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Founded in 1979 by Bernard Adam, the Group for Research and Information on Peace and Security (GRIP) emerged in the specific context of the Cold War.

Since the nineties, GRIP has acquired recognised expertise in armament and disarmament issues (production, legislation, transfer control, non-proliferation), conflict prevention and crisis management (particularly in Africa), European integration in the area of defence, as well as in strategic challenges in the Asia-Pacific region.

Composed of 20 permanent staff members and a network of several associated researchers from different countries, GRIP has been recognised by the Belgian government as a permanent education organisation. GRIP's mission of disseminating information is further pursued through its numerous publishing activities. In 1990 it was designated as "Peace Messenger" by the Secretary-General of the United Nations, Javier Pérez de Cuéllar, for its "precious contribution on peace promotion".

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ANALYSIS NOTE

Weapons Tracing in Conflict Theatres: Lessons and Perspectives

Claudio Gramizzi

June 13th, 2014

Abstract

During the last couple of decades, increasing attention and resources have been dedicated to tracing illicit weapons in conflict areas. This Paper underlines the importance of this discipline and the value of the evidence-based information it generates, not only to identify the entities involved in international sanctions violations, but also to improve understanding of conflict dynamics, to enhance conflict analysis, to improve the effectiveness of existing arms control mechanisms, and to steer international assistance and cooperation more effectively.

Résumé

Le traçage des armes sur les lieux de conflits: leçons et perspectives

Au cours des deux dernières décennies, une attention et des ressources croissantes ont été consacrées au traçage des armes illicites dans les zones de conflit. Ce document souligne l'importance de cette discipline et la valeur de l'information fondée sur des preuves qu'il génère, non seulement afin d'identifier les entités impliquées dans des violations des sanctions internationales, mais aussi afin d'améliorer la compréhension de la dynamique des conflits, d'en renforcer l'analyse, augmenter l'efficacité des mécanismes de contrôle des armements existants, et orienter l'aide et la coopération internationale de manière plus efficace.

Introduction

During the last couple of decades, increasing attention and resources have been dedicated to tracing illicit weapons in conflict areas. Initially used as a monitoring tool to assess the level of implementation of international arms embargoes, international expertise in this domain has consistently grown involving, in addition to Sanctions Monitoring Panels mandated by the United Nations' Security Council, non-governmental organizations, independent researchers and investigation journalists. Nowadays, the scope of tracing illicit weapons in violent conflict-affected zones is applied in several regions, well beyond the limited number of countries targeted by arms embargoes.

This Paper underlines the importance of this discipline and the value of the evidence-based information it generates, not only to identify the entities involved in international sanctions violations, but also to improve understanding of conflict dynamics, to enhance conflict analysis, to improve the effectiveness of existing arms control mechanisms, and to steer international assistance and cooperation more effectively.

After having recalled the basic principles behind marking, record-keeping and tracing of SALW and the existing international normative frameworks that apply to these domains (Chapter 1), this paper will present current international initiatives undertaken by law enforcement agencies in the area of tracing illicit firearms (Chapter 2). Thereafter, the paper will address the practical differences that apply to tracing, focusing on weapons used in violent conflicts, and will elaborate on the main challenges that investigators face while using tracing techniques on arms used in conflict-affected zones, in comparison with those applied in the framework of criminal justice (Chapter 3). In addition, the paper will elaborate on the useful outcomes of tracing to have a better understanding of the underlying dynamics of some of the current conflicts waged worldwide and to design more adequate arms-control and conflict-resolution policies (Chapter 4). Finally, the paper will formulate some recommendations to enhance the effectiveness of tracing initiatives, focusing on conflict weapons and maximizing the benefit that can be generated from the evidence-based information produced by tracing for policy makers (Chapter 5).

1. Setting the frame – introductory remarks and basic principles

1.1 What is tracing about?

Following the same principles applied to tracing other goods, like food items, vehicles or any other general commodity, tracing illicit weapons and ammunition (hereafter “weapons”)¹ consists of determining their life cycle, from the point of manufacture until the latest known owners, and following the different steps of their chain of custody. The aim of tracing weapons is to determine the circumstances (time, location and context) under which they were diverted into the illicit sphere. The ultimate purpose is to determine who (or what) was responsible for the change of the legal status of the weapon

1. For simplicity, in the following sections the expression ‘weapons’ will refer to both SALW and their ammunition, unless specifically stated.

(from legally owned to illicit) and to reduce, as much as possible, the risk of similar diversion mechanisms being used again in the future.

Tracing techniques have been increasingly developed, in particular by law enforcement agencies mandated to investigate the origin of firearms used in criminal acts, in order to establish correlations between the firearms, suspected criminals identified as users and the networks involved in the supply of the weapons. Similarly, and although the discipline is less developed and less systematically applied, the same principles can be followed to investigate deliveries of weapons used in conflict-affected areas, with the aim to determine if such supplies represent breaches of international law or any other existing sanctions regime. In this context, the information generated by investigations focusses less on the individual user of the weapons than on the routes followed by the supply chain, the trafficking networks and the eventual violations of (domestic and/or international) legal obligations.²

Irrespective of whether tracing is conducted on weapons used to perpetrate crimes or used in conflict theatres, tracing stands as a powerful investigation tool that proves to be useful both from a coercive and a preventive perspective. This efficacy of tracing will be elaborated below.

