

Report

October 2017



MAKING A TOUGH JOB MORE DIFFICULT

Loss of Arms and Ammunition in Peace Operations

Eric G. Berman, Mihaela Racovita,
and Matt Schroeder



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OPERATIONS
MORE EFFECTIVE



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A publication of the Small Arms Survey's Making Peace Operations More Effective project with support from US Department of State's Office of Weapons Removal and Abatement

Credits

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Making Peace Operations More Effective

The Small Arms Survey's Making Peace Operations More Effective (MPOME) project is a multi-year initiative to deepen understandings of, and to support efforts to counter, the loss of weapons and ammunition from peace operations worldwide. It responds to an emerging consensus that the scale of the global loss of lethal materiel from United Nations (UN) and regional-led peacekeeping operations is considerably greater than previously understood—with much of the loss likely preventable. MPOME research has also demonstrated that oversight and proper management mechanisms are lacking for weapons and ammunition that peacekeepers recover outside of formal collection programs.

The MPOME project addresses these concerns in four ways:

- by deepening understandings of the loss of materiel from peace operations through a **series of regional conferences**;
- by developing **training modules and good practice guidelines** to counter losses in cooperation with major troop- and police-contributing countries;
- by working directly with the UN and regional organizations to develop **mechanisms to improve stockpile security and administrative oversight** of materiel; and
- by **highlighting findings and initiatives** with policymakers, programmers, and experts at relevant international forums (such as at the UN Programme of Action on Small Arms and the UN General Assembly).

The MPOME project is supported by Global Affairs Canada with additional assistance from the German Federal Foreign Office and the Swiss Federal Department of Foreign Affairs. It draws on research undertaken with the backing of Denmark, Norway, and the United States.

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Executive summary

Peace operations have changed dramatically since the end of the cold war—in terms of both their nature and the actors undertaking them. Today’s missions are frequently larger, more complex, and more dangerous than their predecessors. Peace operations are likely to become more challenging in the future.

The loss of arms and ammunition in peace operations is neither infrequent nor inconsequential. The Survey has identified losses in at least 20 missions undertaken by the UN, several other organizations, and ad hoc coalitions of the willing. Losses include not only assault rifles and pistols, but also armoured vehicles and numerous types of light weapons, such as heavy machine guns, grenade launchers, heavy mortars, and recoilless guns.

Lethal materiel is lost in a variety of ways and settings. While political sensitivities and opacity in reporting have resulted in misleading categorizations in UN sources, documented losses take place during everyday operations (such as patrol or escort missions), during movements of goods or supplies (by land or water), at the front or back end of tours of duty, and at fixed sites (residences, depots, bases). Incidents range from the seizure of a few rifles from patrols to the wholesale looting of weapons and ammunition from arsenals.

The loss of small arms and ammunition is not always preventable. Sometimes peacekeepers are in the wrong place at the wrong time, and some arms depots are breached not because of lax stockpile security, but because the assailants are determined and well armed. This study looks at such incidents (including seizure resulting from military clashes, and forced abandonment) alongside losses resulting from less-than-best practice and corruption.

The UN’s system for managing and controlling the movement of contingent-owned equipment provides the framework for a rigorous stockpile security and transport control regime for weapons and ammunition. Less is known about the challenges confronting officials and contingents serving in non-UN peace operations. Greater access to the many documents detailing the policies, procedures, and guidelines of both UN and non-UN peace operations would improve understanding of existing control measures and the gaps in these controls.

Thus the UN and other organizations undertaking peace operations are part of the solution, not part of the problem. At the same time, the focus on properly supporting and overseeing Blue Helmets must be accompanied by appropriate engagement with Green Helmets and the development of good practice when managing their arms and ammunition. Moving forward, much more can be done to better understand the scale and scope of the problem, its causation, and the efficacy of checks and balances, and to develop indicators for accountability and performance.

Key findings

- More than a dozen organizations apart from the UN undertake peace operations. Oversight of the lethal materiel deployed during many of these missions is negligible or non-existent.
- Even the UN has no institutionalized oversight of arms and ammunition recovered outside of formal weapons recovery programmes. The materiel recovered through patrolling, cordon and search operations, or as a result of embargo implementation or other mandate implementation measures can be sizeable.
- The extensive losses of contingent-owned equipment (COE) that the Survey documented in Sudan and South Sudan are not outliers or exceptions. The loss of arms and ammunition in peace operations is a global and pervasive problem, affecting missions across geographical regions, functioning in different threat environments, and involving many troop- and police-contributing countries (TCCs/PCCs).
- Moreover, the Survey's previous estimate of losses from peace operations in Sudan and South Sudan (at least 500 small arms and light weapons and 750,000 rounds of ammunition) significantly underestimated the scale and scope of the losses incurred during these missions.
- Peacekeepers are susceptible to losing equipment during the course of everyday activities, such as patrols and escort duties, but also during resupply operations, troop rotations, or repatriation.
- The system through which the UN manages COE provides a framework for rigorously controlling arms and ammunition during peace operations. However, the establishment of uniformly robust controls on the storage and transport of these items is hindered by numerous budgetary, logistical, and infrastructural constraints; shortages in staffing and expertise; and gaps in UN policies and procedures.
- The UN has established numerous pre-deployment procedures for ensuring that TCCs/PCCs comply with expectations regarding equipment and training levels. Comparable procedures for rehatted troops already serving in mission areas are slower and less effective, with significant implications for the operational readiness of thousands of uniformed personnel.
- Armed guards deployed as part of unarmed civilian missions have also lost arms and ammunition. While civilian missions are not the focus of this study, the loss of weapons and ammunition from these missions raises questions about oversight and good practice that merit further exploration.



A small percentage [of equipment deployed] is lost, stolen, or seized by armed groups and criminals. Cumulatively, this materiel likely comprises thousands of weapons and millions of rounds of ammunition.”

Introduction

Each year, tens of thousands of military, police, and civilian personnel serve in one of dozens of peace operations mandated by the UN and other multilateral institutions. Many of these operations are in regions that are inhospitable, unstable, and violent. To operate in these environments peacekeepers must have the full range of capabilities to enable them to implement their mandated tasks, such as the protection of civilians, which requires them to deploy with a wide array of small arms and other weaponry. While the vast majority of the hundreds of thousands of deployed small arms are responsibly used during these missions and repatriated without incident, a small percentage are lost, stolen, or seized by armed groups and criminals. Cumulatively, this materiel comprises thousands of weapons and millions of rounds of ammunition. The lost materiel is vulnerable to misuse, including against the peacekeepers themselves and the civilians they are trying to protect. This report examines the loss of arms and ammunition during peace operations, and efforts by mission staff and TCCs/PCCs to minimize the unauthorized acquisition and use of weapons and materiel.

The report is the third in a series of studies examining weapons and other materiel seized, stolen, or otherwise diverted from peacekeepers. Berman and Racovita (2015) document the loss of hundreds of small arms and light weapons, and thousands of rounds of ammunition, during peace operations in Sudan and South Sudan. Schroeder (2016) analyses recent efforts to secure weapons deployed and recovered during peace operations and identifies barriers to the universal implementation of robust controls on these weapons. (See Box 1 for definitions and short contexts of terms used throughout this study.)

Concurrent with the research and publication of these reports was the development and finalization of a multifaceted and multi-year initiative. Two of the four components of the Making Peace Operations More Effective (MPOME) project (see Small Arms Survey, n.d.b) are especially relevant. The MPOME project supports the creation of improved control measures to counter materiel losses. It will assist the African Union (AU), for example, to develop guidelines on how to secure and manage recovered arms and ammunition in its peace operations. The MPOME project will also seek to engage major TCCs to learn from their experiences, develop training modules in their national institutions, and share these lessons and improved practices with others.¹

The present report builds on this research and the project's framework and identifies priorities for future inquiry.

The report is organized into three parts. The first section includes a brief overview of peace operations in the post-cold war era. It introduces the reader to the increased demands placed on peacekeepers and the challenges they face, as well as the growing number of actors undertaking these missions. Drawing on data from the Small Arms Survey's Peace Operations Data Set (PODS), the second part looks at the types of

Box 1 Terms and definitions

For the purposes of this study, **small arms** include the following items:

- revolvers and self-loading pistols;
- rifles and carbines;
- shotguns;
- sub-machine guns; and
- light machine guns.

The term **light weapons** refers to:

- heavy machine guns;
- mortar systems of calibres of 120 mm or less;
- hand-held, under-barrel, and automatic grenade launchers;
- recoilless guns;
- portable rocket launchers, including anti-tank rockets; and
- portable missiles and launchers, namely anti-tank guided weapons and man-portable air defence systems.

The term ‘small arms’ is sometimes used as shorthand to refer to both small arms and light weapons, but the term ‘light weapons’ never includes small arms. This study also examines the loss of parts, accessories, and ammunition for small arms and light weapons.

Loss refers to the unauthorized change in possession or end use of weapons, ammunition, parts, explosives, or other materiel. The loss of arms and ammunition can be intentional or unintentional, and includes the misplacement, theft, seizure, and illicit intra-state and international retransfer of weapons.

The term **peace operation** refers to a mission that deploys active police or military personnel that (i) has broad governmental backing—usually including support from a regional or international body; (ii) promotes the reduction of armed violence (for example, implementing peace accords, enforcing arms embargoes, engaging armed groups, or professionalizing state security forces); (iii) seeks to maintain internationally recognized national borders and governments—or to support a peace agreement that calls for a possible change to this status quo; and (iv) is not part of any formal collective defence or bilateral military agreement. The report differs from the way the UN High-Level Independent Panel on UN Peace Operations (HIPPO) uses the term (see UNGA and UNSC, 2015, para. 50).² This report focuses primarily on peace operations with uniformed personnel that are multinational, and that receive support from a multilateral organization. The uniformed personnel may—or may not—be armed. The support from a multilateral organization might be retroactive or informal.

The Survey agrees with HIPPO that a peace operation’s mandate can include a wide range of activities. These undertakings cover one or more aspects of what might be described

▶ as the ‘Four Ps’: peace-building, peacekeeping, peace enforcement, and peacemaking as broadly defined by former Secretary-General Boutros Boutros-Ghali in his *Supplement to an Agenda for Peace* (UNGA and UNSC, 1995). The report uses **peacekeeper** to refer to anyone serving in a peace operation, regardless of its mandate. The term **Blue Helmet** refers to military or police personnel serving in UN-mandated peacekeeping operations, while **Green Helmets** are uniformed personnel serving in peace operations undertaken by an authority other than the UN (for example, regional organizations or ad hoc coalitions of the willing).³ The term **rehatting** refers to the transfer of command over personnel and equipment from one institution to another (for example, from AU to UN command).

Some of the terms used in this report are specific to UN operations. The UN defines COE as ‘major equipment, and minor equipment and consumables deployed, and operated by the troop/police contributor’s contingent in the performance of peacekeeping operations’ (UNGA, 2015, p. 16). ‘Major equipment’ is defined as ‘major items directly related to the unit mission as mutually determined by the United Nations and the troop/police contributor’ (p. 18). Items categorized as major equipment range from main battle tanks to knee protection for riot-control police (pp. 162, 165).

The Survey uses the term **physical security** to refer to measures that ‘provide the capability to detect, assess, communicate, delay, and respond to an unauthorized attempt at entry’ into a weapons storage facility (King, 2011, p. 2). **Inventory controls** are the various mechanisms used to account for, monitor, and track arms and ammunition to ensure that these items are accessible only to authorized end users and are only used for authorized purposes. These mechanisms range from on-site inspections to reporting requirements for lost and stolen weapons. **Movement control** refers (in part) to ‘the processes of planning, coordinating, organizing, executing and controlling the transportation of personnel and cargo from a point of origin to a destination’ (UNDPKO and UNDFS, 2014a, p. 9).

weapons, ammunition, and equipment most frequently lost during peace operations, and the circumstances surrounding these losses. Analysing the circumstances of these losses not only reveals the magnitude of the phenomenon, but also points to effective strategies for preventing or mitigating the loss of lethal equipment. The report’s third and final section examines the UN’s numerous policies and practices for managing and transporting small arms and ammunition, with a particular focus on physical security, inventory management, and movement control. Barriers to fully implementing these safeguards are then identified and analysed. The report concludes with a brief summary of key findings and observations. ●



The demands placed on peacekeepers—whether UN or other—frequently far exceed the missions’ resources and abilities.”

Peace operations in the post-cold war period: a brief overview

A period of growth

UN peace operations attract considerable attention and are well known.⁴ For the first 40 years of the organization's existence the polarized Security Council authorized only 13 peacekeeping operations. The thawing of tensions between East and West in the late 1980s led to a significant increase in UN peace operations. During the five-year period from January 1988 to December 1992 the Security Council undertook 14 additional peacekeeping operations. Since then the UN has established more than 40 others (see, for example, Koops et al., 2015).

Less well known are the growing number of organizations outside the UN that have undertaken such operations. More than 20 such bodies have authorized—or been associated with⁵—peace operations with at least ten police or military personnel deployed at a single time (see Table 1).⁶ Some of the more active and familiar organizations include the AU, the Economic Community of West African States (ECOWAS), the European Union (EU), and the North Atlantic Treaty Organization (NATO). Some bodies, such as the Organization for Security and Co-operation (OSCE), mostly undertake civilian-only missions—and the inclusion of military or police elements is not well known. Five organizations that have undertaken peace operations no longer exist. All told, these non-UN actors have undertaken more than 100 peace operations, the vast majority of which were established after 1991 (Berman and Brehm, 2017).⁷

Numerous other organizations may undertake peace operations, which merit additional attention. A partial list includes the Collective Security Treaty Organization (CSTO, see below), the Community of Portuguese-language Countries (Comunidade dos países de língua Portuguesa or CPLP), and the G5 Sahel (G5S) (Burkina Faso, Chad, Mali, Mauritania, and Niger). The CPLP briefly considered undertaking a peace operation in Guinea-Bissau in 1998 (see Berman and Sams, 2000, pp. 368–70), and heads of state of the recently established G5S (created in 2014) agreed in 2015 to establish a joint military force to combat radicalization (see Berman and Maze, 2016, pp. 46–47). In June 2017 the EU announced EUR 50 million (USD 58.9 million) to support a G5S force (EC, 2017), but questions remained regarding the force's composition and commencement of operations (Lebovich, 2017).

Peace operations undertaken by what are frequently described as 'ad hoc coalitions of the willing' have also increased during this period. Because this report focuses on missions undertaken by organizations, these coalitions are not analysed here. Many of these operations, such as the International Force for East Timor and the AU-led Regional Task Force (AU-RTF),⁸ are armed and include thousands of uniformed personnel. The management of the administrative oversight of arms and ammunition in use with these undertakings is also of interest. As this report notes (see Table 2), an attack on peacekeepers serving in the Inter-African Mission to Monitor the Bangui Agreements/Mission interafricaine de surveillance des accords Bangui (known as MISAB) resulted in the loss of lethal materiel (Berman with Lombard, 2008, p. 67).

