The Management of Lethal Materiel in Conflict Settings: **existing challenges and opportunities for the European Peace Facility**

By Eric G. Berman

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SYNOPSIS

This paper shows how contingent-owned equipment (COE) in peace support operations (PSOs), and lethal materiel these missions recover and otherwise manage, are frequently seized and recirculated. In light of the recently established European Peace Facility (EPF), this paper identifies mechanisms and initiatives that the European Union (EU)—and others—can use to help secure lethal materiel and reduce the risk of its diversion or misuse.

The paper is organized into three parts. Part I provides a short case study of the challenges facing PSOs in the Lake Chad Basin region, including attacks on security sector personnel and loss of lethal materiel. Part II examines the larger continental and global context of challenges to PSOs. It shows that the experience in the Lake Chad Basin region is not an outlier, and that the loss of COE in conflict zones is a global problem. Part III explores existing regional arms control frameworks and support for elements of weapons and ammunition management (WAM) programmes. It pays particular attention to the legally-binding small arms control conventions of the Economic Communities of Central and West African States given that their members are particularly active contributors to PSOs, and asks how effective some popular capacity-building and training initiatives have been.

The paper concludes by summarizing key findings and suggests some ways in which the EU can use its investments and resources more effectively, to help ensure COE used in PSOs—not just in Africa—are appropriately accounted for and safeguarded. This message takes on an added urgency in light of the tremendous quantities of COE that militants seize from state security forces, and the EU's recent decision to provide lethal materiel through the EPF. This paper does not advocate against the provision of lethal materiel to supplement efforts to promote peace and security, but it flags some of the pitfalls of doing so without enhanced checks and balances, as well as greater accountability.

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EDITORIAL

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Antwerp, September 2021

Front Cover Image: Still from a propaganda video showing a captured British FV101 Scorpion armoured vehicle during an Islamic State West Africa Province attack on a military base in December 2018.
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The **International Peace Information Service (IPIS)** is an independent research institute that provides tailored information, analysis and capacity-building to support stakeholders who want to achieve a vision of continued peace, sustainable development and respect for human rights.

The **Safeguarding Security Sector Stockpiles (S^4) Initiative** strives to reduce loss of contingent-owned equipment and recovered materiel within conflict settings by promoting good practice, arms control frameworks and accountability.

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AUTHOR'S NOTE

Since this paper was largely completed in April 2021, there have been some notable developments in the Lake Chad Basin region and at the European Union (EU) that merit mentioning here even though they are not recorded in the manuscript or mentioned only obliquely.

Chief among these events is the death of Abubakar Shekau, the leader of the People Committed to the Propagation of the Prophet's Teachings and Jihad (JAS, from the name in Arabic), one of the two major Boko Haram factions. In May, he either was killed or took his own life rather than be taken prisoner (or worse) by the Islamic State of West Africa Province (ISWAP), the other major faction. (In the popular press, Shekau was often cited as the leader of Boko Haram, but the group split into two in 2016.)

Many of Shekau's followers have reportedly since pledged allegiance to ISWAP, which as a result will likely be a more formidable foe to state actors active in the Lake Chad Basin region. The paper does acknowledge the existence of both JAS and ISWAP but does not distinguish between them when it comes to attacks on security forces and the proliferation of lethal materiel. Shekau's passing does not affect the paper's findings and recommendations.

There are also developments worth noting in Brussels. In July, the EU decided to establish another military training mission in Africa, this time in Mozambique. The paper notes the challenges facing existing EU Training Missions (EUTMs) in the Central African Republic, Mali, and Somalia. The obstacles facing an EUTM in Mozambique will likely be similar to other such undertakings when it comes to security for EU personnel and a partner that likely could benefit from the provision of lethal materiel as well as training. The EU may also choose to support—financially and/or militarily—the African-led force that the Southern African Development Community (SADC) approved in June to support Mozambique. This paper focuses on the arms control mechanisms of two other African regional organizations, but notes that SADC has concluded a legally-binding small arms control agreement. The EU ought to examine and use as appropriate the checks and balances the SADC Protocol contains when it comes to weapons and ammunition management.