1.2 Marking and Record-keeping: prerequisites for effective tracing



Bulgarian PG-type rocket launcher with an obliterated serial number
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Tracing weapons can only be envisaged if the weapons to be traced leave sufficient tracks during their life cycle and, therefore, if at least two conditions are fulfilled:

- a) weapons are duly marked with a unique combination of codes,³ and
- b) each change of ownership is registered and relevant data is subsequently kept in a format that enables a quick recovery of successive ownerships.

In fact, tracing generally only starts when the precise “status” of a weapon needs to be verified (this is mostly after a dubious use or ownership) and at a point in time when the information needed to trace the weapon (contained in its marking or in the database in which it was

due to be registered) can already be retrieved. Therefore, tracing is only possible if the

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2. In particular if the type of weapons concerned are regulated by any specific regulatory framework, such as landmines or cluster bombs.
 3. Tracing techniques can focus on weapons but also on ammunition. One major difference, however, applies between the two categories in terms of marking, since while the majority of weapons can easily be marked with a unique combination of codes – therefore guaranteeing that each weapon is different from each other and can be identified with no ambiguity – rounds of ammunition generally bear only a limited number of marking codes on the rim of the cartridge, due to the limited surface that can be marked by stamping (the most common technique among manufacturers). Most of the time, two rounds belonging to the same manufacturing lot therefore present identical marking codes (or head-stamps) and cannot be differentiated from one another. In general, complete marking codes for ammunition are visible on the packaging units only.

information was already available before the status of the weapons (or its use) shifted from licit to illicit. In other terms, useful data for tracing can be generated by comprehensive marking and record-keeping, but this is possible only if it is undertaken well before the necessity for tracing emerges. As a result, weapons that do not bear marking codes enabling their identification and/or that were not registered are simply impossible to trace.

Therefore, marking, record-keeping and tracing are inextricably interconnected elements; marking establishes a direct correlation between the weapon and constitutes a unique source of information; accurate record-keeping enables the history of the individual weapon to be followed through its marking; and (the procedures to access) these records allow investigators to determine the point of diversion of the weapon, tracing back its history.

1.3 Existing Normative Framework on Marking, Record-keeping and Tracing of Weapons



Bunch of ammunition 7.62x54Rmm bearing headstamps consistent with Chinese and Sudanese manufacturing markings
© Claudio Gramizzi

The most relevant normative frameworks adopted over the last decades to curb the illicit proliferation and illegal trade weapons do contain several references to marking, record-keeping and tracing of small arms and light weapons (SALW). However only two international instruments establish *specific* and *detailed* provisions which States are compelled to implement in that regard, i.e. the *Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their parts and Components and Ammunition, supplementing the United Nations Convention against Trans-national*

Organized Crime (hereafter: Firearms Protocol)⁴ and the *International Instrument to Enable States to Identify and Trace, in a Timely and Reliable Manner, illicit Small Arms and Light Weapons* (hereafter: ITI).⁵

Firearms Protocol

Adopted in May 2001 by the General Assembly of the UN, the Protocol stands as an annex to the United Nations Convention against Trans-national Organized Crime and, most importantly, as the only legally binding global instrument on small arms.⁶

Aiming to promote and enhance international cooperation, as well as to develop mechanisms designed to prevent, combat and eradicate illicit manufacturing and trafficking of firearms, the Firearms Protocol establishes a number of provisions

4. The full text of the Protocol is available on <http://www.unodc.org/documents/treaties/UNTOC/Publications/A-RES%2055-255/55r255e.pdf>

5. The full text of the Instrument is available on <https://www.unodc.org/documents/organized-crime/Firearms/ITI.pdf>

6. As of 3 February 2014, the Protocol had been ratified by 107 State-parties (31 in Africa, 13 in Asia and Pacific, 21 in Eastern Europe, 28 in Latin America and the Caribbean region, and 14 in Western Europe and others). The Protocol applies to small arms only and not to light weapons.

criminalizing the illicit production and trade of firearms; designing control measures to prevent diversion; setting common norms for governmental authorizations for the legitimate manufacture of firearms and ensuring adequate standards for firearms marking, record-keeping and tracing.

It is equally worth noting that the Protocol's scope includes, in addition to firearms, their components and their ammunition, as well as a set of provisions to enhance information sharing, capacity building, investigation and prosecution of firearms-related offences, and this is in addition to regional and international cooperation.

Among other things, parties to the Protocol are committed to adopting strict legislation to prevent, investigate and prosecute offences related to the illicit manufacturing of and trafficking in firearms;⁷ to establish and maintain national firearms records for at least ten years;⁸ to establish licensing systems for the export and import of firearms, their components and ammunition;⁹ and to apply marking of firearms to ensure the identification of the manufacturer, the year of manufacture and the country of origin.¹⁰

International Tracing Instrument

Endorsed as a politically binding instrument (and thus not legally binding), the ITI is the result of several years of negotiations. This political instrument was finally adopted by the UN General Assembly in December 2005 and sets unprecedented commonly accepted standards in terms of SALW marking. Despite the fact that this instrument represents an important step in the international strategy against illicit SALW, the ITI's scope – which reflects the arduousness of the negotiation process and the relatively weak level of consensus among negotiating States – is rather limited by the fact that it simply defines marking and record-keeping as “national prerogatives”.¹¹ It contains no specific provision on how tracing should be conducted in practice; it formally excludes ammunition from its scope of application; and it fails to establish any specific implementation mechanism. As outlined in a number of relevant publications, the implementation of the ITI remains limited because of a number of technical and institutional reasons, many of which were discussed by States in the framework of the open-ended working group that was

7. Provisions on the criminalization of the illicit manufacture and transfer of firearms are established in articles 4 (paragraph 1), 5 and 12 (paragraph 3) of the Protocol.