Table 1 Peace operations undertaken by organizations other than the United Nations

Organization*	Peace operations deployed ^a				Mission names* (deployments) [Bold = operational as of 30 June 2017]
	No.	First (yr)	Max. strength	Any armed?	
ANAD ^b	1	1986	16	No	ANAD Observer Mission (Burkina Faso–Mali)
AU	14	2002	22,000	Yes	AULMEE (Eritrea–Ethiopia); AMIB (Burundi); AMIS I (Sudan); MIOC (Comoros); AMIS II (Sudan); AMIS II-E (Sudan); AMISEC (Comoros); AUSTF (Burundi); AMISOM (Somalia); UNAMID ^c (Sudan); MAES (Comoros); Op. Democracy (Comoros); AFISMA (Mali); MISCA (CAR)
CEMAC	1	2003	500	Yes	FOMUC (CAR)
CEN-SAD	1	2001	300	Yes	CEN-SAD Mission (CAR)
CIS	4	1992	32,000	Yes	JCC (Moldova [Transdnistrier]); IPKF (Georgia [South Ossetia]); CPKF (Tajikistan); CPKF (Georgia [Abkhazia])
Commonwealth	2	1979	1,300	Yes	CMF (Rhodesia/Zimbabwe); CPAG (South Africa)
ECCAS	1	2008	1,500+	Yes	MICOPAX (CAR)
ECOWAS	8	1990	14,000	Yes	ECOMOG (Liberia); ECOMOG (Sierra Leone); ECOMOG (Guinea-Bissau); ECOMICI (Côte d'Ivoire); ECOMIL (Liberia); ECOMIB (Guinea-Bissau); ECOMIG (the Gambia); MICEWA (Mali)
EU	25	2003	7,000	Yes	EUPM (BiH); EUFOR Concordia (Macedonia); EUFOR Artemis (DRC); EUPOL Proxima (Macedonia); EUFOR Althea (BiH); EUPAT (Macedonia); EUPOL COPPS (Palestinian Territories); EUPOL Kinshasa (DRC); EUSEC RDC (DRC); EUFOR RD CONGO (DRC);

FLS ^b	1	1986	10,000+	Yes		EUPOL Afghanistan (Afghanistan); EUPOL RDC (DRC); EUPOL TCHAD/RCA (CAR–Chad); EUMM (Georgia); EULEX Kosovo; EUSR Guinea-Bissau; EUTM Somalia (Somalia); EUCAP Sahel (Niger); EUCAP Somalia/Nestor; EUTM Mali (Mali); EUFOR RCA (CAR); EUCAP Sahel (Mali); EUAM (Ukraine); EUMAM RCA (CAR); EUTM RCA (CAR)
IGAD	1	2003	50+	No		n/a (Mozambique) VMT (Sudan)
LAS	4	1961	30,000	Yes		ALF (Iraq–Kuwait); SASF (Lebanon); ADF (Lebanon); Arab League Observer Mission (Syria)
LCBC	1	2016	10,000	Yes		MNJTF (Nigeria)
MFO	1	1981	2,000+	Yes		MFO (Egypt [Sinai])
NATO	15	1992	130,000	Yes		Op. Maritime Monitor (Adriatic); Op. Sky Monitor (BiH); Op. Maritime Guard (Adriatic); Op. Deny Flight (BiH); Op. Sharp Guard (Adriatic); IFOR (BiH); SFOR (BiH); KFOR (Serbia [Kosovo]); AFOR (Albania); Op. Essential Harvest (Macedonia); Op. Amber Fox (Macedonia); Op. Allied Harmony (Macedonia); ISAF (Afghanistan); Op. Unified Protector (Libya); RSM (Afghanistan)
NNSC	1	1953	500+	Ukn		NNSC (DPRK–South Korea)
OAS	5	1948	25,000	Yes		Military Monitoring Committee (Costa Rica–Nicaragua); Committee of Military Advisers (Honduras–Nicaragua); OAS Commission (Panama); IAPF (Dominican Republic); Military Observers Mission (El Salvador–Honduras)
OAU ^b	11	1980	3,500	Yes		Neutral Force I (Chad); Neutral Force II (Chad); MOT (Rwanda); NMOG I (Rwanda); NMOG II (Rwanda); OMIB (Burundi); OMIC I (Comoros); JMC (DRC); OLMEE (Eritrea–Ethiopia); OMIC II (Comoros); OMIC III (Comoros)

OECS	1	1983	400	Yes	ECPF (Grenada)
OSCE	4	1995	150+	No	Mission to Bosnia and Herzegovina (BiH); Spillover Monitor Mission to Skopje (Macedonia); Mission to Skopje (Macedonia); Mission to Georgia ^d (Georgia)
PIF	1	2003	2,000	Yes	RAMSI ^e (Solomon Islands)
SADC	2	1998	12,000+	Yes	OSLEG (DRC); Op. Boleas (Lesotho)
WEU ^b	4	1993	250	Yes	Op. Sharp Guard ^f (Adriatic); WEU Danube Op. (Danube); Task Force Mostar (BiH); MAPE (Albania)

Notes:

* The full meanings of abbreviations and acronyms used in Tables 1 and 2 are given in the ‘List of abbreviations and acronyms’.

^a **Headers:** ‘No.’ = number of missions fielded; ‘First (yr)’ = year the organization’s first mission was authorized or deployed; ‘Maximum]. strength’ = approximate number of uniformed personnel in the largest peace operation(s) of the organization in question; ‘Any armed?’ = ‘yes’ if at least one mission included armed personnel.

^b **Organizations no longer in existence:** The regional organizations ANAD, FLS, OAU, and WEU ceased to exist in 2001, 1994, 2002, and 2011, respectively.

^c UNAMID, a joint AU–UN mission, is listed here. Because the UN administered the operation—which included more than 26,000 uniformed personnel—this figure is not included here.

^d The OSCE’s Mission to Georgia started in 1992 as a peace operation of the OSCE’s predecessor, the Conference on Security and Co-operation in Europe (CSCE). The small cell of fewer than ten unarmed uniformed military personnel serving in the CSCE and OSCE missions since shortly after 1992 more than doubled after the 2008 war. (The Spillover Monitor Mission to Skopje, which began as a CSCE mission in 1992, did not contain a uniformed police component until 2001.)

^e RAMSI’s last day of operations was 30 June 2017.

^f The WEU joined the NATO mission Operation Sharp Guard in 1993, a year after NATO’s initial deployment for Maritime Monitor, placing the two organizations’ forces under a new mandate (WEU, n.d.).

Sources: Berman and Brehm (2017), drawing on dozens of sources, especially Berman and Sams (2000), Bellamy and Williams (2015, pp. 31–36), and the SIPRI Multilateral Peace Operations Database (SIPRI, n.d.).

The number of Blue Helmets participating in peace operations has waxed and waned—and waxed again—since the end of the cold war. In 1987 they numbered some 10,000. In 2010 their number surpassed 100,000 for the first time, and it has averaged close to that since then.⁹ (The number of Blue Helmets spiked in the early 1990s in excess of 75,000, but dropped to cold war-type levels by the decade’s end after UN peacekeeping lost much of its lustre in the 1993–95 period.)¹⁰ Despite a sustained effort to dust off and promote Chapter VIII of the UN Charter, which provides a framework for regional peacekeeping (see Berman, 1998), the UN ultimately took over responsibility from numerous African-led operations, often in recognition of their financial and operational limitations.¹¹ This resulted in tens of thousands of Green Helmets being rehatted as Blue Helmets, which created other challenges (such as underequipped peacekeepers). The UN also authorized a spate of new operations.

Moreover, the number of uniformed personnel serving in non-UN peace operations has grown. Despite the challenges African-led missions have encountered, African regional organizations continue to authorize them and their member states continue to field them. In June 2017 three African bodies were undertaking five deployments with more than 30,000 armed men and women.¹² Outside that continent, six institutions were simultaneously fielding eleven operations with more than 20,000 police and military personnel.

The mandates for these missions have also expanded. Peacekeepers no longer deploy primarily to document parties’ adherence to demilitarized zones or to help implement formal peace agreements. It is now common for uniformed personnel to operate in non-permissive environments in which armed local actors have not been consulted and approval for the operations has been neither sought nor given. Mandates sometimes include treating some of these groups as spoilers, with specific instructions to marginalize or even neutralize them. Tasks now increasingly include protecting civilians in areas where armed conflict, human rights abuses, and the illicit proliferation of small arms are deeply entrenched and plentiful.

A period of growing concern

The demands placed on peacekeepers—whether UN or other—frequently far exceed the missions’ resources and abilities. TCCs and PCCs in the mission area often lack the requisite materiel. This is especially true for missions with large numbers of rehatted troops and police. Moreover, leadership and accountability sometimes fall short of good practice and expectations.

Numerous capacity-building programmes exist to address this disparity. Three permanent members of the UN Security Council—France, the United Kingdom, and the United States—joined together in the second half of the 1990s to promote their ‘P3 Initiative’.¹³

Each of these governments developed programmes to train and (in the case of France and the United States) equip peacekeepers. Several other countries also undertook capacity-building programmes to develop African capacities in peace operations (see Berman and Sams, 2000, pp. 267–358; Berman, 2002). The United States subsequently expanded its support to TCCs and PCCs outside of Africa as part of its Global Peace Operations Initiative (GPOI), which has trained many more uniformed personnel than the initial target of 75,000 it initially sought to engage. The trainees hail from more than 50 countries, the majority from outside Africa.¹⁴ The EU—through its African Peace Facility programme—funds

and trains non-EU countries’ peacekeepers and various African peacekeeping missions. NATO has helped to train and equip multinational battalions that have served in peace operations. The CSTO has undertaken peacekeeping training exercises for several years now—and has proposed to field a force in Ukraine (see Armenpress, 2013; Malyasov, 2016; RT, 2015; TN, 2011). (The current Russian Federation military presence in eastern Ukraine is not a CSTO peace operation.)

The UN and member states have also undertaken several reform efforts. As with each element of this short section, space does not allow each initiative to be given its due. Significant examples include the ‘Brahimi Report’ of 2000, efforts to address sexual exploitation and abuse among peacekeepers, and the 2015 ‘HIPPO Report’ (see UNGA and UNSC, 2000; 2015; UN Women, 2015). In 2015 the United States initiated a UN Peacekeeping Summit at UN Headquarters to address performance and accountability issues, which was followed up by a Defence Ministerial on UN Peacekeeping held in 2016 in London. Canada will host another Defence Ministerial on UN Peacekeeping in November 2017 in Vancouver. Fewer than 50 days into his tenure, newly appointed UN Secretary-General António Guterres announced the creation of a team to review reforms of the UN Secretariat’s ‘peace and security strategy, functioning and architecture’ that is to produce recommendations by mid-year (UNNC, 2017). Despite the wide breadth of issues covered by these institutional reforms, to date none has explicitly addressed shortcomings regarding the safe and secure management of TCC and PCC COE—especially lethal materiel—or oversight of recovered arms and ammunition outside of disarmament, demobilization, and reintegration (DDR) programmes.¹⁵

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The AU is still at the early stages of developing a robust mission support concept, including institutional guidelines on COE for peace operations. As a result, recent and ongoing AU missions have often made reference to relevant UN guidelines. This approach is problematic given the AU's limited availability of funds for reimbursements and in light of the dynamic nature of most of its operations.¹⁶ ECOWAS is unusual in that it has a legally binding convention that calls on its members to provide the ECOWAS Secretariat with data on weapons deployed to and repatriated from mission areas (ECOWAS, 2006, art. 11). The ECOWAS Small Arms Convention, which entered into force in 2009, requires its 15 members to share information on weapons deployed as part of all peace operations in which they participate (not just those authorized by ECOWAS). The same convention also calls for its members to destroy any weapons they recover during peace operations (art. 17). These requirements are not always implemented, and ECOWAS staff are attempting to address the disconnect between commitments and existing practice. Many other organizations that undertake peace operations have no such oversight mechanisms and no stated plans to create them.¹⁷

The next section explains why the monitoring and oversight of weapons in peace operations are important. ●

“Figures provided from official and media reporting accounted for only a partial record of actual losses—and likely do not include cases of intentional diversion.”

Incidents of loss during peace operations

Loss of weapons and ammunition: a global phenomenon

The loss of weapons and ammunition by peacekeepers is a long-standing, global problem that is difficult to document. Cases of the diversion, seizure, and theft of contingent-owned arms and ammunition have been documented as routine occurrences in various regions and involving various TCCs and PCCs (with varying levels of training and equipment), and in missions undertaken by numerous organizations (see Table 2). The Small Arms Survey's PODS includes more than 100 records of incidents of loss from 1992 to 2017 based on official sources (mission reports, UN Panel of Experts reports, and press releases), as well as media reports and key informant interviews. PODS is skewed toward capturing large-scale events that have a greater likelihood of being covered by either official or media reports. As the Survey learned from its directed research into incidents of loss in peace operations in Sudan and South Sudan, however, these sources do not capture many such events.

Due to the challenges in data collection, the scale and scope of the losses of weapons and ammunition during peace operations remain difficult to estimate. The initial study of losses from peace operations in Sudan and South Sudan in 2002–14 found that the phenomenon is larger than commonly assumed, but could document very few losses with authoritative specificity. The initial investigation into losses determined that between 2005 and 2014 at least 500 weapons and 750,000 rounds of ammunition were lost from AU and UN stocks to other users (Berman and Racovita, 2015). Figures provided from official and media reporting accounted for only a partial record of actual losses—and likely did not include cases of intentional diversion (see Box 2). The same dynamics and challenges exist for examining this phenomenon at the global level. Moreover, key informants have suggested that reports of COE losses in the public domain persistently—and sometimes significantly—underestimate their magnitude and frequency.

Numerous officials who served in one or more of the seven AU and UN missions in Sudan and South Sudan¹⁸ have told the Survey that in its effort not to sensationalize, and to present rigorously documented accounts of losses of arms and ammunition from peace operations in Sudan and South Sudan, the Survey significantly underestimated the scale and scope of the problem. For example, a number of interlocutors who served in the AU Mission in Sudan (AMIS)¹⁹ or otherwise oversaw that mission as part of their day-to-day responsibilities have said that the 24 incidents listed in Berman and Racovita (2015) constitute a fraction of attacks on peacekeepers between July 2004 and December 2007. One peacekeeper who served with the AU in Darfur in 2005 had the following to say about the 2015 case study:

The eight examples of [attacks on peacekeepers in 2005] listed in your report can definitely not be assumed to be the only incidents of attack . . . as a participant observer, I assert with all sense of responsibility that AMIS suffered regular attacks and operational disruptions from the warring parties and the GOS [Government

of Sudan] forces. . . . The possibility of arms and amm[unition] seizures under the prevailing circumstances in the Darfur was very high. The bulk of the attacks on AMIS locations or patrol convoys were often aimed at arms and amm[unition] seizures.²⁰

Moreover, the case study did not systematically account for incidents in which fewer than ten weapons or 500 rounds of ammunition were lost. However, as some of the data suggests, these incidents are likely numerous. For instance, the Survey documented that during a ten-week period between October 2008 and January 2009 peacekeepers were attacked four times, resulting in the loss of—at a minimum—several hundred rounds of ammunition, a half-dozen or so assault rifles and machine guns, and a number of unspecified vehicles (perhaps with machine guns and sizeable quantities of ammunition) (Berman and Racovita, 2015, p. 65). Dozens of such smaller incidents have occurred in missions in Sudan and South Sudan (Small Arms Survey, n.d.a). Instead of recording these relatively minor incidents, the primary focus was (and remains) to document ‘notable’ incidents.²¹

In some cases that were deemed ‘possible losses’, new sources have subsequently confirmed the seizure of arms and ammunition, allowing for the reclassification of the incident to ‘known loss’. The Survey noted the ‘possible loss of materiel’ as a result of an attack on a convoy of Senegalese peacekeepers in Al Geneina in October 2013 (Berman and Racovita, 2015, p. 115). The UN Panel of Experts tasked to investigate arms embargo violations reported that the attack resulted in the loss of four assault rifles (UNSC, 2016b, p. 105). In October 2014 a South African platoon of AU–UN Hybrid Operation in Darfur (UNAMID) peacekeepers was attacked in Kutum. The Survey recorded the incident, but not the size of the unit, only that it was a ‘patrol’, that three peacekeepers were injured, and that there was a ‘possible loss of materiel’ (Berman and Racovita, 2015, p. 117). The Survey has been told that the unit in question was of platoon strength and that the entire platoon was disarmed.²²

Besides under-recording the number of attacks on mission personnel, peacekeepers and senior officials from missions in Sudan, South Sudan, and elsewhere have told the Survey that its estimates of losses are too low. For example, the Survey estimated the number of rounds of ammunition seized in an attack on UNAMID near Sindy in February 2014 to be at least 3,500 cartridges. Subsequently, a former UNAMID official informed the Survey that mission records document the ammunition lost in this incident at over 6,000 rounds.²³ Regarding the attack on Haskanita, the Survey recorded that 100,000+ rounds of ammunition were seized. New data and expert consultations suggest that although the initial assumptions were fair, a more accurate estimate would be 125,000— or even 150,000+—7.62 mm and 12.7 mm cartridges for assault rifles and machine guns as having been lost, as well as 325+ mortar rounds and 650+ anti-tank rounds.²⁴

Attacks on peacekeepers and losses of arms and ammunition from peace operations in South Sudan and Sudan have continued since the cut-off date (31 December 2014) of



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were commonplace—whereas only one such incident was listed in the study (see Berman and Racovita, 2015, pp. 79–80). Former officials have mentioned that the UN was able to ultimately recover lethal material that the SPLA seized. But an UNMISS peacekeeper underscored that even if the materiel was returned, these type of incidents—as well as peacekeepers’ loss and abandonment of weapons and weapons systems—undermined the credibility of the UN and the support the UN needed to fulfil its mandate. The former UNMISS official added that the seizure of such materiel was often preventable, resulting from poor soldiering and not poor planning.²⁵

Indeed, the temporal distribution of large-scale incidents identified to date suggests that losses of COE occur with regular frequency. As Table 2 shows, such incidents have been documented almost yearly. Losses have taken place in UN, hybrid, and non-UN operations. They have involved TCCs from each of the UN’s five regional groups and have occurred in missions on at least three continents.