In addition, the EU has begun to report on its plans for an Integrated Methodological Framework (IMF) to support the work of the European Peace Facility (EPF). The IMF identifies four key principles that will inform its work—compliance, protection, proportionality, and controls—but the EU offered few details when it made available a short summary of the instrument in late March 2021. The conclusion makes reference to this important initiative and provides some specific suggestions for what the IMF might do (and which perhaps it already is doing). All of the paper's recommendations complement or echo the framework's broad principles, and it is hoped they should therefore be relatively easy to take on board.

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Of course, despite these welcome contributions, the information, analysis—and caveats—provided in the report are my responsibility.

LIST OF ACRONYMS

AMISOM	AU Mission in Somalia
AU	African Union
COE	Contingent-Owned Equipment
DDR	Disarmament, Demobilisation, and Reintegration
DRC	Democratic Republic of the Congo
ECCAS	Economic Community of Central African States
ECOMOG	ECOWAS Cease-fire Monitoring Group
ECOWAS	Economic Community of West African States
EPF	European Peace Facility
EU	European Union
FC-G5S	G5S Joint Force
G5S	Group of Five Sahel
ISIS	Islamic State of Iraq and Syria
ISWAP	Islamic State's West African Province
JAS	Jama'atu Ahlis Sunna[h] Lidda'awati w'al Jihad [People Committed to the Propagation of the Prophet's Teachings and Jihad]
LCBC	Lake Chad Basin Commission
LGA	Local Government Area
MBT	Main Battle Tank
MNJTF	Multinational Joint Task Force
PoA	UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons
PSO	Peace Support Operation
PSSM	Physical Security and Stockpile Management
RECSA	Regional Centre on Small Arms in the Great Lakes Region, the Horn of Africa, and Bordering States
S⁴	Safeguarding Security Sector Stockpiles
SADC	Southern African Development Community
TCC	Troop-Contributing Country
UN	United Nations
WAM	Weapons and Ammunition Management

INTRODUCTION

The European Union (EU) and its member states invest heavily in peace support operations (PSOs) across the globe. Besides its significant financial contributions as well as militaries detached to United Nations (UN) peacekeeping operations,[1] the EU has supplemented that support through its African Peace Facility (APF) in support of the African Peace and Security Architecture (APSA) of the African Union (AU) and various EU initiatives such as Common Security and Defence Policy (CSDP) missions and operations and security sector reform (SSR) projects in conflict zones.[2] In addition, many EU member states participate in bilateral military aid programmes with countries undertaking PSOs. Some also provide boots on the ground in both UN missions and ad hoc coalitions among willing countries, such as Operation Barkhane and Task Force Takuba.

The new European Peace Facility (EPF) represents significant new opportunities for EU member states and various partners when it comes to supporting Common Foreign and Security Policy (CFSP) actions in military and defence areas.[3] The EPF, which was officially established through the Council's decision on 22 March 2021, will provide EUR 5 billion for this purpose over the period 2021-2027, roughly twice what was spent during the period 2004-2019 (ICG, 2021, p. 4). The EPF replaces the Athena Mechanism and the African Peace Facility, which will cease to exist, taking over the military and defence related aspects previously covered under those instruments. The EPF will also continue to finance PSOs led by the AU. In addition, the EPF allows the EU to directly support partner countries bilaterally in military and defence matters, including through the provision of military equipment to increase partners' defence capabilities. Support through the EPF can now be provided to both troop-contributing countries (TCCs) and regional organizations on a global level, and not just to—or through—the African Union, as was the case before under the APF.

Yet, the EPF sparks new concerns,[4] especially one element of the tool in particular: the potential to provide lethal materiel in support of peace operations. Certainly, the frustration of investing in the training of security sector personnel in skills that the recipients cannot deploy due to the lack of equipment is something that has been frequently voiced in the past, and worth trying to address and resolve.[5] But the provision of lethal materiel comes with high risks, such as the misuse of equipment by national armies, or weapons falling into the hands of militants. How can the EU mitigate these risks by best promoting safeguards and monitoring mechanisms when providing lethal materiel through the EPF? Also, how can the EU best ensure that its new-found flexibility does not undermine the AU's role in promoting good practice on the continent on weapons and ammunition management (WAM) in PSOs?

This paper is organized into three parts. While it largely focuses on experiences in the Lake Chad Basin region, and on African actors, the concerns that it flags and actions it recommends are not limited to the African context.