8. Provisions on record-keeping are contained in article 7 of the Protocol, establishing that “*Each State Party shall ensure the maintenance, for not less than ten years, of information in relation to firearms and, where appropriate and feasible, their parts and components and ammunition that is necessary to trace and identify those firearms and, where appropriate and feasible, their parts and components and ammunition which are illicitly manufactured or trafficked and to prevent and detect such activities*”.

9. These aspects are developed, in particular, in article 10 of the Protocol (entitled “*General requirements for export, import and transit licensing or authorization systems*”)

10. Provisions established by article 8 of the Protocol.

11. Article 7 of the ITI calls States “*to ensure that, whatever method is used, all marks required under this instrument are on an exposed surface, conspicuous without technical aids or tools, easily recognizable, readable, durable and, as far as technically possible, recoverable*”, while article 11 encourages States to “*ensure that accurate and comprehensive records are established for all marked SALW within their territory and maintained (...) in order to enable their competent national authorities to trace illicit SALW in a timely and reliable manner*”.

established in 2011 to prepare the second UN PoA Review Conference.¹² It is also worth mentioning that, even though the ITI does not explicitly set any obligation for States to deal with tracing requests from non-State entities, it does not formally exclude this possibility either. Thus, States are allowed to fulfil tracing requests from actors which do not belong to State institutions or do not operate under a governmental mandate.

Regional Frameworks

Among other normative frameworks, at least three regional agreements deserve an explicit mention: the *Nairobi Protocol for the Prevention, Control and Reduction of SALW in the Great Lakes Region, the Horn of Africa and Bordering States* that was adopted on 21 April 2004,¹³ the *ECOWAS Convention on Small Arms and Light Weapons, their Ammunition and other Related Materials* of 14 June 2006¹⁴ and the *Central African Convention for the Control of Small Arms and Light Weapons, their Ammunition, Parts and Components that can be used for their Manufacture, Repair or Assembly*, of 30 April 2010.¹⁵ The importance of these agreements does not only emerge from the fact that two of them (the Nairobi Protocol and the ECOWAS Convention) are legally binding for

12. See, in particular PARKER Sarah, “*Analysis of National Reports Implementation of the UN Programme of Action on Small Arms and the International Tracing Instrument in 2009–10*”, Occasional Paper n°28, Small Arms Survey, May 2011, Geneva (Switzerland), BEVAN James and Mc DONALD Glenn, “*Weapons Tracing and Peace Support Operations Theory or Practice?*”, Issue Brief n°4, Small Arms Survey, March 2012, Geneva (Switzerland) and SENIORA Jihan, “*Marquage et traçage des armes légères : défis actuels et nouvelles tendances*”, Note d’Analyse du GRIP, 22 June 2012, Brussels (Belgium).

13. The Nairobi Protocol applies to fifteen Member States, namely the Republic of Burundi, the Central African Republic, the Republic of the Congo, the Democratic Republic of the Congo, the Republic of Djibouti, the State of Eritrea, the Federal Democratic Republic of Ethiopia, the Republic of Kenya, the Republic of Rwanda, the Republic of Seychelles, Somalia, the Republic of the Sudan, the Republic of South Sudan, the United Republic of Tanzania, and the Republic of Uganda.

Full text is available on http://www.recsasec.org/publications/Nairobi_Protocol.pdf

14. The ECOWAS Convention was signed by the Heads of States of the Republic of Benin, the Republic of Burkina Faso, the Republic of Cape Verde, the Republic of Côte d’Ivoire, the Republic of Gambia, the Republic of Ghana, the Republic of Guinea, the Republic of Guinea-Bissau, the Republic of Liberia, the Republic of Mali, the Republic of Niger, the Federal Republic of Nigeria, the Republic of Senegal, the Republic of Sierra Leone, and the Togolese Republic. Full text is available on <http://www.poa-iss.org/RegionalOrganizations/ECOWAS/ECOWAS%20Convention%202006.pdf>

15. The Central African Convention, also known as the Kinshasa Convention, was signed by eleven States, namely the Republic of Angola, the Republic of Burundi, the Republic of Cameroon, the Central African Republic, the Republic of Chad, the Democratic Republic of the Congo, the Republic of the Congo, the Republic of Equatorial Guinea, the Gabonese Republic, the Republic of Rwanda and Democratic Republic of São Tomé and Príncipe. Full text is available on http://www.iansa.org/system/files/Pages%20from%20Convention%20de%20Kinshasa%20certifié_low_eng.pdf

signatory States¹⁶ but, also and most importantly, because they do include practical provisions which States have to fulfil in terms of marking and tracing.¹⁷

2. Tracing Illicit Firearms

Tracing techniques have been used – and developed – by States' law enforcement agencies as an investigative tool to resolve criminal cases involving firearms. Mainly relying on readily available information on the chain of custody of the firearm found at a crime scene,¹⁸ tracing progressively became a key tool of criminal justice. Taking advantage of technology-supported solutions, a number of different tracing techniques have been developed during the last decades, which increase the capacity of the investigators to constantly improve the efficiency of tracing and of law enforcement services' laboratories to retrieve useful information, including from weapons bearing incomplete, distorted or erased marking codes.¹⁹