The loss of COE is shaped by numerous factors, although the exact role of—and relationships among—these variables is not always clear. The degree of threat faced by a mission can influence the frequency and magnitude of equipment losses, but the data collected so far suggests that there is no clear relationship between the number of casualties as a result of attacks and the scale of lost weapons and ammunition. There is no publicly available evidence of higher loss rates of COE among contingents participating in the UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA), for example, which suffered the largest number of fatalities of any UN mission in 2014, 2015, and 2016 (UNDPKO, 2017b), than contingents serving in other, less lethal, missions. This is explained in part by the types of attacks and the motivations of the attackers. The majority of UN peacekeeper deaths in Mali²⁶ were due to mines, improvised explosive

incidents for the 2015 study. The Survey cannot compare the scale and scope of losses or attacks since January 2015 to previous periods, given the constraints on data collection. The UN has reported dozens of incidents in which UN peacekeepers came under attack (UNSC 2017b, para 27; 2016a, para, 27; 2015b, para. 64), and numerous instances in which arms were lost as a result—and, one may reasonably assume, sizeable quantities of ammunition as well (see below).

Officials familiar with the UN Mission in the Republic of South Sudan (UNMISS) have noted that seizures of TCC COE by the Sudan People’s Liberation Army (SPLA)

Box 2 Intentional ‘losses’: the deliberate diversion of COE

While the Small Arms Survey generally focuses on unintended ‘loss’, as can occur when peacekeepers are attacked, there are cases where the transfer of weapons and ammunition from a peace operation to others is deliberate. This may occur for several reasons, of which corruption is just one—and likely not the leading cause. Besides incidents of selling or bartering arms or ammunition for personal enrichment, other explanatory factors include strategic calculations made on the part of mission or sector commands, and national policies set by governments of TCCs. In the AU Mission in Somalia (AMISOM), for example, peacekeepers have routinely transferred ammunition to militia members serving alongside them or within their sectors, as well as to soldiers of the Transitional Federal Government (TFG).²⁷ The practice of dispensing ammunition to Somali militia and the Somali National Army continues.²⁸ Political considerations have reportedly led to purposeful transfers of arms and ammunition to armed actors within a peace operation (Andreas, 2009, p. 39).

Documenting intentional diversion is considerably more difficult than recording lethal materiel lost during an attack. While both require close investigation to establish the circumstances and attribute responsibility, corruption charges often require a lengthier and more difficult process of investigation. In addition, allegations of corruption generally involve monitoring a routinized practice rather than examining a single occurrence. Transparency International’s typology on corruption risk in peace operations notes numerous areas in which the intentional loss or diversion of arms and ammunition may occur. Their report does not provide specific examples of peacekeepers selling or trading arms and ammunition, but features numerous other transgressions concerning trade in non-lethal materiel (such as ivory or diamonds), and notes that the oversight and investigation of corruption allegations is of poor quality (see TI-UK, 2013). Other organizations have also alleged that peacekeepers are involved in the illicit trade in ivory and diamonds (Escobales, 2008; UNOIOS, 2008). When the British Broadcasting Corporation (BBC) tried to follow up on a Human Rights Watch investigation that UN peacekeepers in the Democratic Republic of the Congo (DRC) had recirculated recovered weapons from armed groups in the Kivus back to the armed groups, the UN officially informed the BBC that the allegations were not true (Plaut, 2007). After having left the UN, the organization’s primary lead investigator into the allegations subsequently reported that his team found the allegations of collected weapons being transferred in exchange for gold to be credible (Basanisi, 2008), which the UN publicly refuted (Ahlenius, 2008; see also HRW, 2005; Lynch, 2007; Roth and Crawshaw, 2008).

To tackle these problems, the UN adopted its own system of accountability, while some states instituted individual safeguards and investigations. The Department of Peacekeeping Operations (DPKO)/Department of Field Support (DFS) policies make express reference to combating corruption and ensuring the investigation of any allegations of misdeeds (UNDPKO and UNDFS, 2014b). Uganda, for example, has acknowledged that some of its peacekeepers in Somalia have engaged in corrupt and illegal practices, which has included selling ammunition. The Uganda Peoples’ Defence Forces has held many hearings on the alleged wrongdoing of its personnel in AMISOM, and has court-martialled, fined, and imprisoned numerous soldiers, including officers (Somalia Newsroom, 2016). The UN Monitoring Group on Somalia reported frequently and openly about reports it received of AMISOM troops selling arms and ammunition (see, for example, UNSC, 2008, pp. 60–71).

Table 2 Selected incidents of losses of weapons and ammunition in peace operations, 1993–2017

Date	Organization	Mission and location	TCC/PCC	Lethal materiel lost (<i>italics = estimates</i>) ^a	
				Weapons systems	Ammunition
April 1993	UN	UNTAC, Cambodia	Poland	<ul style="list-style-type: none"> • 5 pistols • 2 assault rifles 	<ul style="list-style-type: none"> • 250+ <20 mm rounds
April 1994	UN	UNAMIR, Rwanda	Ghana		<ul style="list-style-type: none"> • 50,000+ <20 mm rounds
May 1995	UN	UNPROFOR, BiH	France	<ul style="list-style-type: none"> • 61 assault rifles 	<ul style="list-style-type: none"> • 5,500 <20 mm rounds
July 1995	UN	UNPROFOR, BiH	Netherlands	<ul style="list-style-type: none"> • 152 assault rifles • 35 machine guns • 6 mortar systems • 6 AT weapons 	<ul style="list-style-type: none"> • 100,000+ <20 mm rounds • 300+ mortar rounds • 60+ AT rounds
June 1997	(Ad hoc coalition of the willing)	MISAB, CAR	Burkina Faso	<ul style="list-style-type: none"> • 12 assault rifles • 4 machine guns • Ukn mortar systems 	<ul style="list-style-type: none"> • 1,000+ <20mm rounds • Ukn mortar rounds
December 1998	ECOWAS	ECOMOG, Sierra Leone	n/a	<ul style="list-style-type: none"> • 5 machine guns • 3 mortar systems • 3 tanks 	<ul style="list-style-type: none"> • 14,600 <20 mm rounds • 150+ mortar rounds
September 1999	ECOWAS	ECOMOG, Sierra Leone	Guinea	<ul style="list-style-type: none"> • 14 pistols • 46 assault rifles 	<ul style="list-style-type: none"> • 20,000 <20 mm rounds • 105 AT rounds • 350 grenades

January 2000	UN	UNAMSIL, Sierra Leone	Guinea	<ul style="list-style-type: none"> • 30 pistols • 485 assault rifles • 30 machine guns • 20 AT weapons • 10 mortar systems • 1 self-propelled gun • 3 APCs 	<ul style="list-style-type: none"> • 100,000+ <20 mm rounds • 500 mortar rounds • 200 AT rounds
May 2000	UN	UNAMSIL, Sierra Leone	Zambia	<ul style="list-style-type: none"> • 500+ assault rifles • 30 machine guns • 10 mortar systems • 13 APCs 	<ul style="list-style-type: none"> • 45,000+ <20 mm rounds • 500 mortar rounds
May 2000	UN	UNAMSIL, Sierra Leone	Kenya	<ul style="list-style-type: none"> • 33 assault rifles • 18 machine guns • 8 APCs 	<ul style="list-style-type: none"> • 12,000+ <20 mm rounds
March 2003	CEMAC	FOMUC, CAR	n/a	<ul style="list-style-type: none"> • 1 pistol • <i>Ukr assault rifles</i> • 2 machine guns 	<ul style="list-style-type: none"> • 1,000+ <20 mm rounds
October 2005	AU	AMIS II-E, Sudan	Senegal	<ul style="list-style-type: none"> • 1 <i>pistol</i> • 38 assault rifles • 10 <i>machine guns</i> • 2 <i>AT weapons</i> 	<ul style="list-style-type: none"> • 9,400+ <20 mm rounds • 20 AT rounds
2003–06	AU + UN ^b	AMIB/OMIB, Burundi	South Africa	<ul style="list-style-type: none"> • 2 pistols • 46 assault rifles • 3 machine guns 	<ul style="list-style-type: none"> • 49,000+ <20 mm rounds • 97 mortar rounds
January 2006	UN	UNOCI, Côte d'Ivoire	Bangladesh	<ul style="list-style-type: none"> • 47 <i>flare guns</i> 	<ul style="list-style-type: none"> • 280,000+ <20 mm rounds^c • 2 mortar rounds • 81 grenades

January 2006	UN	MONUC, DRC	Guatemala	<ul style="list-style-type: none"> • 8 pistols • 8 sub-machine guns • 2 AT weapons 	<ul style="list-style-type: none"> • 2,000 <20 mm rounds • 5 AT rounds • 5 grenades
December 2006	UN	MINUSTAH, Haiti	Uruguay	<ul style="list-style-type: none"> • 2 machine guns • 1 sniper rifle • 1 APC^d 	<ul style="list-style-type: none"> • Ukn <20 mm rounds
September 2007	AU	AMIS II-E, Sudan	Nigeria	<ul style="list-style-type: none"> • 3 pistols • 50+ assault rifles • 24 machine guns • 10 mortar systems • 20 AT weapons 	<ul style="list-style-type: none"> • 125,000+ <20 mm rounds • 325 mortar rounds • 650 AT rounds
April 2008	AU–UN	UNAMID, Sudan	(China) ^e	None	<ul style="list-style-type: none"> • 600,000+ <20 mm rounds (12.5 tons)
March 2010	AU–UN	UNAMID, Sudan	Nigeria	<ul style="list-style-type: none"> • 55 assault rifles • 8 machine guns • 4 AT weapons 	<ul style="list-style-type: none"> • 14,000+ <20 mm rounds • 13 AT rounds
October 2011	AU	AMISOM, Somalia	Burundi	<ul style="list-style-type: none"> • 26 assault rifles • 10 machine guns • 1 rocket launcher • 1 recoilless gun 	<ul style="list-style-type: none"> • 4,500+ <20 mm rounds • 8 hand grenades • 6 AT rounds
September 2012	AU	AMISOM, Somalia	Kenya	<ul style="list-style-type: none"> • 5 assault rifles • 6 machine guns • 2 AT weapons 	<ul style="list-style-type: none"> • 1,000+ <20 mm rounds • 8 AT rounds
June 2013	AU–UN	UNAMID	Tanzania	<ul style="list-style-type: none"> • 5 machine guns • 1 AT weapon 	<ul style="list-style-type: none"> • 890 <20 mm rounds • 11 AT rounds

December 2013	UN	UNMISS, South Sudan	India	<ul style="list-style-type: none"> • 40+ assault rifles • 10+ machine guns • 2 mortar systems • 3 AT weapons 	<ul style="list-style-type: none"> • 22,000 <20 mm rounds
August 2014	UN	UNDOF, Israel–Syria	Fiji	<ul style="list-style-type: none"> • 10 pistols • 45 assault rifles • 2 machine guns 	<ul style="list-style-type: none"> • 4,000+ <20 mm rounds
June 2015	AU	AMISOM, Somalia	Burundi	<ul style="list-style-type: none"> • 100+ assault rifles • 20+ machine guns • 5+ AT weapons • 5+ mortar systems 	<ul style="list-style-type: none"> • 110,000+ <20 mm rounds • 260+ AT rounds • 220+ mortar rounds
January 2016	AU	AMISOM, Somalia	Kenya	<ul style="list-style-type: none"> • 150+ assault rifles • 26+ machine guns • 7+ AT weapons • 5+ mortar systems 	<ul style="list-style-type: none"> • 140,000 <20 mm rounds • 260+ mortar rounds • 275+ AT rounds
May 2016	UN	MINUSMA	Togo	None	<ul style="list-style-type: none"> • 2,700+ <20 mm rounds
June 2017	UN	MINUSMA, Mali	Guinea	<ul style="list-style-type: none"> • 4 assault rifles • 1 machine gun 	<ul style="list-style-type: none"> • 1,000+ <20 mm rounds

Notes

^a Estimates are based on the circumstances of the attacks, key informant interviews, and accompanying assumptions where specific data has not been obtained. The formulas for estimating losses from UN and AU missions can differ, because these calculations rely on different sources for establishing COE deployed (UN documents, and key informant interviews for AU estimates). “Ukn” is used when a loss of materiel is known or assumed to have occurred, but no estimate is possible.

^b This involved two missions—AMIB and OMIB—although the absence of more concrete information makes it difficult to establish whether the losses occurred during the ad hoc South African-led mission in Burundi before the deployment became an AU mission (with the addition of Ethiopian and Mozambican troops).

^c The figure refers to all ammunition that was left behind by UNOCI troops as a result of their hasty departure in light of the deteriorating security situation. The lack of physical control over the stocks categorizes it as a “loss” even though the UN has reported that 278,000 rounds were subsequently recovered.

^d According to the Uruguayan government, all arms lost during this incident, as well as the APC, were subsequently recovered.

^e This was Chinese COE that was being transported by a private company—Raiba Trans (Berman and Racovita, 2015, p. 76).

Source: Small Arms Survey (n.d.a)

devices, and other weapons targeting troops rather than their equipment (Sebastian, 2015). Armed groups have seized arms and ammunition from peacekeepers in Mali, such as the capture of some 2,500 rounds of ammunition on 29 May 2016 (Small Arms Survey, n.d.a),²⁹ but these losses appear to be incidental rather than the attackers' principal motivation.³⁰ In contrast, the UN Protection Force (UNPROFOR) in Bosnia and Herzegovina (BiH), which is also ranked as a high-casualty mission (Seet and Burnham, 2000), sustained significant material losses, such as the seizure of dozens of assault rifles and estimated losses of more than 5,000 rounds of ammunition from peacekeepers who were abducted and subsequently used as human shields (see Table 2 for a much larger example of losses during UNPROFOR).³¹

Troop morale and professionalism can also affect the incidence of COE losses. Reported delays in the payment of allowances in the early days of AMIS, and the chronic lack of funds and necessary equipment, negatively affected troop morale. This in turn reduced the mission's ability to effectively respond to attacks (Lynch, 2007), and likely aggravated the problems peacekeeping forces faced on the ground (Berman and Racovita, 2015, p. 60).

Attacks that result in the capture of COE are often spontaneous and opportunity driven, but armed groups' strategic goals—such as the replenishment of dwindling arsenals—clearly influence peacekeeper losses. Evidence from the Raiba Trans incident, for example, in which 12.5 tons of ammunition were captured while being transported, suggests that the assailants had no prior knowledge of the cargo until they had stopped and searched the containers (Berman and Racovita, 2015, p. 76). By contrast, a report investigating the attack on the Haskanita base suggested that the primary purpose was replenishing the depleted armaments stocks of the Justice and Equality Movement and the Sudan Liberation Army (AU, 2007).

Typical types and quantities of deployed materiel

A mission's deployed COE varies according to the organization authorizing the mission, mission profile, contingent, and type of operational units. Within the UN system, the individual memorandum of understanding (MoU) with the TCCs/PCCs details the personnel deployed; the equipment provided, including weapons, ammunition, and support and combat vehicles; and the reimbursement rates (UNDPKO, 2015a, p. 186). Similar MoUs exist between the AU and TCCs, although in practice, due to the lack of resources, hybrid systems have been put in place to handle the logistical support needs of missions such as AMISOM (ACSS, 2015; Badmus, 2015). The EU follows a similar process with troop-contributing nations as the main supplier of military equipment, but also has a provision for multinational cooperation, reinforced by a mechanism that administers common costs for EU-led missions (EUMC, 2011).