Part I provides a short case study on attacks on security sector personnel and the loss of lethal materiel in the Lake Chad Basin region. The conflict has been raging for more than ten years and shows no signs of abating despite significant investments in lives and money by the lake's four riparian members—Cameroon, Chad, Niger, and Nigeria—who comprise the backbone of the AU-authorized Multinational Joint

1 The EU's 27 members currently are charged 23.9 per cent of UN's peacekeeping operations costs (calculations based on UNGA, 2018). The EU's percentage of the share used to be greater with the addition of the United Kingdom and larger economies relative to non-EU countries. In 2005, for example, EU member states (which then numbered 25) were assessed 38.6 per cent of the UN peacekeeping budget (calculations based on UNGA, 2003). Annual UN peacekeeping expenditures topped USD 7 billion from 2008 through 2017 (GPF, n.d.).

2 See Tardy (2013) for some specific examples and figures.

3 The European Centre for Development Policy Management (ECDPM) has undertaken three EPF-focused studies of note: Deneckere, 2019; Deneckere, Neat, and Hauck, 2020; and Hauck, 2020. Other papers and reports on the EPF of note include Furness and Bergmann, 2018; Hauk and Mutschler, 2020; and ICG, 2021.

4 Forty civil society organizations (mostly from Africa and Europe, but also from the Asia and North America, as well as several with international operations) signed a joint statement in November 2020 that flagged their concerns about the EPF (NHC, 2020).

5 Numerous studies highlight the disconnect between expectations and abilities, and the challenges of coordination among various players supporting security enhancement when it comes to EU training missions (e.g. see Cold-Ravnkilde and Nissen, 2020; Hellquist and Sandman, 2020; Hickendorff and Acko, 2021; Williams and Ali, 2020).

Task Force (MNJTF). (Benin, which is not an LCBC member, also contributes some troops to the force.) This part answers two questions: What are the challenges that the uniformed personnel have faced; and what is the scale and scope of materiel that has been lost? These questions are of interest to the EU because of the potential provision of lethal materiel under the EPF, and because the EU has helped fund the MNJTF since 2017 (ICG, 2020, p. 7). Moreover, UN Secretary-General Antonio Guterres has flagged evidence of growing coordination and cooperation between violent extremist organizations operating in the Sahel and those active in the Lake Chad Basin region (UNSC, 2020a, para. 2).

Part II sheds light on the larger continental and global context of attacks on uniformed personnel and loss of materiel. Is the experience of loss of contingent-owned equipment (COE) in the Lake Chad Basin region an outlier? The short answer: no.[6] The query is an important one, and merits a lengthier answer and a bit of context. It was essentially the same question policy makers asked after an initial study on the experiences of PSOs in Sudan and South Sudan largely focusing on attacks on peacekeepers in Darfur (see Berman and Racovita, 2015). Indeed, it subsequently became clear that the number of attacks was greater than that which was reported, and the scale of losses larger. A review of experiences of UN peacekeeping operations underscores that the challenge is not limited to operations in Africa or to African TCCs. As the EPF is a global instrument, it is important to understand that control of COE in conflict zones is a global challenge.

Part III explores existing regional arms control frameworks and support for elements of WAM programmes. It pays particular attention to the small arms control conventions of the Economic Communities of Central and West African States (ECCAS and ECOWAS, respectively) as the members of both of these organizations are active in contributing uniformed personnel to peace operations, and as their agreements are legally binding and contain explicit references to PSOs.[7] This section also examines numerous efforts, including those by the EU and EU members, to provide these states with material and training support. The EU would be well served to take fuller advantage of these various control measures, especially given the role the EU and several of its member states have played in their development and operationalization. Moreover, to promote effective PSOs, the EU cannot be concerned only with securing materiel it may provide the TCC or the mission through the EPF. It should also work to ensure that lethal materiel that troops and the mission collect or otherwise manage does not recirculate, and is not used to harm uniformed personnel or undermine the mission's effectiveness.