Similarly, using the ballistic fingerprint produced by the deformation caused on consumed cartridges by the firing pin or the ejector, criminal investigators are nowadays able to determine if the same firearm was used in other crime scenes, even in the absence of the weapon or they can establish if a seized firearm has been previously used to commit other crimes.²⁰

To some extent, and thanks to technology-supported solutions, tracing weapons illegally *used* – but previously legally produced domestically or legally imported – to their last legal owner is less challenging today than it was in the past. Conducting a similar exercise on weapons illegally *imported*, however, still generates a number of serious difficulties. This is because once the weapon is duly identified (through its calibre, type, model, and unique serial number or codes-combination and its country of origin), establishing the history of

16. At the time of drafting, the Kinshasa Convention had been ratified by three States (the Central African Republic, the Republic of Chad and the Republic of the Congo) and accepted by the Gabonese Republic. In conformity with its article 36, the Convention will enter into force thirty days after the date of deposit of the sixth instrument of ratification, acceptance, approval or accession.

17. For additional details, see the Best Practice Guidelines for the implementation of the Nairobi Protocol Declaration and the Nairobi Protocol on Small Arms and Light Weapons (available on <http://www.poa-iss.org/RegionalOrganizations/RECSA/Nairobi%20Best%20Practice%20Guidelines.pdf>), article 19 of the ECOWAS Convention and the conclusions of the Governmental Experts Meeting to adopt Standards and Unique Codes to the Marking and Tracing of Small Arms and Light Weapons in ECOWAS Member States was held in Bamako, Mali, from 6 – 8 December 2011 (available on <http://www.poa-iss.org/bulletinboard/Default.aspx?g=posts&t=955>).

18. This is mainly due to the fact that most of weapons used appear to be weapons available on the civilian market, possession of which is regulated by the domestic legislation, ownership licensing mechanisms and subsequent registration in the concerned State's firearm database.

19. For instance, through magnetic resonance-based technology or microscopic optical systems, recovering the marking codes from the in-depth deformation left by stamping in the metal of the frame or receiver of the weapons. For additional elements on this subject see, for instance, <http://forensicsciencecentral.co.uk/index.shtml>

20. Every weapon leaves a unique signature on the cartridge of the used ammunition, as a result of the grooves left by the impact of the firing pin and frictions between the cartridge and the ejector of the firearm. For additional elements on this subject see, for instance, <http://forensicsciencecentral.co.uk/index.shtml>

its life cycle often remains a laborious task since, generally, the necessary information is not directly available and immediate access to it – including when the information does exist in an usable format – does not belong to the investigators’ prerogatives. Whenever tracing goes beyond the territory of a State, cooperation with other national authorities and agencies often remains a critical element. Requests for information need to be channelled through adequate bilateral channels, in many cases under the framework of rogatory requests, which are lengthy, cumbersome and costly procedures.

The reduction of these administrative challenges and acceleration of the tracing processes – which often remains a crucial factor for criminal justice – were therefore among the main objectives of several bilateral, regional and international cooperation assemblies. At the international level, the most important achievements in this area have been achieved, without any doubt, by the *International Criminal Police Organization* (hereafter: INTERPOL), which has facilitated the adoption of numerous cooperation and information-sharing agreements between the police services of its 190 Member States. In addition, INTERPOL assists in the management of international tracing requests through three main tools (shortly described below) designed to enhance the capacity of its members to collect and analyse information that can be captured from both outside and inside firearms and ammunition. These three tools are:

The INTERPOL Firearms Reference Table (IFRT) is an online instrument accessible by national law enforcement agencies. Its aim is to set a standard method of identifying and portray firearms, facilitating access and verification of the characteristics of a firearm through the description of its type, model, calibre, country of manufacture, and serial number.

INTERPOL Ballistic Information Network (IBIN) hosts an international ballistic data hub enabling criminal investigators to rely on a platform designed to collect, store and compare digital ballistic images.

INTERPOL Illicit Arms Records and tracing Management System (iARMS) is a web-supported system designed to enhance cooperation between law enforcement services regarding firearms used in criminal activities. The system centralizes reports and makes queries on lost, stolen and illegally transferred firearms and facilitates the submission, the treatment and the management in real time of international tracing requests among law enforcement agencies.

3. Tracing SALW Used in Conflict Areas

From a practical point of view, tracing weapons used in violent conflicts aims to answer similar questions which law enforcement agencies attempt to resolve when focusing on illicit firearms:

- What is the origin of the weapons?
- When and to which consignee have they been exported?
- Under which circumstances and following what supply routes were the weapons exported? and,

- What is the legal status of these weapons (especially in the framework of embargo monitoring) and which individuals or entities are responsible for their delivery (or import) in the territory that is under a sanctions regime?

In practical terms, both the steps and the rationale behind the tracing process are therefore identical to those followed in criminal justice investigations and the tracing process can be summarized by following stages:

- a. The identification of the weapon;
- b. The confirmation of the identity of the weapon with the manufacturing country/company;
- c. The identification of the first legal consignee of the weapon;
- d. The determination of the subsequent chain of custody of the weapon; and
- e. The establishment of the circumstances under which the weapon was transferred to parties involved in the conflict, if different from the first consignee.