Though there are notable differences in the quantity and types of weapons deployed within missions, some types of weaponry can be considered typical. For instance, a Brazilian UN Stabilization Mission in Haiti (MINUSTAH) infantry-army battalion deploying in 2005 was to receive the following armaments:

- 6 crew-served machine guns (from 11 mm to 15 mm);
- 18 crew-served machine guns (up to 10 mm);
- 4 mortars (61 mm to 82 mm);
- 16 mortars (up to 60 mm); and
- 7 tear-gas launchers (UNDPKO and MINUSTAH, 2005, p. 10).

Variations do exist among specialized units, such as logistics, reconnaissance, special forces, riverine, or military transport units (UNDPKO and UNDFS, 2015a; 2015b; 2015c; 2015d; 2016b).

Vehicles, such as armoured personnel carriers (APCs) and infantry fighting vehicles (IFVs), are fitted with weapons. The types and number of weapons varies depending on the make and model of the vehicle, and TCC preferences. APCs such as those deployed by the Brazilian Army are often fitted with 120 mm mortar carriers, and can also feature 7.62 mm and 12.7 mm machine guns, 30 mm cannons, or 40 mm grenade launchers (Army Technology n.d.; UNDPKO and MINUSTAH, 2005). IFVs, such as the British Warrior variants used in BiH and Kosovo, can feature a 30 mm cannon, 94 mm anti-armour rockets, and 7.62 mm machine guns (British Army, n.d.).

In addition to such major equipment, peacekeepers also bring personal weapons, which vary depending on the type of unit in which they serve. According to the *UN Infantry Battalion Manual*, the standard UN personal equipment for an infantry, logistics, or transport unit includes individual service rifles and side arms (UNDPKO and UNDFS, 2012, p. 142). The make, model, and age of personal weapons vary. Some contingents have recently modernized their weapons, such as the Irish in the UN Disengagement Observer Force (UNDOF), who upgraded their Steyr rifles in 2013 to include better sighting systems and grenade launcher attachments (Department of Defence and Defence Forces Ireland, 2014, p. 27; Lavery, 2012).

The amounts of ammunition deployed during peace operations also vary greatly across units and missions. The UN's guidelines for the deployment of ammunition emphasize the need to consider the mission task, level of threat, tempo of operations, safety levels of supply, and replenishment times, as well as reflect the assessments in the mission technical survey (UNDPKO, 2002, p. ii). For infantry units, the minimum numbers of rounds per weapon or per person (for an operational period of 12 months) are as follows:

- grenades: 1.4 per person;
- machine guns: 4,800 (light), 8,400 (medium), and 4,800 (heavy);
- mortars: 170 (up to 61 mm); 300 (62–81 mm);
- pistols/revolvers: 120;
- rifles/carbines: 720;
- rifles/sniper rifles: 360;
- shotguns: 100;
- sub-machine guns: 700 (UNDPKO, 2002, pp. 3–4).

For formed police units (FPUs) the minimum quantities of ammunition per person/weapon are 250 rounds for a light machine gun, 275 rounds for a rifle, and 35 rounds for a sidearm (pistol/revolver) (UNDPKO, 2002, p. 8).

Although the loss of COE in the field can sometimes affect large items such as tanks or weapons systems, most cases on record involved personal arms. These include assault rifles (such as AK-pattern rifles), pistols, and light machine guns (Small Arms Survey, n.d.a). Occasionally, sniper rifles, rocket-propelled grenade (RPG) launchers, and crowd control or signal equipment have also been taken (see examples in the sub-sections below).

Contexts in which losses occur

If sufficient quantitative and qualitative data were available, losses of arms and ammunition might be analysed in a number of different ways, including according to presumed proximate causes (for example, losses attributable to human failure, corrupt practices, high-threat environments,³² or unavoidable accidents), the outcomes (for example, permanent or temporary losses), or the circumstances of the events. This report discusses losses based on the contexts and circumstances of the incidents, including patrols and escort missions, resupply operations, fixed sites, and troop rotations or repatriation. While it focuses specifically on missions that deploy with a military component, the study also notes that guard units for civilian missions have also lost weapons and ammunition (see Box 4, below).³³

Patrols and escort missions

Peacekeepers frequently come under attack during patrols and while escorting convoys. For example, in June 2012 a UN Operation in Côte d'Ivoire (UNOCI) reconnaissance patrol was attacked while it was investigating an earlier attack on civilians. The assailants,

who had crossed over from Liberia, seized 6 assault rifles, 1 machine gun, and 130 rounds of ammunition (Small Arms Survey, n.d.a). Three years later a patrol was attacked and disarmed while collecting water near Habilla, Sudan. The assailants seized seven assault rifles (UNSC, 2015a, para. 30) and 300 rounds of ammunition.

Patrols operating in very volatile areas are often more likely to be attacked and, since they are also heavily armed, the types and quantities of weapons lost during these attacks are often more substantial than materiel captured from peacekeepers operating in more stable areas. In January 2016 two UNAMID patrols came under attack in North Darfur (UNSC, 2017c, p. 34). The first patrol came under fire while searching for a stolen World Food Programme truck near Kutum. UN investigators later determined that five personal weapons were lost (UNSC, 2017c, p. 34), and presumably between 150 and 450 rounds of ammunition. The second attack occurred on 7 January, when peacekeepers charged with preparing for the visit of the UNAMID Deputy Joint Special Representative were ambushed 20 km south of Anka. The assailants captured five assault rifles and an estimated 450 rounds of ammunition (UNSC, 2017c; UNNC, 2016). Both attacks appear to be opportunity driven and resulted in relatively minor losses. By contrast, a 2005 attack on a patrol operating in a ‘very precarious’ security situation in West Darfur (UNSC, 2005, para. 6) resulted in the loss of an estimated 38 assault rifles, 10 machine guns, 2 anti-tank weapons, and over 9,000 rounds of small arms ammunition (Small Arms Survey, n.d.a).

Escort duties for convoys and VIPs present additional opportunities for attacks on peacekeepers. Close protection teams for VIPs³⁴ have at times been targeted, not for equipment, but for the symbolic value of attacking a high-level target. In May 1992 an armed escort for General MacKenzie of UNPROFOR was detained and disarmed by Serb ‘irregulars’, who demanded a prisoner swap. Although the general and other hostages were released, the attackers kept the hostages’ weapons and equipment, which included three .38 calibre revolvers, a 9 mm pistol, and an estimated 400 rounds of ammunition (Owen, 2013).

Resupply operations

Large amounts of weapons and ammunition are typically transported during resupply operations, so when in-transit losses occur they can be sizeable. But not all types of transport are equally at risk. Shipments by air are among the safest—and most expensive—means of transporting lethal equipment. Instances of helicopters or planes being shot down during resupply missions are rare.

Maritime or riverine shipments are more susceptible to seizure. On 26 October 2015 an UNMISS resupply convoy transporting 55,000 litres of fuel on the Juba corridor of the White Nile³⁵ was captured near Kaka, South Sudan (*African Arguments*, 2015). Some 100 SPLA-in-Opposition soldiers surrounded and boarded the barges, accusing UNMISS



Losses suffered during the April 2008 Raiba Trans incident are the largest on record, with more than 600,000 rounds of ammunition destined for UNAMID seized in an ambush.”

of transporting weapons and ammunition for the government. The Bangladeshi Riverine FPU was detained and all materiel on board seized, including the fuel, 16 assault rifles, and presumably some 2 machine guns and around 3,000 rounds of assorted ammunition.³⁶ After high-level negotiations the personnel were released and some of the equipment returned. Similarly, on 14 April 2014 a riverine convoy was ambushed near Bor and the assailants captured over 750,000 litres of fuel and lethal equipment, estimated as 20 assault rifles, 2 heavy machine guns, mortars, 1 recoilless gun, and around 3,000 rounds of ammunition (Small Arms Survey, n.d.a).

Resupply operations by land are also at high risk of diversion, and convoys transporting ammunition, food, or fuel destined for peacekeepers can be attacked en route. Losses suffered during the April 2008 Raiba Trans incident are the largest on record, with more than 600,000 rounds of ammunition destined for UNAMID seized in an ambush (Berman and Racovita, 2015, p. 76). In a more recent case, al-Shabaab militants attacked an AMISOM supply convoy near Burhakaba in June 2015. The captured equipment reportedly included 11 assault rifles, 3 sniper rifles, 3 light machine guns, 1 RPG launcher with 2 rounds, 33 grenades, and thousands of rounds of ammunition (Small Arms Survey, n.d.a).

Fixed sites

Although not as frequent as losses from patrols, the seizure of weapons and ammunition from fixed sites can be more sizeable. It affects headquarters sites, forward operating bases (FOBs), observation posts, and the residences of mission personnel. Mission headquarters and base camps occasionally come under attack despite the robust security measures typically implemented at these sites. One example is an attack on the Multinational Force and Observers mission headquarters in northern Sinai in 2012. On 15 September a group of Salafi Bedouins attacked and briefly overran the base, wounding eight peacekeepers and seizing an unknown quantity of ammunition (Small Arms Survey, n.d.a). In another incident on 17 January 2006, a group of protesters known as the ‘Jeunes Patriotes’ broke into the UNOCI base in Guiglo, Côte d’Ivoire, and attacked Bangladeshi peacekeepers on site. Following the evacuation of

Box 3 Loss of life and lethal materiel: the case of AMISOM

AMISOM has grown considerably since it was established more than ten years ago. The AU authorized the mission in January 2007, the UN Security Council gave the mission its formal support the following month, and the first AMISOM peacekeepers deployed in March.³⁷ The mission took three years to meet its initial authorized strength of 8,000 troops, but attained its declared goals—in terms of uniformed personnel—more quickly in the ensuing years, which included three new troop ceilings (see Lotze and Williams, 2016, p. 3). The bulk of the force has come from Burundi, Djibouti, Ethiopia, Kenya, Sierra Leone, and Uganda.³⁸

The maxim that peacekeepers often operate where there is little or no peace to keep certainly applies to AMISOM. Somalia has been without a functioning central government since 1991. Clan, ethnic, gender, religious, and sexual violence are entrenched and pervasive (see WPF, 2013; HRW, 2011). Outside of Puntland and Somaliland,³⁹ which exercise various levels of control over large parts of their territories, well-armed ethnic and religious militias are active and operate largely with impunity.⁴⁰ AMISOM functions with support from the AU and UN, but without the framework of a peace agreement.

The mission has come under frequent attack from al-Shabaab, which has resulted in significant loss of life. The AU and its TCCs are not transparent about the casualties AMISOM has suffered, and reports on such matters vary greatly. According to AU reports on death and disability payments, more than 400 peacekeepers had died in AMISOM between September 2009 and August 2012 (see Williams, 2015).⁴¹ Al-Shabaab has since attacked AMISOM bases at least five times: against Burundians in Leego (June, 2015); Ugandans in Janaale (September, 2015); Kenyans in El Adde (January, 2016); Ethiopians in Halgan (June, 2016); and Djiboutians in Beledweyne (October, 2016)⁴²—not to mention attacks on AMISOM convoys and patrols. These strikes have resulted in more than 100 additional AMISOM fatalities. One thing is clear: service in AMISOM is far more hazardous than in any of the UN's 60-plus peacekeeping operations over the past 70 years.⁴³

Attacks on FOBs have also resulted in the loss of a substantial amount of COE, although the exact number of lost weapons and rounds of ammunition is not known. These bases are typically staffed by an infantry company of 150–200 or more uniformed personnel usually comprising 3 or 4 infantry platoons and supporting elements. FOBs should be largely self-sufficient, ideally for up to three months,⁴⁴ given the insecure main (re-)supply routes by road. The exact amount of materiel held at these bases is difficult to determine because the AU and AMISOM understandably withhold data for security reasons (so that adversaries do not become emboldened or otherwise advantaged), and because the type and quantity of materiel are determined by expected usage, doctrine, and financial means, which vary between bases and among TCCs. With these caveats in mind, the Survey uses the following estimates for arms and ammunition at an AMISOM FOB: 200-plus assault rifles and automatic pistols; 50-plus anti-tank weapons, machine guns, and mortar systems (including heavy machine guns, as well as 81 mm and, possibly, 120 mm mortars); 200,000-plus rounds of small arms and light weapons ammunition; and 1,000-plus anti-tank munitions and mortars.⁴⁵ The AU and AMISOM TCCs are no more enthusiastic or willing to share information on losses of COE than they are about the casualties they have incurred. Al-Shabaab has displayed equipment it claims to have captured from AMISOM troops and has uploaded videos of its combatants allegedly emptying AMISOM storehouses. The veracity of such propaganda is open to debate, and is not discussed here. In the case of the attack on El Adde, however, there is little question that al-Shabaab successfully overran the base and completely looted the site's strategic stores. It seized substantial amounts of operational weapons and ammunition—not to mention numerous armed and armoured vehicles. Al-Shabaab also captured lethal materiel and vehicles from its attacks on Leego and Janaale (Williams, 2016, p. 3), but not on the same scale as from El Adde.⁴⁶

UN troops, more than 280,000 rounds of ammunition were forcefully abandoned, but most—over 278,000—were subsequently recovered (Small Arms Survey, n.d.a).

Losses from fixed sites range from a few personal weapons to dozens or hundreds of weapons and tens of thousands of rounds of ammunition. The largest incident on record is the attack on and subsequent looting of the Haskanita Military Group Site on 29 September 2007. The attack resulted in the loss of an estimated 50 assault rifles, 24 machine guns, 10 mortar systems, and 20 anti-tank weapons. The Survey also estimates that at least 125,000 rounds of small arms ammunition, 325 mortar rounds, and 650 anti-tank rounds were also lost (Small Arms Survey, n.d.a). Figures in the UN's ammunition guidelines suggest that the storage of 160,000 rounds at a base of this size would not be unusual. Losses during other attacks on fixed sites are minimal. In August 2010 a group of 60 assailants armed with machetes and spears attacked a UN base in Kirumba, DRC. Troops stationed at the base suffered three casualties, but thwarted the attack and retained control of the base (UNNC, 2010). As a result, the only weapons lost during the attack were two rifles taken from fallen peacekeepers.

FOBs have also sustained heavy losses in terms of lives and seized weapons. Stationed in remote areas, these sites, where large quantities of arms and ammunition are sometimes stored, are often more vulnerable to loss. The recent series of attacks on AMISOM FOBs (see Box 3) highlight organizational and procedural problems that may have amplified losses (Williams, 2016). Attacks on temporary operating bases such as the one in Akobo in December 2013 resulted in the capture of 22,000 rounds of ammunition, an estimated 40 assault rifles, 10 machine guns, 2 mortar systems, and 3 AT weapons (Berman and Racovita, 2015, p. 80).

Outposts, which are temporary structures that are much smaller than a base, have also been the site of loss incidents. In August 2014 Jubat al-Nusra forces attacked a UNDOF outpost in Quinetra, Syria, and abducted the 45 Fijian peacekeepers who were manning the post (Position 27). The attackers ransacked the outpost, seizing an estimated 45 assault rifles, 10 pistols, 2 light machine guns, and over 4,000 rounds of ammunition (Small Arms Survey, n.d.a).

Repatriation or troop rotation

Peacekeepers have also lost weapons during the rotation and repatriation of troops. While troop rotation can serve to prevent loss of COE (in the same way that the rotation of UN procurement officers helps to reduce fraud),⁴⁷ it can also provide opportunities to smuggle arms out of mission areas. In the early 1990s the UN had difficulty recruiting well-trained, professional troops, which had repercussions on the management of COE. An extreme example is a Bulgarian battalion in the UN Transitional Authority in Cambodia that was linked to numerous incidents of ill discipline during its deployment in Cambodia.

