Russian and Chinese origin. This misuse of the term ‘Stinger’ created—and has perpetuated—the impression that US-made Stinger missiles are commonly found on the black market, which is demonstrably false; FIM-92 Stinger missiles are tightly controlled and are now rarely, if ever, acquired by unauthorized end users. Nonetheless, some users of Twitter, Facebook, and other social media platforms continue to refer to all MANPADS as ‘Stingers’.⁶

Referring to MANPADS missiles as complete systems is another common mistake. During the Libyan civil war, a US military official estimated that ‘there were as many as 20,000 of these types of weapons

212 See, for example, Mhmad Mhmad (n.d.).

in Libya before the conflict began' (US AFRICOM, 2011). The official was referring to MANPADS components (individual missiles or launchers) but his statement was widely misinterpreted to mean that the Qaddafi regime had imported 20,000 complete systems. As noted in Chapter 5, a functional MANPADS consists of four main components: a missile, a launch tube, a launcher (gripstock), and a battery unit. Typically, governments import several missiles for every launcher and therefore the number of complete systems in Libya at the time of the uprising was likely only a fraction of the 20,000 MANPADS often cited on social media (Schroeder, 2015a, p. 4). The misidentification of specific models of MANPADS is another source of misinformation. The physical differences between different models of MANPADS are often subtle. This is particularly true for variants of the same model produced in different countries. These variants are often nearly identical in appearance and are sometimes assembled from the same components as the original model. Telling these systems apart requires a trained eye and access to up-to-date reference materials. A final mistake that is often seen on social media is the assumption that all missiles with certain model designations are shoulder-fired. Many missiles with the same model name are fired from both

Image 9.6 Fake 'Stinger missile' featured in a video reportedly taken in Ukraine and posted on Youtube, 2015



Source: Telekanal ICTV (2015)

vehicle-mounted and man-portable launchers. In some cases, the missiles are interchangeable; they can be fired from launchers mounted on vehicles and from gripstocks. In other cases, however, individual missiles with the same model name can only be fired from vehicle-mounted launchers. This often leads to confusion and misreporting. During the civil war in Libya, some analysts prematurely declared that advanced Russian Igla-S MANPADS had been looted from Libyan arsenals after finding emptied crates for 9M342 missiles. The 9M342 missile is fired from man-portable launchers, but also from other launchers.⁷ In fact, the missiles imported by the Libyan government were not shoulder-fired; they were reportedly configured only for use with vehicle-mounted launchers (Schroeder, 2013b, p. 25). Despite the best efforts of many journalists and analysts to point this out, Libya's Igla-S missiles are still occasionally referred to as 'MANPADS' on social media and elsewhere.

Because of the acute threat to military and civilian aircraft posed by MANPADS, their proliferation to and within conflict zones warrants continued coverage. Improving the accuracy of this coverage would increase its utility to analysts and policy-makers, with potentially significant implications for aviation security and counter-trafficking efforts.

Box 9.2 Tips for analysing data on illicit small arms and light weapons

- Make sure that the data is generated or compiled by individuals with the expertise required to accurately identify the weapons referenced in the data. Accurately identifying weapons is difficult and requires significant experience and training. Data generated by individuals without adequate training or experience may contain large numbers of errors, some of which may not be easily identifiable.
- Corroborate data on the make, model, and provenance of weapons. Since even experts sometimes misidentify weapons, it is important to check the make and model of illicit weapons with multiple, independent sources.
- Identify biases in each data source and determine how these biases affect the data. All data is affected by biases. Accounting and controlling for these biases and their effects on data collection and aggregation is an essential part of analysing data on illicit small arms.
- Look for signs of sloppy or inconsistent data entry. Even the most meticulously assembled data will have some errors, but excessive error rates may indicate serious, systemic problems. Obvious errors include duplicate records, misspellings, weapon model designations that do not match the make and/or calibre of the weapon, and inconsistent use of terminology.
- Confirm that the data is representative of the broader population of illicit weapons. As noted above, some datasets on seized weapons may not contain data on certain types of weapons, such as explosive munitions. When possible, ask a representative of the institution that compiled the data if the dataset provides a full accounting of all weapons taken into custody.
- Conduct key informant interviews. Determining whether seized weapons are representative of illicit weapons in a particular country or region is extremely difficult. Law enforcement officers and other local experts with in-depth knowledge of arms trafficking patterns are often well placed to answer this question. Many of these officials are willing to respond to questions about illicit small arms if they can be answered without divulging classified information and if the questions are provided in advance.

⁷ Representatives of the Russian defence industry have claimed that the 9M342 missiles exported to Libya are not compatible with MANPADS gripstocks (Schroeder, 2013b, p. 25). The Small Arms Survey has not independently verified this claim. It is unclear whether other (individual) 9M342 missiles are compatible with both man-portable and vehicle-mounted launchers.

analysts used social media to document the acquisition of increasingly sophisticated MANPADS by various armed groups, culminating in the discovery of a video featuring rebels armed with four generations of MANPADS, including systems not previously seen outside of government control (Schroeder, 2014a, p. 9).

As explained in Chapter 8, social media also has significant limitations. It is often extremely difficult to verify the authenticity, time, and location of events depicted in social media (see Box 9.1). The decentralized and ad hoc nature of social media means that postings on illicit small arms are erratic and that coverage is incomplete. Furthermore, the sprawling digital architecture of social media platforms and the functional limitations of available search engines preclude the systematic and comprehensive identification and collection of relevant images. No single search engine generates a complete set of hits from all relevant sources, and most images of weapons are not identified and tagged in social media posts.

Conclusion

Tracking illicit arms flows is a difficult endeavour. Reliable reports on illicit arms transfers are few and far between, and many of the reports that are published are vague or impossible to corroborate. Until recently, there was too little data from alternate sources to systematically study and report on illicit small arms. This is changing rapidly. Images of illicit weapons are routinely posted on social media, creating new opportunities for creative research and analysis. This data is just the tip of the iceberg: millions of records on seized weapons are sitting on the hard drives of government computers. Recent, successful efforts by the Small Arms Survey to acquire some of this data reveal that governments are willing to release redacted versions of these records if they are approached in the right way. Data and images of millions of additional weapons are hidden in plain sight in more obscure corners of the Internet. When combined with field research conducted by the United Nations, journalists, and other researchers, this data has the potential to revolutionize our understanding of illicit small arms and the role they play in crime and conflict.

Journalists and other researchers have a key role to play in this revolution. Their writing skills and large, diverse audiences make them well suited to bridge the gap between technical analysts and the general public. Furthermore, many

foreign correspondents have the mandate, experience, and networks required to access data on illicit weapons and trafficking networks in areas of the world not covered by social media or UN investigators. With the proper training and resources, researchers can fill these data gaps and, in doing so, significantly improve our understanding of arms flows and their implications for peace and security.

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