The application of tracing techniques to weapons in conflict areas became more systematic as of the end of the 1990s, in parallel with the creation by the UN Security Council of Panels of Experts mandated to monitor the implementation of arms embargoes. Interest – and reliance on these methods – increased progressively with time, when researchers, NGOs and investigative journalists broadened the scope of this discipline to deepen the understanding of arms trafficking and armed conflicts also to areas not targeted by international sanctions regimes.²¹

Although none of the existing missions of the UN Department for Peacekeeping Operations (hereafter: DPKO) act under a mandate that explicitly includes an obligation of weapons tracing, the personnel of Peacekeeping Operations that operate in countries targeted by arms embargoes have the prerogative to conduct physical inspections on the prohibited weapons passing through entry points (such as ports, airports and border posts) and to identify weapons suspected to have entered into the national territory. While these activities generally result in the establishment of extensive databases, analysis of the data collected remains, if any, limited and restricted to internal use within the concerned DPKO Mission/Operation only.²² Some efforts to enlarge the scope of Peacekeeping Operations activities in the area of tracing were nevertheless undertaken recently; in late 2013, for instance, an *ad hoc* mission in the Democratic Republic of the Congo was conducted by DPKO to inspect weapons previously controlled by the M-23 rebel movement in the East of the country. More recently, in addition, MINUSMA (the United Nations Mission in Mali) has been considering the possibility of creating an

21. See for instance “*Lethal Arms Vanishing ‘Without a Trace’*”, Amnesty International, 24 January 2005, documenting the origin of ammunition used to perpetuate the massacre committed in the Gatumba refugees’ camp in Burundi, on 14 August 2004; “*Arms Tracing. Perspectives on control, traffic and use of illegal weapons in Colombia*”, University of Gent, November 2009, documenting the origin of SALW used by Colombian armed groups or the several tracing reports published by the Small Arms Survey Human Security Baseline Assessment in Sudan and South Sudan between 2012 and 2013, focusing on weapons used in the different conflicts affecting the two countries.

22. For a more in-depth analysis on this subject see, for instance, BEVAN James and Mc DONALD Glenn, “*Weapons Tracing and Peace Support Operations Theory or Practice?*”, Issue Brief n°4, Small Arms Survey, March 2012, Geneva (Switzerland).

integrated unit to be tasked with SALW data collection designed to enable the Mission to geographically map weapons and ammunition inspected during the disarmament programmes.

Outside the United Nations context, an interesting example of the States' growing interest in this area of tracing investigation is provided by the EU Council Decision 2013/698/CFSP, adopted in November 2013, which supports the I-Trace project (lead by Conflict Armament Research, an independent NGO based in the United Kingdom) as a global reporting mechanism on illicit SALW and other illicit conventional weapons and ammunition, in order to:

- a. Develop an information management system ensuring long-term collection and analysis of illicit conventional weapons data;
- b. Provide conventional arms control policy makers and experts with a tool to define more effective strategies and priority areas for assistance and cooperation;
- c. Facilitate the production of policy relevant information, regardless of rapidly changing policy requirements; and
- d. Substantially increase the efficacy of international arms monitoring organisations and individuals by providing an information-sharing mechanism of expanding scope, as well as related technical assistance and training.²³

3.1 Main challenges for tracing conflict weapons

The tracing process that applies to weapons used in violent conflicts generally faces a number of practical challenges; while some are identical to those experienced by law enforcement investigators, others are, despite convergences in the approach and in the methodology, specific to the environment of armed conflicts. Among the most significant challenges faced, it is worth underlining the following:

Limited access to weapons and relevant information. Arms to be traced in conflict zones are rarely readily available and, as many practitioners admit, obtaining authorization to access the arms in order to conduct proper physical examinations often represents a time and effort-consuming dimension of the exercise. This is so, not only for merely logistical- or protection-related issues. This is, in many cases, and for reasons that are easy to understand, due to belligerent parties that are not inclined to authorize access to their stockpiles and the conditions of inspections therefore need to be thoroughly negotiated by the external observers. In addition – and contrary to what occurs in criminal justice investigations in which firearms, when seized, are directly available to investigators who can conduct as many successive examinations as necessary – access to weapons used in armed conflicts can rarely be scrutinized twice. This is not only because of the difficulty of obtaining the concerned parties' authorization more than once (as even once is sometimes challenging), but it is also because they can be moved from one location to another in accordance with the tactical needs of the weapons owners and with no prior notification. In addition to that, it emerges from a number of tracing exercises undertaken in the past couple of years in different conflict-affected areas in the African continent (for

23. Full text of the EU Council Decision is available on <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013D0698&from=EN>

instance the ‘two areas’ of Sudan²⁴ and South Sudan) that an increasing proportion of weapons and ammunition do not bear marking codes or had their serial number erased.²⁵

Total dependency on the concerned parties’ cooperation. Unlike law enforcement agencies, all the entities conducting tracing of weapons in conflict-affected areas (UN Security Council’s monitoring groups or non-governmental researchers) cannot exert any form of legal authority on the parties owning or using the weapons that must be traced. As a result, their chances of success critically depend on the concerned parties’ (States or non-State armed groups) willingness and availability to genuinely cooperate. Due to the legal weakness of their mandate, investigators focusing their efforts in conflict zones also need to liaise with a relatively elevated number of interlocutors before being able to physically conduct inspections, as they need to seek clearances and support from the different relevant authorities (Ministerial authorities, command of the armed forces or groups, etc.) who can guarantee a sufficient level of access to the stockpiles to be traced.