Box 4 Loss of military equipment from ‘unarmed’ personnel and missions

Armed uniformed personnel are not the only individuals who suffer losses of lethal equipment in the field. Unarmed international political observers and civilian police sometimes bring side arms to mission areas for their personal protection. These weapons are occasionally seized or stolen during attacks on personnel or residences. For instance, a burglary from a UN Integrated Mission in Timor-Leste residence in September 2007 resulted in the loss of one pistol and 45 rounds of ammunition (Small Arms Survey, n.d.a).⁴⁸

Although some political or peace-building missions are essentially unarmed, they are often heavily guarded (Rettman, 2013). Examples include the UN Assistance Mission in Afghanistan (UNAMA), UN Assistance Mission in Iraq (UNAMI), and EU Border Assistance Mission (EUBAM). The guard units⁴⁹ assigned to protect personnel during these and other missions have also lost weapons and ammunition. In December 2016 reports surfaced that weapons belonging to the Fijian guard unit in UNAMI had disappeared from storage. The stolen items included 18 9 mm pistols, 5 assault rifles, 2 sniper rifles, and more than 10,000 rounds of ammunition (Small Arms Survey, n.d.a). Apparently the theft occurred months before the information was reported. A Nepali guard unit in UNAMA also lost weapons during an attack on the base on 1 April 2011. Around 2,000 protesters surrounded the base, attacked the five guards stationed outside the compound, and seized their weapons, some of which were used against local police who responded to the attack. The Survey estimates that five assault rifles and around 30 rounds of ammunition were lost in this incident (Small Arms Survey, n.d.a). A shipment of weapons destined for the EUBAM Libya guard unit was stolen while waiting to be picked up at Tripoli airport (UNSC, 2015b, para. 151). The lost weapons included 23 assault rifles and accessories, 70 handguns (9 mm), 21,200 rounds of .223 ammunition, and 20,850 rounds of 9 x 19 mm ammunition (UNSC, 2015b, Annex 20).⁵⁰

By December 1992, 56 members of the battalion, including eight officers, had been repatriated on disciplinary grounds (Findlay 1995, pp. 139–45). During the repatriation of the rest of the battalion in August 1993 UN military police reportedly seized more than 400 illicit weapons, including 100 craft-produced handguns, 2 factory-built firearms, 30 rounds of ammunition, and more than 300 knives (Buckingham, n.d.). There are also allegations that Fijian troops serving in the UN Interim Force in Lebanon smuggled guns into their home country at the end of their tours (Capie, 2003, p. 85).

Loss of weapons and ammunition recovered during peace operations

Missions often stockpile weapons and ammunition that are collected during DDR efforts, found during cordon and search operations, discovered on patrols, or seized

from hostile forces. Oversight of these weapons is a grey area. There are no standardized, system-wide policies for the storage and disposal of recovered weapons, and procedures vary from mission to mission and between contingents. As a result, recovered weapons are sometimes vulnerable to theft, loss, and diversion. This is particularly true when stockpiles change hands, such as during troop rotations. Recovered armaments have reportedly been lost or captured from troops serving in ECOMOG in Sierra Leone, UNOCI, and MINUSMA (Small Arms Survey, n.d.a).

In 1994 the Bosnian Serb army seized large quantities of heavy weaponry from collection points overseen by UNPROFOR. In one incident the Serbs took a T-55 tank (equipped with one 100 mm main gun and two 7.62 mm machine guns), two M-80 armoured personnel carriers (each equipped with one 20 mm automatic chain gun and one 7.62 mm machine gun), and one Praga anti-aircraft system (composed of dual-barrel 30 mm automatic machine guns mounted on an armoured personnel carrier) from the collection centre in Ilidza. During the months leading up to the attack in Ilidza, Serbian forces seized 18 heavy weapons from UN weapons collection points (Yovich, 1994).

Attacks against DDR collection points run by the UN Mission in Sierra Leone have also reportedly resulted in large-scale losses. In early 2000 Revolutionary United Front (RUF) militia attacked and looted the DDR collection centres in Makeni and Magburaka (UNSC, 2000, paras. 57, 59). The RUF reportedly seized over 5,000 weapons that their members had previously surrendered to the UN as part of a disarmament process (Roberson, 2007, p. 48). There are also reports of weapons and ammunition losses from stockpiles of seized weaponry held by UNOCI (Small Arms Survey, n.d.a), underscoring the need for stronger controls on these weapons. The loss of recovered weapons and ammunition is a significantly understudied area that needs further illumination. ●



A better understanding of how the AU and other organizations secure—or fail to secure—their arms and ammunition is essential, given their growing role and influence in global peace operations.”

Securing small arms and light weapons during peace operations: current practices

This section provides an overview of policies and practices aimed at securing arms and ammunition during peace operations. These measures range from the use of intrusion-detection systems at weapons storage facilities to the training of movement control personnel in the safe handling of ammunition and other dangerous goods. The section focuses primarily on UN missions, both because Blue Helmets still comprise the largest percentage of armed personnel serving in peace operations and because the UN is the global standard bearer for policies, procedures, and practices pertaining to these operations. This should not diminish the importance of peacekeeping conducted by other organizations. Indeed, a better understanding of how the AU and other organizations secure—or fail to secure—their arms and ammunition is essential, given their growing role and influence in global peace operations.

Most arms and ammunition in the inventories of peacekeepers are either contingent owned or are supplied by the UN or donor states. UN data provides a rough sense of the amount of equipment deployed by—and provided to—peacekeeping contingents. For financial years 2010/11 and 2011/12, 64 countries provided COE and self-sustainment to 16 missions under 333 MoUs. These countries submitted more than 2,548 reimbursement claims for deployed equipment totalling approximately USD 957 million, according to the UN. Some missions also hold stocks of weapons and ammunition that were seized during patrols and cordon and search operations, or recovered while administering DDR initiatives.

UN policies on managing, securing, storing, and transporting weapons, ammunition, and other COE and recovered weapons are laid out in numerous mission-specific and UN-level documents. These documents include the following:

- *Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual)* (hereafter ‘COE Manual’) (UNGA, 2015);
- *Guidelines for the Field Verification and Control of Contingent-owned Equipment and Management of Memorandum of Understanding* (hereafter ‘COE Verification Guidelines’) (UNDFS, 2015);
- *Movement Control Manual* (UNDPKO and UNDFS, 2014a); and
- International Ammunition Technical Guidelines (IATG) (UNODA, 2015).

The UN refers to the system through which policies on COE are implemented as the ‘COE system’. This system comprises several different entities, including DPKO and DFS, the individual missions’ COE and MoU management review boards (CMMRBs), and COE units (UNOIOS, 2016d, p. 1). Missions should also establish a working group to assist the CMMRBs with monthly reviews of—and responses to—issues pertaining to the management of COE and the implementation of MoUs (UNOIOS, 2016d, p. 3).

The COE system’s categorization scheme for small arms, light weapons, and other materiel differs from typical definitions of small arms and light weapons in important ways. With the exception of hand grenades, all the light weapons listed on p. 13 above are categorized as ‘major equipment’⁵¹ (UNGA, 2015, pp. 162, 165). Most small arms are not explicitly categorized in the COE Manual. According to a DPKO spokesperson, small arms are considered ‘personal weapons’ and are reimbursed as ‘personal equipment’ in the COE system (Schroeder, 2016, p. 2). How the UN categorizes small arms and light weapons is important because inspection and reporting requirements for major equipment are often more rigorous than those for other items.

“ In most cases, the transient nature of peacekeeping missions imposes limitations on both the types of structures used for storing weapons and the physical security measures at storage sites.”

Physical security of stockpiles

The theft and looting of arms and ammunition from weapons storage facilities are major sources of illicit weapons throughout the world. Notable examples of losses from storage facilities during peace operations include the looting of dozens of weapons and thousands of rounds of ammunition from an overrun AMIS base near Haskanita in 2007, and similar attacks on bases in Akobo, South Sudan, and El Adde, Somalia, in 2013 and 2016, respectively. The attackers seized possibly hundreds of weapons before peacekeepers retook the bases (Small Arms Survey, n.d.a). Robust physical security reduces the likelihood of such incidents by deterring or preventing attempts to gain unauthorized access to weapons storage facilities or by delaying unauthorized entry to these facilities until authorities arrive. When combined with rigorous inventory controls, physical security measures also minimize opportunities for theft by storage facility personnel.

Physical security measures implemented during peace operations vary significantly, both between and within different missions. In most cases, the transient nature of peacekeeping missions imposes limitations on both the types of structures used for storing weapons and the physical security measures at storage sites. Few peacekeepers store their weapons in purpose-built depots. Instead, COE is usually kept in requisitioned buildings, shipping containers, or other ad hoc and temporary types of accommodation (Schroeder, 2016, p. 3).

Some of the pre-existing structures in which weapons are stored are modified to improve security. Steps taken by the UN Mine Action Service (UNMAS) and its contractors include adding fire prevention equipment, bricking over windows, and installing new doors. Similarly, missions attempt to make shipping containers more secure by covering them in earth, reinforcing the sides with sand bags, and surrounding them in razor wire. Other physical security measures implemented by one or more contingents include controlled access to storage facilities, external lighting, guards, gun racks, perimeter fencing, and the separate storage of weapons and ammunition. Such improvements are not universally implemented. Interviews with UN officials indicate that few, if any, modifications had been made to requisitioned buildings and shipping containers used as weapons storage facilities in their mission areas (Schroeder, 2016, p. 3).

In recent years the UN has also procured at least 100 mobile security containers for use in peacekeeping operations. The containers are similar in size and shape to conventional maritime shipping containers, but are configured specifically for the storage of weapons or ammunition. An example is the multi-purpose security container built by the Israeli company Mifram, which the UN has procured for use in the Central African Republic (CAR).⁵² The containers are bulletproof and blast proof, and some feature built-in heating, ventilation, air conditioning, electrical systems, lighting, intruder detection systems, and gun racks.⁵³

In contrast, other contingents lack access to even the most basic storage facilities. Interviews with current and former UN officials reveal that some troops store their ammunition in tents and vehicles, while others ‘carry their personal weapons with them at all times’ because they have no storage facilities (Schroeder, 2016, p. 3). Whether such practices are widespread is unclear. The UN has not issued specific, system-wide requirements for physical security at COE storage facilities. Instead, the responsibility for developing and enforcing such requirements is delegated to each mission.⁵⁴ These requirements are laid out in mission-specific standard operating procedures (SOPs), which vary depending on the mandate and size of the mission, and the security and operational environment of the mission area.⁵⁵ Many SOPs are reportedly based on a common template,⁵⁶ but neither the template nor most of the SOPs are publicly available, making it difficult to verify this claim. Furthermore, publicly available information reveals little about how and to what extent mission staff monitor and enforce compliance with mission-specific requirements for physical security at storage facilities. What is clear is that the type and rigour of physical security and stockpile management (PSSM) applied to COE varies significantly, and that some missions and contingents struggle to meet even minimum requirements.

Physical security for seized and recovered weapons is more difficult to analyse. Some missions require the destruction of such weapons, while others are transferred to the host government or returned to the individuals from whom they were seized (Berman and Racovita, 2015, p. 15). Regardless of the length of time that the mission is in possession of the weapons, secure storage facilities are essential to preventing the loss of these items.

Interviews with UN officials indicate that storage facilities for these weapons vary significantly from contingent to contingent, but publicly available documentation on these facilities is limited. The document *Force Standard Operating Procedures for Backloading and Destruction of Recovered Weapons in Liberia* of the UN Mission in Liberia (UNMIL) sheds some light on that mission's policies. The SOPs instruct mission staff to 'Prepare a storage room for the weapons', but provide no guidance on the type of room that should be used or the physical security measures that should be put in place (UNMIL, 2010, p. 3). How the SOPs were implemented and whether they are representative of other missions' policies are unclear.

Inventory controls

Robust inventory controls are essential for detecting and deterring the theft of weapons from storage facilities; tracking weapons issued to individual soldiers; and preventing the excessive accumulation of surplus, obsolete, and expired arms and ammunition. Key inventory controls include the maintenance of accurate and up-to-date records of arms and ammunition; regular inspections of weapons, ammunition, and depot conditions; and periodic audits of records, policies, and practices (OSCE, 2003, pp. 40–41). The arrest of AMISOM troops in June 2016 for illegally selling ammunition, fuel, and equipment taken from the mission underscores the importance of these controls (Small Arms Survey, n.d.a)

The COE system includes numerous inspection and reporting requirements aimed at ensuring that the type, quantity, and serviceability of weapons and equipment are consistent with the MoUs that the TCCs and UN sign, and are sufficient to meet the operational requirements of the mission (UNDFS, 2015, p. 3). The safeguarding of arms and ammunition is not an explicit goal of this system. Nonetheless, it provides a framework for robust inventory controls at every stage of the deployment cycle.

Inspections, record-keeping, and reporting on COE begin before shipments of arms and ammunition arrive in the mission area, and continue until the items are repatriated, retransferred, or destroyed. The missions are required to establish a CMMRB to ensure that mission staff and contingents implement these requirements, and the UN Office of Internal Oversight Services (UNOIOS) periodically assesses mission-level compliance. Since 2015 UNOIOS staff have audited the COE management practices of 12 peacekeeping missions in Africa and the Middle East.⁵⁷ The findings from these audits, which are described below, shed light on compliance with record-keeping, reporting, and inspection requirements that are essential to preventing the loss of arms and ammunition.

The COE Manual requires the completion of *arrival inspections* of COE within a month of receipt of major equipment, and within six months for most firearms and other 'personal equipment' (Schroeder, 2016, p. 4; UNGA, 2015, pp. 28–29). Inspectors from the



Audits underscore the importance and viability of the COE management system as a framework for robust inventory controls.”

mission’s COE unit check all major equipment against a list prepared in advance by contingent staff, prepare an inventory of all ammunition and explosives,⁵⁸ and assess the adequacy of storage arrangements for ammunition and explosives. The inspectors also confirm that personal weapons are serviceable and are available in sufficient quantities for contingent personnel. The COE unit summarizes the results of the inspection in a verification report that is submitted to UN Headquarters via the electronic COE (eCOE) system—an intranet

database that is accessible to approved staff throughout the UN system (UNDFS, 2015, pp. 13, 24–26, 96).

The COE unit is expected to conduct additional inspections at least once every three months.⁵⁹ Prior to each *periodic and operational readiness inspection*, contingent staff are to prepare a briefing package for the COE unit that includes the types and serial numbers of all major equipment and personal weapons, and the primary physical location of all major equipment. During the inspection, weapons are displayed with their ancillary equipment (for example, magazines, sights, etc.) and storage facilities are made available for inspection. The COE Verification Guidelines require inspectors to check each weapon against their records and to verify that they are serviceable. At a later date the COE unit is required to inspect any weapons that are out on duty at the time of the inspection. The Guidelines also recommend that the ammunition technical officer (ATO) be present, and that he/she follows up with contingent staff regarding the care, condition, handling, and storage of ammunition (UNDFS, 2015, pp. 29–32, 38, 49).

After each inspection the COE unit prepares a verification report and submits it to UN Headquarters through the eCOE system. These reports contain detailed lists of small arms and light weapons, notes on any light weapons that were absent during the inspection, notifications regarding any transfers of weapons or ammunition, and assessments of ammunition storage arrangements. A final *repatriation inspection* should be conducted prior to the departure of the contingent from the mission area. The failure to complete all of these inspections can lead to delays or reductions in reimbursement for TCCs—a powerful incentive for contingents to comply with inspection requirements.

Audits conducted by UNOIOS reveal a remarkably high completion rate for COE inspections, even by large missions in insecure environments. According to UNOIOS, inspection teams in the UN Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) conducted all 1,142 of the required periodic and operational readiness inspections (ORIs), and submitted the corresponding verification reports within

established time frames (UNOIOS, 2016e, p. 3). This is noteworthy, given the size of the mission area, the rudimentary transportation infrastructure in much of the DRC, and the endemic insecurity in the region where peacekeepers are deployed (UNSC, 2017a, p. 3). Auditors reported similar completion rates for other missions operating in challenging environments, including the UN Multidimensional Integrated Stabilization Mission in the Central African Republic, MINUSMA, UNAMID, and the UN Support Office in Somalia (UNOIOS, 2016a, p. 4–5; 2016c, p. 6; 2016d, p. 4; 2016f, p. 3). The auditors discovered some flaws in the execution of some of the inspections,⁶⁰ but their overall assessment of COE inspections and verification reporting was positive.