The paper concludes by summarizing key findings and suggests some ways in which the EU can use its investments and resources more effectively to help ensure COE used in PSOs are appropriately accounted for and safeguarded. This takes on an added urgency in light of the tremendous quantities of COE that militants seize from state security forces, and the EU's recent decision to provide lethal materiel in support of its capacity-building and financial assistance through the EPF. This paper does not advocate against the provision of lethal materiel to supplement efforts to promote peace and security, but it flags some of the pitfalls of doing so without enhanced checks and balances, as well as greater accountability.

6 Similarly, the experiences of the riparian countries of Lake Chad in losing lethal materiel to armed groups is not unique to the region. For useful regional and global studies on arms proliferation to non-state armed groups involving less-than-best national practice, see Florquin, Lipott, and Wairagu, 2019; and Demuynck, Mehra, and Bergema, 2020, respectively.

7 Specifically, the ECOWAS convention references 'peace operations,' and the ECCAS convention speaks of "peacekeeping operations," (ECOWAS, 2006, para. 11; and ECCAS, 2010, para. 22; respectively).

1. LOSSES OF UNIFORMED PERSONNEL & LETHAL MATERIEL IN THE LAKE CHAD BASIN REGION

Efforts to defeat Boko Harm have arguably made the situation worse. Nigeria's elimination of the movement's initial leader, Mohammed Yusuf, in 2009 created new challenges for Nigeria—and the region. Under Yusuf's successor, Abubakar Shekau, the group's attacks became bolder and deadlier, and spread to many of Nigeria's 36 states in the early 2010s.[8] It became clear to Nigeria's neighbours that left unchecked, the militants posed a direct threat to their own citizens' well-being. The Lake Chad Basin Commission (LCBC)[9] took a number of decisions that culminated in the operationalization of the MNJTF.[10] Shortly afterwards, in 2015, Shekau pledged loyalty to the Islamic State of Iraq and Syria (ISIS), which led in 2016 to a splintering of his group.[11] For the purposes of this paper, no distinction is made between these factions, and the term 'Boko Haram' is used to describe both of them (even though neither group calls itself by this name).[12] The conflict has claimed more than 40,000 lives (Campbell, 2021), with ramifications felt by millions of people.[13]

Although Boko Haram's two major factions differ in many ways,[14] they are a mirror image of each other in one important characteristic: the way they secure materiel. The Boko Haram insurgency is not an example of a proxy war. No neighbouring country has provided the group with lethal materiel or given it sanctuary to train or recruit as payback for, or to otherwise influence, one of the affected country's actions elsewhere. What then explains the group's longevity? The answer lies in its successful attacks against the region's security forces and seizure of their lethal materiel—both small arms and larger conventional weapon systems.

This section examines Boko Haram's attacks on uniformed personnel and the resulting loss of security sector materiel. It demonstrates the risks associated with lethal equipment provision, and just how easily materiel can fall into the wrong hands. Such experiences are relevant for the EU to consider and learn from when carrying out support activities and providing lethal equipment through the EPF. The analysis draws heavily on the author's Safeguarding Security Sector Stockpiles (S^4) Data Set, which is based primarily on open-source information. The database includes more than 500 reported incidents of attacks on security sector personnel in the Lake Chad Basin region since January 2015 in which a Boko Haram faction is the likely perpetrator.

8 Prior to 2010, raids by supporters of Yusuf tended to focus on police stations, principally in Borno and Yobe states (Mantzikos, 2014, p. 64). Under Shekau, however, the group undertook wide-ranging attacks against both civilian and state targets—killing both Christians and Muslims—in more than a dozen Nigerian states (Copeland, 2013, p. 3).

9 LCBC, established in 1964, initially comprised the four countries bordering what was then Lake Chad: Cameroon, Chad, Niger, and Nigeria. Somewhat paradoxically, as the Lake has shrunk, the organization's membership has grown: Central African Republic and Libya joined in 1994 and 2008, respectively. For a useful short background on the organization's history and dynamics, see Galeazzi, et al., 2017.

10 Although initially an inter-governmental body focused on managing the lake's resources responsibly, its members ventured into security matters in 1994 and took additional measures in subsequent years. The growing threat that Boko Haram posed gave impetus to dust off and revitalize existing mechanisms, and develop new ones (see Abada, et al., 2020).