The weak legal status of the investigators. Entities tracing conflict weapons (including the United Nations’ Panels of Experts) cannot avail themselves of a clear legal status. They are thus compelled to operate in what could be considered a “legal grey area”. As an immediate consequence of this statutory limitation, they critically depend on the voluntary cooperation of the relevant actors and can access and benefit from existing tracing tools (for example INTERPOL-developed tools that are strictly reserved for use by national law enforcement agencies of the organization’s Member States) only when specific frameworks of bilateral cooperation are negotiated and established for each individual case.²⁶ This issue appears to be particularly important, especially since the information needed to trace conflict weapons is often spread out in different states and concern equipment that, during its life cycle, is likely to have changed custody several times.

Limited technical and investigation capacity. The experiences of the last decades of weapons tracing suggest that a considerable proportion of tracing initiatives were unsuccessful because of the inaccuracy of the information reflected in the initial requests circulated by the investigators.²⁷ This challenge does not only refer to tracing requests produced by UN Panel of Experts, NGOs’ investigators, journalists, or other members of civil society, but it equally refers to those undertaken by law enforcement agencies on

24. The States of South Kordofan and Blue Nile.

25. For additional details on this specific aspect see, for instance, Box 1 (page 14) in Leff J. and LeBrun E. *Following the Thread: Arms and Ammunition Tracing in Sudan and South Sudan*, Working Paper n°32, Human Security Baseline Assessment, May 2014, Geneva (Switzerland).

26. UNSC Panels of Experts, for instance, are not considered UN entities, since they are composed of non-UN personnel. As a result, Panels need to negotiate individual cooperation frameworks even when information-sharing and cooperation agreements between the Organization of the United Nations and relevant entities (such as INTERPOL, regional organisations or Member States) already exist.

27. This aspect was explicitly discussed during the consultations held within the framework of the *Open Ended Group of Governmental Experts* that specifically focused on the implementation of the ITI in May 2011. For additional and concrete examples, see, for instance, SENIORA Jihan, *Marquage et traçage des armes légères: défis actuels et nouvelles tendances*, Note d’Analyse du GRIP, 22 June 2012, Brussels (Belgium).

illicit firearms.²⁸ If some practical tools were recently developed to tackle these challenges,²⁹ technical awareness, working methodology and capacities of the investigators involved in tracing weapons – no matter whether they are illicit firearms of weapons used in conflict areas – still need to be increased and consolidated.

4. Why Should Conflict Weapons be Traced?

Tracing conflict weapons proves to be an efficient tool for disclosing abusive arms transfers, despite the fact they are generally not used as a support for judiciary investigations, as illicit international transfers and embargo violations often escape from the scope of national jurisdictions. As a result, the outcome of tracing conducted on illicitly transferred weapons can provide useful information to enhance the efficiency of existing arms control mechanisms and, from a more general perspective, conflict analysis. Some of the areas in which tracing conflict weapons can generate an added value are addressed here:

Revealing violations of sanctions regimes and international control mechanisms. As elaborated in the previous sections, the mechanisms for tracing weapons were mainly developed from the early 1990s to determine cases of breaches of arms embargoes. At that time, the International Community also started to rely more systematically on international sanctions as a conflict prevention tool. Tracing weapons, which were possibly supplied to embargoed States in violation of the sanctions regime, indeed constituted a key instrument to, first, document the chain of custody of suspicious stocks and, second, to determine whether their presence constituted a violation of obligations (of abstention) adopted by the Security Council. In addition, tracing weapons enables the identification of the entities (States, private companies or individuals) involved in breaches of sanctions regimes and provides the concerned national authorities data that can serve, if deemed relevant, as a basis for follow-up domestic investigations. Also, tracing conflict weapons is an effective method for assessing the effectiveness of existing international treaties and their control mechanisms (including, for instance, the EU Common Position on export of Military Equipments, the Nairobi Protocol, the ECOWAS Convention, the UN PoA, or the Arms Trade Treaty, etc.).

Enabling more efficient risk assessment prior to export. The outcome of tracing does not always document *intentional* violations of the international law, but sometimes it simply

28. Figures provided by the participants of the Open Ended Group of Experts' consultations illustrate well to what extent chances of tracing are undermined by the inadequacy of the manner in which they are formulated. According to INTERPOL, for instance, 70% of the tracing requests that were made until 2011 proved unsuccessful because the information provided by the requesting parties was incomplete or incorrect. Similarly, in the United States of America, 40% of the tracing request cannot be followed-up by the national agencies mandated to address them because law enforcement agents originally did not record the information contained in the marking of the firearms to be traced correctly.

29. Among these initiatives it is worth mentioning, for instance, the elaboration of INTERPOL Guidelines for firearms photography, the tracing training sessions organised in 2011 by the Belgian manufacturer FN Herstal and addressed to UN Panels' investigators in order to improve the latter's technical knowledge and the company capacity to respond positively to tracing requests on conflict weapons and the 2008 Small Arms Survey Ammunition Tracing Kit, available on <http://www.smallarmssurvey.org/publications/by-type/book-series/ammunition-tracing-kit.html>

reveals the poor capacity of States to guarantee the effective control and custody of their national stockpiles. These results can prove to be particularly useful, not only for the Governments involved (purportedly or not) in the violations, but also for their future suppliers in weapons and ammunition. This is because the particular outcomes of tracing cases provide concrete indications of the potential risks of post-delivery diversion.