The COE Manual also requires contingents to report losses of COE valued at USD 250,000 or more to mission staff, who in turn are required to alert UN Headquarters, promptly investigate the incident through the establishment of a board of inquiry (BoI), review and transmit the BoI's report to UN Headquarters, and implement any mission-level recommendations in the report (UNDPKO and UNDFS, 2016a, p. 23). Reimbursement for the lost equipment is contingent upon the completion of these procedures and determination by mission staff that the loss was not due to 'wilful misconduct or negligence' (UNGA, 2015, p. 134–35). In 2017 the UN Working Group on COE approved a proposal to lower the reimbursement threshold for major equipment that is lost or damaged in a single incident to USD 100,000 and to adopt a cumulative annual threshold of USD 250,000. These changes would presumably increase transparency and accountability by extending reporting and reimbursement requirements to more lost and seized arms and ammunition (UNGA, 2017, p. 11).

There are no comparable requirements for most losses of COE valued at less than USD 250,000,⁶¹ which includes many of the cases profiled in the present report. These and similar losses are summarized in situation reports and other documentation, but in most cases UN inquiries into these incidents are less robust than investigations by BoIs.

The audits underscore the importance and viability of the COE management system as a framework for robust inventory controls. Through this system, UN inspectors check every light weapon by serial number at least once every three months and are required to report any missing or unserviceable weapons to UN Headquarters. In most cases these inspections are well suited to detecting—and presumably deterring—the loss of contingent-owned light weapons.

The (system-wide) requirements for checking firearms and other personal weapons during periodic and operational readiness inspections are less rigorous, but—in theory at least—are still sufficient to detect widespread theft or loss. While inspectors are not required to inventory personal weapons by serial number, they are supposed to check the quantity of available weapons, and thus the extensive or systematic loss of these weapons would result in shortfalls that would be evident to inspectors. Some missions have adopted more extensive controls on personal weapons. SOPs adopted by UNMIL require mission staff to conduct a 100 per cent initial check of all weapons, ammunition,

and explosives, followed by additional checks during subsequent inspections. As explained in the SOPs, ‘The endeavour shall be to check 100% weapons during operational readiness inspections (ORIs)’ (UNMIL, n.d., p. 3). In an interview with the Survey, a former UNMIL force commander indicated that when he was in charge of the mission the checks consisted of ‘100% inventories by serial number’ (Schroeder, 2016, p. 5).⁶² Since most mission-specific SOPs are not publicly available, it is difficult to determine whether other missions have adopted similar policies.

It is less clear if the current system is conducive to consistently detecting and addressing shortcomings in stockpile security. While the COE Manual and Verification Guidelines require inspectors to assess weapons storage facilities, neither document contains specific requirements for physical security or for assessing the implementation of these requirements. As noted above, the requirements are laid out in mission-specific SOPs, most of which are not readily available in the public domain. Furthermore, there are no publicly available assessments of PSSM that are comparable to the UNOIOS audits of the COE system. For these reasons, determining whether and to what extent mission policies and contingent practices conform to international standards is difficult. Interviews with current and former UN officials indicate that the nature and rigour of PSSM practices vary from mission to mission, and often within the same mission (Schroeder, 2016, p. 3), but the extent of this variation—and its impact on the security of contingent-owned weapons and ammunition—is unclear.

The rigour of inventory controls for seized, found, and recovered weapons is also unclear. Some missions require the destruction of such weapons, while others are transferred to the host government or returned to the individuals from whom they were seized. Existing evidence indicates that controls on recovered weapons are less standardized⁶³ and robust than controls on COE, but a lack of publicly available data and documentation precludes a definitive assessment.

Transport security

Strong transport controls help to prevent in-transit loss of arms and ammunition. Such losses take many forms, including the unauthorized rerouting of arms shipments intended for peacekeepers and the seizure of weapons and ammunition from convoys and patrols. Among the most notable examples is the previously mentioned theft of more than 12 tons of ammunition from a commercial contractor en route from Port Sudan to a UNAMID base in South Darfur (Small Arms Survey, n.d.a).

Numerous UN entities formulate and implement policies on the transport of COE to, from, and within mission areas. Collectively, this process is referred to as movement control (MovCon). Entities involved in MovCon include the Global Service Centre in Brindisi, Italy; the Movement Control Section at the UN Secretariat in New York; regional

transport centres; and various mission-level entities. The security and oversight of transported COE cover the entire transport chain—from pre-deployment decisions about the mode of transport to confirmation of delivery to the intended recipient (Schroeder, 2016, p. 9). These policies and practices include the following:

- *Packing and labelling requirements for arms and ammunition.* Firearms and other weapons must be marked; packed in wooden, steel, or other ‘suitable hard boxes’; and unloaded of ammunition. Shipping boxes must be locked and include packing lists with the serial numbers of each weapon. Weapons must be disabled through the removal of key components, such as firing pins. The components, along with magazines and ammunition, must be packed separately from weapons, and boxes of arms and ammunition must be segregated from other cargo (UNDPKO and UNDFS, 2014a, pp. 58, 85). Shipments of ammunition must be packed and labelled in accordance with various international regulations on dangerous goods (see UNDPKO and UNDFS, 2014a, pp. 86–99).
- *Inspections of arms and ammunition.* Shipments of arms and ammunition must be inspected by MovCon staff and, in some cases, an ATO before they are loaded onto the transport vessel. Dangerous goods that are shipped by land must include a certificate stating that the goods have been inspected and are packed and labelled appropriately. To prevent the unauthorized export of arms, ammunition, and other prohibited articles by repatriating troops, MovCon staff inspect all personal baggage and cargo (unit stores) prior to their departure. After the inspection, containers holding the items are sealed and ‘secured at the unit location’ until transported to the port of exit (UNDPKO and UNDFS, 2014a, pp. 86, 96–97, 109).
- *Physical security at airports and seaports.* All personal baggage and cargo must be screened for dangerous and prohibited goods, including weapons. Shipments of ammunition must be separated from other cargo, and cargo terminals must be configured accordingly. The Movement Control Manual recommends that storage and cargo preparation areas should be monitored by closed-circuit television whenever possible (UNDPKO and UNDFS, 2014a, pp. 55, 58, 66).
- *Record keeping and reporting.* Documentation on shipments of COE, including arms and ammunition, is voluminous and includes information of particular relevance to monitoring and accounting for arms shipments. The serial numbers of all shipped weapons must be submitted to MovCon staff ten working days prior to departure.⁶⁴ UN and mission staff are also required to document any discrepancies between the list of weapons on the manifest and the items in the shipment in a movement discrepancy report, which is registered, sequentially numbered, and distributed to officials who may be able to resolve the discrepancy. The air transport of ammunition and other dangerous goods requires additional reporting (UNDPKO and UNDFS, 2014a, pp. B-7, 62–63).⁶⁵



While some of the missions were meeting expectations in many areas, none of their policies and practices was deemed to be fully satisfactory.”

- *In-transit visibility.* Tracking cargo shipments is one of the six key functions of MovCon as identified in the Movement Control Manual. Referred to as in-transit visibility, the goal of this function is to track each shipment from its origin to its destination through the use of multiple data sources, including automated information systems. In some cases an escort (or security detail) accompanies the shipment to its destination (UNDPKO and UNDFS, 2014a, pp. 11, 43). While the Movement Control Manual does not identify the types of cargo or circumstances in which

shipments are to be escorted, interviews with former UN officials indicate that at least some missions make extensive use of escorts. One former high-ranking mission official noted that every shipment of arms and ammunition within the mission area was escorted to its destination (Schroeder, 2016, p. 10).⁶⁶

- *Training and certification.* The Movement Control Manual requires a wide array of continuation, on-the-job, and specialist training. Of particular relevance is training in the transport of dangerous goods (including ammunition). Everyone involved in the transport of dangerous goods (handling, loading, unloading, etc.) must be trained and certified, and receive recurrent training at least once every 24 months (UNDPKO and UNDFS, 2014a, pp. 97–99, 145–48).

Through these requirements the UN seeks to mitigate the risk of in-transit loss, accidental explosions resulting from improper storage or handling, and unauthorized transfers of weapons and ammunition during troop rotations and repatriation. Reports by UN auditors indicate that the mission-level implementation of these requirements is mixed.

From May 2013 to June 2016 UNOIOS reviewed the ‘adequacy and effectiveness’ of mission-specific control processes, governance, and risk management pertaining to the MovCon of nine missions in Africa, the Caribbean, and the Middle East.⁶⁷ While some of the missions were meeting expectations in many areas, none of their policies and practices was deemed to be fully satisfactory. A good example is MONUSCO, which at the time of the UNOIOS audit had drafted 32 SOPs related to MovCon, including procedures for transporting dangerous goods, weapons, and ammunition; had established the capacity to successfully track cargo movements throughout the transport chain; and was effectively coordinating the various stakeholders involved in MovCon operations. Yet the auditors also noted that baggage and passenger screeners were not adequately trained in handling dangerous goods, which could ‘compromise staff safety and security’ (UNOIOS, 2014d, pp. 3–4, 6).

UNOIOS discovered shortcomings in the MovCon policies and practices of other missions. Problems with UNMISS's cargo movement approval process 'resulted in an unmitigated risk' of the inappropriate shipment of prohibited goods via the mission's cargo services and the documented misuse of these services on at least two occasions (UNOIOS, 2014c, p. 3).⁶⁸ Auditors also reported on lapses in baggage and personnel screening at terminals in Haiti and Liberia. In four of five terminals utilized by MINUSTAH, body scanners and x-ray machines had not been operational for months due to a lack of maintenance (UNOIOS, 2014e, p. 4). In Liberia, auditors determined that personnel had not received sufficient training and that there was inadequate storage space for cargo at 12 of 15 of the audited facilities. As a result, the screening of UNMIL cargo was often hastily done or conducted by staff who lacked the requisite knowledge and skills (UNOIOS, 2014b, pp. 3–4). All three missions accepted the auditors' recommendations for correcting these problems, and MINUSTAH reportedly repaired the inoperable screening equipment (UNOIOS, 2014e, p. 4). Nonetheless, the shortcomings are indicative of the many ongoing challenges confronting UN officials and TCCs in these and other missions.

Challenges

As noted above, controls on arms and ammunition vary from mission to mission, and sometimes even within the same mission. Space limitations preclude a complete discussion of the various factors that explain these differences and hinder the implementation of existing institutional requirements and international best practices. Instead, this section briefly summarizes the most important of these factors and assesses the implications for the implementation of control measures.

The operational tempo of a particular mission is one key factor, as is the maturity of the mission. Interviews with current and former UN officials reveal that PSSM in some missions has improved over time (Schroeder, 2016, pp. 4, 11). The institutional culture of the militaries serving in peace operations also affects the implementation of key control measures. Troops from institutions with strong military discipline and tight controls on weapons and other equipment tend to replicate these attributes when they are in the field. Other militaries are 'a bit more casual' about the management of weapons and other equipment (Schroeder, 2016, p. 12), which helps to explain the uneven compliance rates with requirements for contingents' monthly reporting on their COE.

Personnel issues are another significant problem in some missions. Unfilled billets and insufficient technical expertise at mission headquarters and in contingents hinder COE inspections, limit explosive ordnance destruction operations, and reduce the effectiveness of cargo and baggage screening at airports used by rotating contingents. These problems are sometimes compounded by the unauthorized substitution of untrained for trained personnel shortly before a contingent is deployed (Schroeder, 2016, p. 11).

Staffing limitations have implications for improving compliance with existing, system-wide standards and also for extending mission-specific best practices to other missions. As previously noted, UNMIL is unusual in that the mission requires 100 per cent physical inventories by serial number of all small arms and light weapons, not just those categorized as major equipment. This practice ensures that even small-scale loss will be detected. However, inventorying all contingent-owned firearms is labour intensive, and would likely be prohibitively time-consuming for COE units of the largest missions. Even when fully staffed, the demands on these units are significant. Inspectors with MONUSCO's COE unit must inventory more than 10,400 pieces of major equipment and assess the serviceability of items in 24 different self-sustainment categories every three months (UNOIOS, 2016e). Expecting this unit to inventory thousands of personal weapons as well is unrealistic.

One possible solution is to conduct partial inventories of a representative sample of personal weapons. Initially, this approach appears to be less resource intensive and more practical than 100 per cent inventories, while serving the same purpose. Through eCOE, inspectors have access to the serial numbers of all contingent-owned firearms, and could generate a partial list of these weapons for inventorying during periodic and operational readiness inspections. However, the inspectors would also need data on the location of each weapon, the collection of which is currently not required by the COE Verification Guidelines. Systematically tracking the location of personal weapons and ensuring that data in eCOE is up to date would require significant resources. For these reasons, even partial inventories of personal weapons could be challenging for large missions.

Another challenge confronting peacekeepers is the inherent difficulty of preventing the looting of temporary storage facilities at overrun bases. This challenge is common to all military and police forces operating in the field, not just peacekeepers, and preventing it is difficult even at permanent, purpose-built depots. That said, some design features and other measures can significantly delay entry into depots, giving authorities time to regroup and respond to the attack. UNMAS has implemented several of these measures at storage facilities in Côte d'Ivoire. These measures include:

- constructing depot walls from solid concrete blocks reinforced with stem metal inserts and filled with concrete;
- reinforcing depot ceilings with anti-intrusion systems made from grids;
- preventing the use of windows as entry points to armouries by limiting their size and covering them with protective grids;
- installing a double-door system consisting of an armoured door and a gridded door that is always locked; and
- ensuring that the guard on duty is always inside the armoury with the key. This arrangement reduces the likelihood of attackers acquiring an armoury key from retreating soldiers.

These measures reportedly prevented unauthorized access to weapons stored at a military base briefly seized by mutineers.⁶⁹ While some of these measures are readily implementable at most COE storage sites, others are only applicable to weapons stocks stored in permanent structures, which are the exception rather than the rule in some mission areas. In these cases, the procurement and deployment of mobile armouries may be appropriate. Mobile armouries provide some protection against forced entry, and some models are small enough that transporting them does not require a forklift. Krados Defense offers a modular container comprising three stand-alone units, each of which is one-third the size of a standard 20-foot shipping container. The individual units are small enough to be moved and transported without special handling equipment, making them more conducive for use at FOBs and other remote and sparsely equipped sites.⁷⁰ Procuring such containers for all COE and recovered weapons would have significant budget implications, however. Many mobile armouries cost at least USD 50,000 apiece—a significant outlay for many TCCs, who are unlikely to purchase and deploy them unless they are fully reimbursed by the UN.

Furthermore, armoured walls and reinforced doors only delay unauthorized access; they do not prevent it indefinitely. Some manual trigger locks and electronic locking devices render weapons unusable to all but the most sophisticated armed groups and criminals. Despite the obvious counter-proliferation benefits of such devices, convincing militaries to purchase them for use in the field would be difficult. Trigger locks are cumbersome and require the establishment of a system for managing keys or push-button codes. They also delay access to weapons during emergencies, which significantly limits their appeal to most militaries and police forces, particularly those deployed to war zones and other violent or unstable environments. Electronic locking systems can be configured for the immediate, simultaneous release of all stored weapons (Armatix, 2014), addressing concerns about delayed access. These systems are costly and require an information technology infrastructure, a reliable electrical system, and maintenance. Thus, the widespread deployment of these systems would require significant funding and may be impractical in many circumstances. ●



The focus on properly supporting and overseeing Blue Helmets must not be at the expense of appropriately engaging Green Helmets and the development of good practice in the management of their arms and ammunition.”

Conclusion

Peace operations have changed dramatically since the end of the cold war—in terms of both their nature and the actors undertaking them. Today’s missions are frequently larger, more complex, and more dangerous than their predecessors. Peace operations are likely to become more challenging in the future. The number of actors undertaking peace operations has also grown considerably. The UN undertook the vast majority of peace operations before 1990.⁷¹ Since 1990 more than a dozen regional organizations have authorized the deployment of uniformed armed personnel in peace operations. Seven have done so for the first time since 2000.