Conflict weapons' tracing as a tool for more effective pre-delivery risk assessment

Inspections undertaken by the UN Group of Experts on Côte d'Ivoire in 2013 revealed the presence, in the national stockpile, of two lots of non-lethal rocket launchers type AM-600 and AM-640 (two hundred-seventy pieces each) and related ammunition, manufactured by the Brazilian company Condor Non-Lethal Technologies. The tracing exercise undertaken upon the observation of these weapons determined that they had been sold to the presidential security services of neighbouring Burkina Faso, in conformity with a contract signed in August 2012.³⁰

Apart from the fact that it illustrates a violation of the arms embargo established against Côte d'Ivoire in November 2004, this case appears interesting because it sets yet another precedent suggesting that risk-assessment related to Burkina Faso's requests for exports of SALW should be handled with particular attention, independently from the role – deliberate or unintentional – played by the Burkinabe Government in this instance. Some years before, in fact, the same UN Group of experts reported the case of an attempted violation of the embargo using a false end-user certificate.³¹

Assessing national capacities better and identifying needs for international assistance.

In some cases, tracing exercises can reveal fact-based evidence that some weapons circulating in war-affected areas originate from stockpiles of States that play no direct role in the conflict. These States of origin are often, but not always, unaware of the diversion of their weapons. When volumes of such weapons are small and no specific trend can be recognised, one can believe that supplies were accidentally diverted or occurred upon the initiative of some individuals only. Regardless of the precise circumstances behind these diversions, the outcome of tracing might assist the Government in identifying where the major weaknesses are within their domestic stockpile control mechanisms and therefore in which domains efforts for improvements and assistance are needed as a priority.

The benefits of tracing, in this regard, must be emphasised; as a quick review of many national reports on the UN PoA implementation submitted since 2002 clearly shows, it is still challenging for several States requesting international cooperation to assess and quantify precisely their needs for assistance, as well as for States that can play the role of assistance-providers to determine under which forms and in which domains their support can generate the most concrete impact.³²

30. For additional details on this case, see the reports of the Group of Experts dated 14 October 2013 (ref S/2013/605, paragraphs 30 to 32) and 14 April 2014 (ref S/2014/266, paragraph 44).

31. For additional details see paragraphs 30 to 34 of the Report of the UN Security Council's Group of Experts on Côte d'Ivoire dated 5 October 2006 (ref : S/2006/735).

32. For additional details, see for instance Gree, K. and Parker, S. "A Decade of Implementing the United Nations Programme of Action on Small Arms and Light Weapons. Analysis of National Reports", UNIDIR & Small Arms Survey, 2012 (Geneva (Switzerland) and New York (USA)), available on <http://www.unidir.org/files/publications/pdfs/a-decade-of-implementing-the-unpoa-analysis-of-national-reports-en-301.pdf>

Conflict weapons' tracing as a tool to identify areas in which international assistance is needed to improve control mechanisms

Tracing research conducted by the Small Arms Survey in the Turkana region in the North of Kenya and neighbouring areas of Uganda and South Sudan have established a direct correlation between the widespread availability of illicit ammunition, fuelling armed inter-community violence among pastoralist groups, and transfers from the three countries' national stockpiles to their respective police forces serving in the same areas.³³ Based on the analysis of more than 3,000 rounds of ammunition, the research therefore revealed that a consistent amount of ammunition illicitly circulating among communities appears to have directly originated from States' stockpiles, mainly as a result of high levels of corruption among the law enforcement agents and the poor standards of stockpile management applied in each one of the three above-mentioned countries.³⁴

Establishing such fact-based trends enables the identification of the main SALW-related challenges, of some of the root causes of widespread circulation of illicit weapons and ammunition and of the reasons behind the inefficiency of existing stockpile management mechanisms, hence enabling concerned States to determine areas for priority interventions and to advocate among international assistance-providing partners for more focused cooperation.

Evaluating the effectiveness and impact of disarmament programmes. Tracing applied to weapons collected under the framework of post-crisis disarmament programmes generates useful information to determine the typology, the age and the functionality of SALW handed-over by former combatants. Far from being anecdotal, this type of data is essential not only to evaluate the efficiency of disarmament programmes themselves, but also to determine to what extent they can be considered as effective methods to significantly reduce the rate of serviceable weapons in circulation and what sort of additional efforts might still be relevant to undertake to consolidate the results already achieved.

Improving the in-depth understanding of conflict dynamics. Tracing illicitly transferred weapons not only generates valuable information on the type of equipment used in a particular conflict theatre, it also produces documented evidence of the type of actors, other than belligerents, that are involved in the military dimension of conflicts. Such in-depth knowledge is crucial for policy makers and decision takers worldwide, including those involved in the mediation between the fighting parties (such as multilateral regional or international organisations). A good knowledge of the routes for the diversion of weapons is also a necessary tool if one aims at preventing actors that are negatively influencing the conflict from continuing to play that role.

33. See Bevan, J. "*Blowback. Kenya's Illicit Ammunition Problem in Turkana North District*", Occasional Paper n°22, Small Arms Survey. June 2008, Geneva (Switzerland).

34. Kenyan, South Sudanese and Ugandan states still face severe challenges in terms of efficient stockpile management, despite some recent improvements. The Uganda Police, for example, was progressively transformed, from the 1970s onwards, from an unarmed agency to an armed force, in order to respond to increasing security challenges. This process was nevertheless not accompanied by systematic investments to upgrade storage physical infrastructures, many of which remain, especially in the peripheral districts, inadequate.

Conflict weapons' tracing as a conflict analysis instrument

In 2012, the Human Security Baseline Assessment for Sudan and South Sudan (HSBA) of the Small Arms Survey created an Arms and Ammunition Tracing Desk, aimed at identifying and tracing the chain of custody of the military equipment used in the different active conflict theatres in Sudan (Darfur, South Kordofan and Blue Nile States) and by the armed opposition forces operating in neighbouring South Sudan.³⁵ As a result of these mapping efforts, it proved to be possible to progressively establish a detailed knowledge of the types of military hardware used by the different armed actors involved in the rebellions on both sides of the border between the two countries.

Taking advantage of the cooperation from a number of concerned States and private actors, as well as from regular physical inspections of weapons' stockpiles, the HSBA generated an unprecedented volume of data determining, not only the origin of a significant proportion of the weaponry observed, but also its conformity with stocks owned by the Sudanese armed forces. Describing the supply mechanisms used by the armed movements to procure weapons and ammunition – through direct delivery (in the case of the South Sudanese movements) or captures during military confrontation (as far as Sudanese rebel groups are concerned) – the HSBA concluded that most of the weapons' flows destabilizing the two countries had, in practice, originated from Sudan's national stockpiles, revealing the direct role played by the Sudanese government in the different attempts to destabilise the newly created South Sudan.

Documenting this trend did not generate any coercive decisions, neither against the Sudanese Government, nor against the rebel groups or other non-State entities involved; nevertheless, it provided valuable documented evidence enabling regional and international political stakeholders to increase their visibility on the military dimension of the conflicts in both countries and, possibly, to fine-tune their respective political positions.

35. Groups operating under the leadership of, among others, Peter Gadet, George Athor and John Duit, David Yau Yau, and Bapiny Monytuil. For additional information see the different reports by the HSBA Arms and Ammunition Tracing Desk, available at <http://www.smallarmssurveysudan.org/facts-figures/arms-and-ammunition-tracing-desk.html>

5. Final Remarks and Recommendations

Recent years' experience reveals unambiguously that applying tracing methods to SALW and ammunition circulating in conflict-affected areas generates useful information that can be usefully exploited in a number of different domains (in addition to determining whether arms embargoes have been breached). Despite growing interest and efforts undertaken in this area of investigation, several improvements are nevertheless still necessary to maximize both the capacities and impact of tracing weapons. Considering the specificities of the tracing of conflict weapons (in opposition to illicit firearms tracing), it is crucial that the concerned actors, including States, multilateral organisations and specialised components of the civil society, dedicate additional resources to this domain.

Therefore this paper can conclude with the formulation of some specific recommendations:

- **Relevant organisations** (including States, multilateral organisations and non-governmental actors) **should undertake additional efforts to increase the knowledge of their staff involved in tracing**, in particular when focusing on weapons and ammunition used in conflict settings. As recognised by many practitioners, incorrect or inadequate collection of data from inspected weapons stands as one of the major obstacles for the successful management of tracing, and future technological innovations in manufacture are likely to make such challenges even bigger. It is therefore crucial that entities involved in this area consolidate their in-house expertise through adequate and continued training.
- Key information for tracing is generally not readily available and access to weapons and ammunition in conflict-affected areas is often limited. As a result, it is essential to **further support research activities in this area, as well as to design research programmes with a long life cycle and long-term perspective** in order to maximize the experience collected.
- **The United Nations should consider including weapons' tracing explicitly into the mandate of Peacekeeping Operations** deployed (or to be deployed) in conflict-affected countries, regardless of whether the latter are subjected to arms embargoes or alternative arms control provisions. Peacekeeping Operations present, in fact, two major assets; on the one hand, they are continuously deployed in the field (contrary to the majority of other tracing actors) and, on the other hand, they operate under strong political mandates. These two factors facilitate the building of mutual trust relationships with the parties involved in the conflict and access to weapons stockpiles, both key prerequisites for successful tracing. Enlarging the Peacekeeping Operations mandate to tracing weapons would certainly broaden the scope of knowledge in this domain, reduce risks of diversions of weapons and ammunition from peace support operations and post-conflict disarmament programmes, and maximize the use of human resources and capacities often already available within the Operations' staff.
- **Cooperation among actors** (States, actors undertaking regular tracing missions in conflict areas, relevant international organisations and the SALW industry) **should be enhanced to facilitate information sharing, to achieve better mutual understanding and to develop common instruments** for a more effective management of the different stages of tracing. While some recent initiatives can be regarded as positive steps in this regard (for instance the development of a standard format for tracing requests to be submitted

through INTERPOL or trainings provided by some SALW manufacturing companies to UN Panels of Experts), the room for improvement in this area remains vast.

- Finally, **Governments should refer in a more systematic manner to fact-based evidence produced by tracing initiatives in conflict theatres**, in particular when assessing the potential risks of the diversion of weapons and ammunition prior to export to consignees known for having been involved in illicit supply chains and when developing assistance programmes designed to be implemented in countries that supplied – willingly or unintentionally – arms to war zones. If tracing conflict weapons generates useful information on armed conflict dynamics, this information should not only be considered as being capable of shaping international policies, but it also allows risks related to future exports to be better measured and to identify areas of cooperation in which external assistance in the area of arms control can produce the most effective impact.

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