The loss of arms and ammunition in peace operations is neither infrequent nor inconsequential. The Survey’s 2015 case study on missions in South Sudan and Sudan documented more than a hundred attacks on peacekeepers that resulted in dozens of losses of lethal materiel—more than 30 of which were ‘notable’; that is, more than 10 weapons or 500 rounds of ammunition were lost in a single incident (Berman and Racovita, 2015). Subsequent research suggests that our initial findings—the loss of more than 500 weapons and 750,000 rounds of ammunition during the period 2005–14—were significant underestimates of the scale and scope of these losses. This report highlights additional losses, and confirms that some noted attacks during which there was ‘possible loss of materiel’ resulted in actual, meaningful losses. Research conducted for this report strongly suggests that other previous assumptions about holdings and losses of arms and ammunition were too conservative.

Such losses are also not limited to a few missions or to small arms. The Survey has identified losses of arms and ammunition in at least 20 missions undertaken by the UN and at least five other organizations. Losses include not only assault rifles and pistols, but also armoured vehicles and numerous types of light weapons, such as heavy machine guns, grenade launchers, heavy mortars, and recoilless guns.

Lethal materiel is lost in a variety of ways. Documented losses take place during everyday operations (such as patrol or escort missions), during movements of goods or supplies (by land or water), at the front or back end of tours of duty, and at fixed sites (residences, depots, bases). Incidents range from the seizure of a few rifles from patrols to the wholesale looting of weapons and ammunition from arsenals.

The loss of small arms and ammunition is often—but not always—the cost of doing business. Sometimes peacekeepers are in the wrong place at the wrong time, and some arms depots are breached not because of lax stockpile security, but because the assailants are determined and well armed. This study documented many such incidents, including seizure resulting from military clashes and forced abandonment. However, losses also result from less-than-best practice, political considerations, and corruption. ‘Ambush’ has been used in UN reports to describe losses of weapons, suggesting unavoidability, when a fuller account of such incidents could well reveal that poor soldiering or political calculations led to the decision to part with weapons and ammunition. Rules of engagement and respect for the mandate are not always of paramount importance.

The UN's system for managing and controlling the movement of COE provides the framework for a rigorous stockpile security and transport control regime for weapons and ammunition. Key elements of this system include regular inspections, extensive reporting and record-keeping requirements (that are meant to complement—not replace—national procedures), and a movement control system configured to provide end-to-end in-transit visibility and the safe handling of dangerous goods. The linkages between these elements and

the system by which TCCs and PCCs are reimbursed for deployed equipment provide built-in incentives to comply with these requirements and leverage over units that consistently fail to implement them. Nonetheless, stockpile security practices and the implementation of movement controls vary, not only from mission to mission, but also between contingents in the same mission. These differences are explained by numerous factors, including the maturity of the mission, operational tempo, the institutional culture of the TCCs and PCCs, and resource constraints. The challenges to strengthening and standardizing controls on arms and ammunition are formidable, but not insurmountable.

Less is known about the challenges confronting officials and contingents serving in non-UN peace operations. Thousands of uniformed personnel participate in operations administered by the AU, ECOWAS, NATO, and numerous other institutions. Some of the TCCs involved in these missions have well-developed stockpile security and transport controls, while others have significantly less control over their arms and ammunition. Whether and to what extent the mandating institutions have adopted safeguards for small arms—and are actively monitoring implementation and enforcing these requirements—are unclear. Existing evidence suggests that many of these institutions have not taken these steps, but data gaps preclude a definitive assessment. More information about the policies and practices enacted by the AU and the other organizations listed in Table 1 would allow analysts to assess current efforts and identify gaps in existing controls. The Survey's MPOME project is pursuing these objectives.

Greater access to the many documents detailing policies, procedures, and guidelines would facilitate efforts to close these gaps. Over the past fifty years the UN has developed a robust, multifaceted management and transport infrastructure for COE. Other institutions have much to learn from this system. The UN's regulatory framework for safeguarding seized and recovered weapons is less developed, but mission-specific SOPs contain many of the components of a robust control regime. Making these documents available to the public (with the necessary redactions) via a central repository that is online and easily navigable is an important first step toward harmonizing and optimizing controls on weapons deployed and recovered during peace operations.

“The challenges to strengthening and standardizing controls on arms and ammunition are formidable, but not insurmountable.”

The UN and other organizations undertaking peace operations are part of the solution, not part of the problem. As noted above, the UN's COE management system is well developed and provides the framework for a robust small arms control regime. Other organizations involved in peace operations are placing greater emphasis on the importance of stockpile management and accountability, including implementation of the UN's IATG, consistent with a 2015 UN General Assembly resolution which promotes the adoption of the IATG in preparations for and the execution of peace operations. These guidelines detail best practice for temporary storage units and for the safe storage and handling of ammunition in multinational operations. The UN's 2017 decision to remunerate TCCs and PCCs for lost COE totaling USD 100,000 or more in a mission rather than setting the floor at USD 250,000 for a single incident may result in greater transparency and accountability. DPKO and the UN Office for Disarmament Affairs are cooperating to review the management of arms and ammunition in DDR exercises and to develop a toolkit to assist DDR practitioners in the development and conduct of DDR operations in line with existing standards and guidelines, including the IATG, which could have implications for managing COE and recovered weapons and ammunition in peace operations. The AU is seeking to develop guidelines for managing recovered arms and ammunition in its peace operations. ECOWAS has sought assistance to implement its Small Arms Convention that requires its member states—which are among the most active TCCs and PCCs in peace operations—to be more transparent and accountable.

The focus on properly supporting and overseeing Blue Helmets must not be at the expense of appropriately engaging Green Helmets and the development of good practice in the management of their arms and ammunition. Too often time and money are expended on re-equipping TCCs to bring them up to minimum expectations only after rehatting occurs, with mixed results. Furthermore, while civilian missions are not the focus of this study, the loss of weapons from these missions raises questions about oversight and good practice that merit further exploration.

Moving forward, much more can be done to better understand the scale and scope of losses of arms and ammunition during peace operations, the primary causes of these losses, the efficacy of existing checks and balances, and the most effective indicators for accountability and performance. To this end, the Survey will continue to develop its Peace Operations Data Set. Additional case studies and further outreach will improve existing records. The nascent typology of losses can be more fully developed. In the fullness of time, the Survey may expand PODS to include the loss of non-lethal materiel such as fuel, uniforms, rations, communications gear, vehicles, and particularly sensitive items such as drones and night-vision equipment. The MPOME project will facilitate this effort, and will support the development of some of the above-mentioned initiatives—as well as others, and with other organizations. ●

Endnotes

- 1 The two other components include a series of regional workshops and outreach activities. The initial conference for members of ECOWAS was held in Accra in April 2017 (see LeBrun, forthcoming).
- 2 HIPPO, which advocates including special political missions (SPMs) and other undertakings such as good offices and teams of experts as ‘peace operations’, sidesteps the thorny issue of actually defining ‘peace operation’, while still stating its preference for the term. For other approaches and definitions, see Durch and Berkman (2006, pp. 21–34); Schmidl (2000, pp. 4–5); Bellamy and Williams (2005, pp. 14–23). For a good overview of SPMs, which include field-based missions as well as special envoys, sanctions panels, and monitoring groups, see UN (2013).
- 3 An exception to this general practice would include the Swiss military, who served in the Swiss Headquarters Support Unit within the OSCE in Europe Mission in Bosnia and Herzegovina and were known as ‘Yellow Berets’ from the colour of their headgear (see Swissinfo, 2000). Uniformed personnel in the MFO wear terracotta-coloured berets.
- 4 Important sources of information and analysis on UN peace operations include studies undertaken by the Center for International Cooperation, the Center for International Peace Operations/ZIF, the Danish Institute for International Studies, the Folke Bernadette Academy, the International Peace Institute, the Providing for Peacekeeping joint initiative, and the Stockholm International Peace Research Institute.
- 5 Some of the missions listed were deployed without formal authorization or received authorization after they were deployed. In 1998, for example, two groupings of Southern African Development Community (SADC) member states undertook peace operations in the Democratic Republic of the Congo and Lesotho. Both claimed to have the authorization of the sub-regional body, but neither followed the decision-making framework that SADC provided (see Berman and Sams, 2000, pp. 151–91). The Organization of African Unity formally approved the short-lived Congolese-led peace operation in Chad in 1980 only after the mission had (partially) deployed (see Mays, 2002, pp. 45–53).
- 6 A floor of ten uniformed personnel was established to avoid inflating the number of peace operations by including missions that have only a few police or military personnel.
- 7 Several of these organizations authorized additional missions that failed to deploy.
- 8 The AU-RTF has also been referred to as the Regional Cooperation Initiative against the Lord’s Resistance Army. The mission received political support from both the AU and UN, but was a peace operation of neither organization.

- 9 Budgets for these operations have similarly expanded geometrically. For example, the UN peacekeeping budget in 1998 was around USD 250 million. Recent UN-authorized annual budgets for peacekeeping have been USD 7–9 billion.
- 10 Some of the more prominent developments that besmirched UN peacekeeping in the mid-1990s included the genocide in Rwanda during UNAMIR, the murder of US troops and Pakistani Blue Helmets during UNOSOM II, and the massacre of Bosnian Muslims at Srebrenica during UNPROFOR. (The US troops who died during the incident known to many as ‘Black Hawk Down’ were not part of UNOSOM II, but rather of the US-led UNITAF. Nevertheless, the event was linked to the futility of UN peacekeeping in many governments’ minds.)
- 11 UNAMSIL and UNOCI replaced ECOWAS missions. ONUB and MINURCAT replaced AU and Economic Community of Central African States missions, respectively. These examples are indicative, not exhaustive.
- 12 This calculation treats the joint AU–UN UNAMID as a UN operation in terms of the mission’s strength (which in June 2017 exceeded 19,000 men and women in uniform).
- 13 Canada subsequently lent its support to this effort, which became known as the ‘P3+1 Initiative’.
- 14 Whereas African countries accounted for roughly one-third of GPOI recipients, nearly 90 per cent of the participants of GPOI-funded training modules were from African partner countries and organizations (author correspondence with Jennifer Pulliam, programs director, Peace Operations Capacity Building Division, US Department of State, 17 April 2017).
- 15 The UN Office for Disarmament Affairs is currently working with the UN Department of Peacekeeping Operations to align stockpile security and management in DDR exercises with the International Ammunition Technical Guidelines and the International Small Arms Control Standards. To that end, they are reviewing existing stockpile security and management practices and developing a toolkit to assist DDR practitioners to align their operations with these standards.
- 16 Author correspondence with knowledgeable source, August 2017.
- 17 Author interviews with numerous officials of organizations that undertake peace operations, 2016 and 2017.
- 18 The seven missions include (listed chronologically) AMIS I, AMIS II, UNMIS, AMIS II-E, UNAMID, UNISFA, and UNMISS (see Berman and Racovita, 2015, pp. 27–36, which includes information on four other peace operations active in the two countries during the same period).
- 19 As noted previously, the AU fielded three peace operations in Sudan before undertaking a joint operation with the UN. Peacekeepers participating in these missions tend to speak of participating in ‘AMIS’ without concern for changes to the authorized strength of the mission or the roman-numeral or alphabetical suffix used to distinguish one operation from another. This report defers to participants’ sensibilities.
- 20 Author correspondence with former AMIS official, June 2017.
- 21 The Survey defines ‘notable incidents’ as those involving the loss of ten or more weapons, or 500 or more rounds of ammunition. The Survey has created three types of such events: ‘Category I’ (10–49 weapons or 500–2,499 rounds of ammunition); ‘Category II’ (50–99/2,500–4,999); and ‘Category III’ (100+/5,000+).
- 22 Author interview with knowledgeable source, East Africa, May 2017.
- 23 Author correspondence with former UNAMID official, June 2017.
- 24 Author correspondence with numerous key informants, 2017.
- 25 Author correspondence with former UNMISS official, 19 May 2017.
- 26 A recent report has suggested that the lack of sufficient equipment with which some contingents deploy contributes to the high casualty rate (Albrecht, Cold-Ravnkilde, and Haugegaard, 2017), a weakness that is compounded by the loss of weapons and ammunition.

- 27 Concerning transfers to the TFG, see Bruton and Williams (2014, pp. 56, 60).
- 28 Author interview with knowledgeable source, Addis Ababa, May 2017.
- 29 On 29 May 2016 an attack on a convoy of Togolese peacekeepers near Severe, in the Mopti region, resulted in the loss of over 2,700 rounds of 7.62 mm ammunition and the destruction of a vehicle and seven assault rifles (Small Arms Survey, n.d.a).
- 30 Elsewhere, two platoons of MINUSMA peacekeepers were reportedly disarmed, although the exact figures are unconfirmed. Although public information on the case is scarce, two Nigerian platoons were reportedly ambushed near Menaka in May–June 2015 and disarmed, in what may be a very sizeable seizure (Small Arms Survey, n.d.a).
- 31 In May 1995 the Bosnian Serb army overran the weapons collection centres in Poljine and Lukawica, and French peacekeepers guarding them were captured and disarmed (21 and 40 peacekeepers, respectively). Heavy weapons and small arms and light weapons collected from combatants were also taken (IPN, 1995).
- 32 The UN introduced the security level system in 2011, which estimates the level of general threat in the operating area on a scale of 1 (minimal) to 6 (extreme), and is used to establish the security risk assessment for missions, the minimum operating security standards, and minimum operating residential security standards (UNDSS, 2012, p. 34). A 2015 study found that more than 40 per cent of peacekeepers operated at level 5 (meaning high risk) (Willmot, Sheeran, and Sharland, 2015 p. 11).
- 33 As data collection expands and deepens, other typologies for understanding loss events will be explored as part of the Small Arms Survey’s MPOME project.
- 34 For more information on protocols for VIP protection, including ground or mobile protection forms and convoy composition, see UN (2015).
- 35 For more information on the logistics of river transport and barge operations on the Nile, see UNJLC (2005).
- 36 According to the UN manual on riverine units, at least one of the barges should have been equipped with crew-served weapons (23 mm or larger) (UNDPKO and UNDFS, 2015a, p. 54).
- 37 The speed with which the AU authorized and deployed AMISOM—and with which the UN gave its approval—contrasts sharply with the efforts and experience of the Intergovernmental Authority on Development (IGAD) to undertake a peace operation in Somalia. IGAD had discussed deploying a peace support mission in Somalia for more than two years (see Bruton and Williams, 2014, p. 35; Mays, 2009). The UN Security Council eventually approved this IGAD mission in December 2006, but it never deployed.
- 38 Nigeria and Uganda provide FPU’s, while Cameroon, Gambia, Ghana, Niger, Senegal, and Zambia supply headquarters staff or police (AMISOM, n.d.). Sierra Leone’s contribution of an infantry battalion ceased in January 2015 because Somalia chose not to accept a second battalion from Sierra Leone in light of long-standing concerns regarding the transmission of the Ebola virus disease (EVD). The first—and only—Sierra Leonean battalion remained in AMISOM for 20 months, an unusually long deployment because the foreseen initial rotation did not take place in light of the EVD outbreak in Sierra Leone in December 2013 (AMISOM, 2014; 2015). (Ethiopian troops who withdrew from Somalia in October 2016 were part of a bilateral arrangement between Addis Ababa and Mogadishu and were not part of AMISOM. See BBC (2016).)
- 39 Somaliland (formerly British Somalia) declared itself independent from Mogadishu in 1991. Puntland (formerly part of Italian Somaliland, but also claiming jurisdiction over some parts of former British Somaliland, which has resulted in sporadic conflict and casualties) declared

itself autonomous from Mogadishu in 1998. The UN only officially recognizes Mogadishu. (French Somaliland is now known as Djibouti. For information on efforts to create the autonomous state of Jubaland, in the south-eastern part of Somalia, see Bryden (2013, pp. 17–20).)

- 40 Somalia expert Ken Menkhaus noted that after seven years of existence and considerable international funding and support, the TFG was ‘unable to exercise control over most of the capital . . . had almost no functional civil service . . . [and] failed utterly (to provide aid during the 2011 famine)’ (Menkhaus, 2014, p. 159). The Federal Republic of Somalia, established in 2012, has made some gains in terms of political stability and governance. In 2017 there was a peaceful transfer of presidential power after national elections.
- 41 An attack on Burundian troops in Dayniile in October 2011 was especially deadly and resulted in the seizure of substantial quantities of arms and ammunition (see Table 2).
- 42 An al-Shabaab incursion on a Kenyan base in Kolbiyow in January 2017 was not on AMISOM forces. Some AMISOM TCCs have—or have had—troops in Somalia outside of the AU mission.
- 43 According to the UN, as of May 2017 UNIFIL is the UN peacekeeping operation with the greatest number of fatalities: 312 (DPKO, 2017a).
- 44 Resupplies of certain items, such as fuel, rations, and medical supplies, typically are flown in weekly or bi-weekly. Budgetary and security considerations make discussion of these matters contentious and sensitive (written correspondence with knowledgeable source, 22 February 2017).
- 45 This assessment, which differs slightly from the methodology the Survey employs in generating estimates for UN missions as referenced in Table 2 and throughout the report, is based on the following calculations: the FOB is composed of 180 uniformed men and women comprising 3 infantry platoons (each with 3 sections and each section with 3 squads, and each squad with either an anti-tank weapon or a light machine gun); 1 mortar section (of 4 squads equipped with both medium and heavy mortars, with a light mortar system issued to each infantry platoon); and an administration/support component. A company-strength FOB will possess a dozen-plus armed vehicles (perhaps six thin-skinned with a single machine gun, and eight armoured with one or two machine guns each—and possibly with a cannon, which is not part of the calculation above). The calculation further assumes 10 per cent of surplus weapons to assist with repair and replacement, a minimum of 500 rounds of ammunition for each assault rifle, 5,000 rounds of ammunition for each machine gun (based on a calculation that assumes different consumption requirements for crew-served weapons from vehicle-mounted weapons), and at least 50 projectiles for each anti-tank weapon and mortar system. The numbers provided above for ammunition and munitions cover materiel distributed to each soldier in the unit and loaded in each armed vehicle for operational needs, as well as strategic supplies stored at the armoury.
- 46 The strength of the Djiboutian unit in Leego was considerably smaller than that of the Kenyans in El Adde. The Ugandans reclaimed control of their base in Janaale relatively quickly compared to the other two incidents. The Ethiopians effectively repulsed the al-Shabaab attack on their base in Halgan. And the attack against the sector headquarters in Beledweyne was of a different nature, centring on a vehicle-borne improvised explosive device (author correspondence with Paul D. Williams, associate professor and associate director of the Security Policy Studies Program, Elliot School of International Affairs, George Washington University, 23 May and 17 June 2017). For an account of the attack on Janaale, see Kalinaki (2016).
- 47 See UNODC (2003, p. 106).
- 48 Burglaries of residential buildings most often result in the loss of non-lethal equipment, such as cash, uniforms, and communications equipment, as in the case of an incident in Nyala,

South Darfur, in April 2013 when the residence of a Jordanian UN Police member was ransacked (Small Arms Survey, n.d.a).

- 49 The first UN guard unit deployed in Iraq, in 2004, was largely considered to be an exceptional measure. In 2013 the UN Secretary-General recommended the creation of additional guard units to support and protect unarmed peace-building missions in places like CAR, Libya, and Somalia, but only two were created: a Moroccan contingent of 560 uniformed personnel sent to CAR and a 410-strong force of Ugandan infantry in Somalia (Security Council Report, 2014).
- 50 Although reports are inconclusive, weapons of the same calibre and make have subsequently appeared on online sales (Jenzen-Jones and McCollum, 2017, p. 61).
- 51 Major equipment is defined in the COE Manual as ‘major items directly related to the unit mission as mutually determined by the United Nations and the troop/police contributor’. See UNGA (2015, p. 18).
- 52 Author correspondence with UN official, 23 March 2017.
- 53 In its 2014 report the Expert Panel on Technology and Innovation in UN Peacekeeping included several recommendations that are applicable to stockpile security. The panel calls on the UN to ensure that most UN facilities are equipped with back-up power support, perimeter lighting, and motion-detection technology. The panel also recommends the installation of ‘tamper-resistant tracking technology’ on all vehicles and heavy weapons. Since the report does not define ‘heavy weapons’, it is unclear if the recommendation applies to light weapons. See UN Expert Panel (2014, pp. 26–27).
- 54 According to UN officials, missions are required to follow the IATG, although there are no references to the IATG in either the COE Manual or the COE Verification Guidelines (Schroeder, 2016, p. 12).
- 55 Author correspondence with UN official, 19 January 2016.
- 56 Author interview with UN official, 16 November 2015.
- 57 These missions are MINUSCA, MINUSMA, MINUSTAH, MONUSCO, UNAMID, UNDOF, UNIFIL, UNISFA, UNMIL, UNMISS, UNOCI, and UNSOS (which deals with COE for AMISOM). Note that part of the report on the audit of UNISFA’s practices was redacted. The topic(s) covered in the redacted text is unclear (UNOIOS, 2015a, p. 6). UNOIOS audited MINUSTAH, MONUSCO, UNAMID, UNIFIL, UNMIL, UNMISS, UNOCI, and UNSOA/UNSOS in 2012 (see UNOIOS, 2013).
- 58 The inventory is required to list the type, quantity, and expiry date of all ammunition and explosives. See UNDFS (2015, p. 26).
- 59 The contingents themselves are expected to conduct additional checks every month. As specified in the COE Verification Guidelines, formed units are to check on the availability and serviceability of major equipment, including light weapons, and submit monthly reports on these checks. Contingents are not required to report on the status of personal weapons. See UNDFS (2015, p. 8).
- 60 Shortcomings identified by UN auditors include failing to inspect all applicable items, conducting inspections without key technical experts (including ATOs), and submitting verification reports containing errors. See, for example, UNOIOS (2016b, p. 4; 2016d, p. 4; 2016f, p. 4).
- 61 The threshold for convening a Bol is much lower in certain circumstances, including incidents involving the loss or damage of (1) UN-owned equipment valued at USD 25,000 or more; (2) equipment owned by third parties worth USD 10,000 or more; (3) COE used by one contingent, but supplied by another TCC; and (4) COE during incidents that involve personnel from more than one contingent (UNDPKO and UNDFS, 2016a, p. 4).

- 62 The former force commander, Gen. Sikander Afzal, added that the inspections ‘are supposed to be 100 per cent but they never reach that goal because some percentage of weapons are always checked out. The inventories take place over 3–4 days and usually the inspectors are able to check about 80 per cent of weapons. COE inspectors who conducted the inventories were assigned by DMS [the director of mission support] and were not the same individuals responsible for storage of the weapons’ (Schroeder, 2016, p. 5).
- 63 The Integrated Disarmament, Demobilization and Reintegration Standards lay out specific guidelines for the storage and management of arms and ammunition, but it is not clear how widely these guidelines have been implemented. See UN (2006, pp. 21–22).
- 64 For rotating units, the deadlines for reporting serial numbers is 72 hours prior to the rotation date. See UNDPKO and UNDFS (2014a, p. 110).
- 65 UN staff must submit a movement incident report to the head of movement control within one working day of any incident deemed to have potential safety or security implications. See UNDPKO and UNDFS (2014a, p. 63).
- 66 The 2014 report by the Expert Panel recommends the ‘pervasive use’ of ‘basic satellite-enabled convoy tracking, RFID [radio-frequency identification]-enabled assets and shipment tracking’ (UN Expert Panel, 2014, p. 29). It is unclear whether and to what extent the UN has implemented this recommendation.
- 67 These missions are MINUSCA, MINUSTAH, MONUSCO, UNAMID, UNIFIL, UNMIL, UNMISS, UNOCI, and UNSOA (AMISOM).
- 68 According to auditors, an investigation by UNMISS’s Security Section revealed that ‘staff members utilized the Mission’s cargo services for personal gain’. See UNOIOS (2014c, p. 3).
- 69 Author correspondence with UNMAS official, 20 March 2017.
- 70 Author correspondence with industry spokesperson, 30 March 2017.
- 71 Four organizations that are not mission-specific and undertook peace operations before 1989 have since closed their doors or have not fielded another mission.

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List of abbreviations and acronyms

ADF	Arab Deterrent Force
AFISMA	African-Led International Support Mission in Mali
AFOR	Albanian Force
ALF	Arab League Force
AMIB	AU Mission in Burundi
AMIS	AU Mission in the Sudan
AMIS II-E	AMIS II-Enhanced
AMISEC	AU Mission for Support to the Elections in Comoros
AMISOM	AU Mission in Somalia
ANAD	Accord de non-aggression et d'assistance en matière de défense/ Treaty of Non-aggression, Assistance and Mutual Defence
APC	Armoured personnel carrier
AT	Anti-tank
ATO	Ammunition technical officer
AU	African Union
AULMEE	AU Liaison Mission in Ethiopia and Eritrea
AU-RTF	AU-led Regional Task Force
BBC	British Broadcasting Corporation
BiH	Bosnia and Herzegovina
BoI	Board of inquiry
CAR	Central African Republic
CEMAC	Communauté économique et monétaire de l'Afrique centrale/ Economic and Monetary Community of Central Africa
CEN-SAD	Community of Sahel-Saharan States

CIS	Commonwealth of Independent States
CMF	Commonwealth Monitoring Force
CMMRB	COE/MoU management review board
COE	Contingent-owned equipment
CPAG	Commonwealth Peacekeeping Assistance Group
CPKF	Collective Peacekeeping Force
CPLP	Comunidade dos países de língua Portuguesa/ Community of Portuguese-language Countries
CSCE	Conference on Security and Co-operation in Europe
CSTO	Collective Security Treaty Organization
DDR	Disarmament, demobilization, and reintegration
DFS	(UN) Department of Field Support
DPKO	(UN) Department of Peacekeeping Operations
DPRK	Democratic People's Republic of Korea
DRC	Democratic Republic of the Congo
ECCAS	Economic Community of Central African States
eCOE	Electronic contingent-owned equipment
ECOMIB	ECOWAS Forces in Guinea-Bissau
ECOMICI	ECOWAS Forces in Côte d'Ivoire
ECOMIG	ECOWAS Forces in the Gambia
ECOMIL	ECOWAS Forces in Liberia
ECOMOG	ECOWAS Monitoring Group/ECOWAS Cease-fire Monitoring Group
ECOWAS	Economic Community of West African States
ECPF	Eastern Caribbean Peace Force
EU	European Union
EUAM	EU Advisory Mission
EUBAM	EU Border Assistance Mission
EUCAP	EU Capacity Building Mission
EUFOR	EU Force
EULEX	EU Rule of Law Mission
EUMAM	EU Military Advisory Mission
EUMM	EU Monitoring Mission
EUPAT	EU Police Advisory Team
EUPM	EU Police Mission
EUPOL	EU Police
EUPOL COPPS	EU Coordinating Office for Palestinian Police Support

EUR	Euro(s)
EUSEC RDC	EU Security Sector Reform Mission in the DRC
EUSSR	EU Security Sector Reform Mission in Guinea-Bissau
EUTM	EU Training Mission
EVD	Ebola virus disease
FLS	Frontline States
FOB	Forward operating base
FOMUC	Force multinationale en Centrafrique/ Multinational Force in the Central African Republic
FPU	Formed police unit
G5S	Group of 5 Sahel (Burkina Faso, Chad, Mali, Mauritania, and Niger)
GPOI	Global Peace Operations Initiative
HIPPO	High-Level Independent Panel on UN Peace Operations
IAPF	Inter-American Peace Force
IATG	International Ammunition Technical Guidelines
IFOR	Implementation Force
IFV	Infantry fighting vehicle
IGAD	Intergovernmental Authority on Development
ISAF	International Security Assistance Force
JCC	Joint Control Commission
JMC	Joint Military Commission
JPKF	Joint Peacekeeping Force
KFOR	Kosovo Force
LAS	League of Arab States
LCBC	Lake Chad Basin Commission
MAES	AU Electoral and Security Assistance Mission to the Comoros
MAPE	Multinational Advisory Police Element
MFO	Multinational Force and Observers
MICEMA	ECOWAS Mission in Mali
MICOPAX	Mission de consolidation de la paix en République Centrafricaine/ Mission to Consolidate Peace in the Central African Republic
MINUSCA	UN Multidimensional Integrated Stabilization Mission in the Central African Republic
MINUSMA	UN Multidimensional Integrated Stabilization Mission in Mali
MINUSTAH	UN Stabilization Mission in Haiti
MIOC	AU Observer Mission in the Comoros

MISAB	Mission interafricaine de surveillance des accords Bangui/ Inter-African Mission to Monitor the Bangui Agreements
MISCA	Mission internationale de soutien à la Centrafrique sous conduite africaine/ African-led International Support Mission to the Central African Republic
MNJTF	Multinational Joint Task Force
MONUC	UN Organization Mission in the Democratic Republic of the Congo
MONUSCO	UN Organization Stabilization Mission in the Democratic Republic of the Congo
MOT	Military Observer Team
MoU	Memorandum of understanding
MovCon	Movement control
MPOME	Making Peace Operations More Effective
n/a	not available/not applicable
NATO	North Atlantic Treaty Organization
NMOG	Neutral Military Observer Group
NNSC	Neutral Nations Supervisory Commission
OAS	Organization of American States
OAU	Organization of African Unity
OECS	Organization of Eastern Caribbean States
OLMEE	OAU Liaison Mission in Ethiopia–Eritrea
OMIB	Organization for African Unity Mission in Burundi
OMIC	OAU Observer Mission in Comoros
ONUB	UN Operation in Burundi
Op	operation
ORI	Operational readiness inspection
OSCE	Organization for Security and Co-operation in Europe
OSLEG	Operation Sovereign Legitimacy
PCC	Police-contributing country
PIF	Pacific Islands Forum
PODS	Peace Operations Data Set
PSSM	Physical security and stockpile management
RAMSI	Regional Assistance Mission to Solomon Islands
RCA	République centrafricaine/Central African Republic
RDC/	
RD Congo	Democratic Republic of the Congo
RPG	Rocket-propelled grenade

RSM	Resolute Support Mission
RUF	Revolutionary United Front
SADC	Southern African Development Community
SASF	Symbolic Arab Security Force
SFOR	Stabilization Force
SOP	Standard operating procedure
SPLA	Sudan People's Liberation Army
SPM	Special political mission
TCC	Troop-contributing country
TFG	Transitional Federal Government
Ukn	Unknown
UN	United Nations
UNAMA	UN Assistance Mission in Afghanistan
UNAMI	UN Assistance Mission in Iraq
UNAMID	AU–UN Hybrid Operation in Darfur
UNAMIR	UN Assistance Mission in Rwanda
UNAMSIL	UN Mission in Sierra Leone
UNDOF	UN Disengagement Observer Force
UNIFIL	UN Interim Force in Lebanon
UNISFA	UN Interim Security Force for Abyei
UNITAF	United Task Force
UNMAS	UN Mine Action Service
UNMIL	UN Mission in Liberia
UNMISS	UN Mission in the Republic of South Sudan
UNOCI	UN Operation in Côte d'Ivoire
UNOIOS	UN Office of Internal Oversight Services
UNOSOM	UN Operation in Somalia
UNPROFOR	UN Protection Force
UNSOA	UN Support Office for AMISOM
UNSOS	UN Support Office in Somalia
UNTAC	UN Transitional Authority in Cambodia
USD	US dollar(s)
VIP	Very important person
VMT	Verification Monitoring Team
WEU	Western European Union

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About the Small Arms Survey

The Small Arms Survey is a global centre of excellence whose mandate is to generate impartial, evidence-based, and policy-relevant knowledge on all aspects of small arms and armed violence. It is the principal international source of expertise, information, and analysis on small arms and armed violence issues, and acts as a resource for governments, policy-makers, researchers, and civil society. It is located in Geneva, Switzerland, at the Graduate Institute of International and Development Studies.

The Survey has an international staff with expertise in security studies, political science, law, economics, development studies, sociology, and criminology, and collaborates with a network of researchers, partner institutions, non-governmental organizations, and governments in more than 50 countries.

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