11 In March 2015 Shekau formally pledged allegiance to ISIS and his group became known as the Islamic State's West Africa Province (ISWAP). A leadership fissure developed the following year and Shekau was pushed out. He calls the faction he leads People Committed to the Propagation of the Prophet's Teachings and Jihad (or JAS, for the name in Arabic). "Boko Haram" frequently refers to JAS, and sometimes is used to describe both JAS and ISWAP.

12 Yusuf too did not use this term to describe his movement or his followers (ICG, 2010b, p. 36). Moreover, the name itself is frequently misinterpreted as "Books are Forbidden" or "Western Education is a Sin." Its truer meaning is, arguably, more localized and less universalistic (see Murphy, 2014). Perhaps a translation closer to the mark would be "Foreign influence (or ways) is not appreciated (or welcome)."

13 Millions have been displaced. Many more people's livelihoods and access to health care and education have been severely disrupted. A recent UN snapshot of the humanitarian relief in the sub-region notes that 12.5 million people need humanitarian assistance, of which nearly 3 million were displaced and more than 4 million were facing emergency levels of food insecurity (UN OCHA, 2020).

14 Much has been written about the two factions' differences in religious doctrine and treatment of Muslims (e.g. Mahmood and Ani, 2018), use of women and girls in attacks (e.g. Pearson, 2018), and military doctrine (e.g. Stoddard, 2019).

1.1. Attacks on security sector personnel in the Lake Chad region

Official data concerning attacks on security sector personnel is difficult to obtain, but reports suggest that the situation in the Lake Chad Basin region is serious. Many countries are reluctant to share information on casualties among their uniformed personnel.[15] According to the Council on Foreign Relations' Nigeria Security Tracker (NST), more than 2,000 uniformed security sector personnel have died in the conflict since 2015 (see Table 1).[16] As alarming as these numbers are, they likely under-estimate the true scale and scope of the losses incurred concerning the security personnel of the four Lake Chad Basin countries. A memorial to fallen comrades since 2013 at the headquarters of the Nigerian military's operations in northeast Nigeria had, in 2018, the names of more than 1,300 soldiers inscribed on it. An estimated 600 soldiers had died within a six-month period in 2018, alone (Anyadike, 2018). More than 100 Cameroonian soldiers lost their lives in attacks by Boko Haram in 2014 and 2015 (ICG, 2016c, p. 22). Three separate attacks on police targets in N'Djamena in June 2015 resulted in more than 100 casualties, including dozens of deaths, many of whom were members of the police (BBC, 2015a; RTS, 2015).[17]

Table 1 – Number of MNJTF uniformed personnel fatalities due to Boko Haram conflict (2015-2020)

Country	2015	2016	2017	2018	2019	2020	Totals
Cameroon	36	9	1	0	21	0	67
Chad	1	4	9	0	34	169	217
Niger	14	57	0	19	22	20	132
Nigeria	134	157	171	425	642	423	1,952
Totals	**185**	**227**	**181**	**444**	**719**	**612**	**2,368**

Note/Caveat:
Data for fatalities suffered among uniformed personnel is as follows: "Cameroon" covers events in its Far North region; "Chad" covers events in its Lac region; "Niger" covers events in its Diffa region; and "Nigeria" covers events in its Adamawa, Borno, and Yobe states. Thus, if a soldier from country X were to die in country Y, that soldier's death would be recorded in country Y's statistics. Soldiers from Cameroon, Chad, and Niger have all died fighting Boko Haram factions in Nigeria. (The possibility exists that that tallies may include deaths of Beninois troops serving in the MNJTF. If so, it is believed the numbers would be very small.)

Source: Written correspondence with Asch Harwood, Principal for Red Hook Media Lab and Research Associate for Council on Foreign Relations, 5 April 2021

Burial for some of the slain Nigerian soldiers from the November 1998 Boko Haram attack on the Metele army base in Borno state. © Channelstv

15 Nigeria, for example, has been accused of burying bodies of its dead soldiers at a secret graveyard under cover of night to escape the media spotlight and public scrutiny (Parkinson, 2019).

16 The number of fatalities would jump to over a thousand more if including data for the period 2012-14, which just includes Nigerian casualties (written correspondence with Asch Harwood, Principal for Red Hook Media Lab and Research Associate for Council on Foreign Relations, 5 April 2021).

17 Security forces from Niger have also been hit hard by non-state armed groups, but more so in the country's north and west than in the south-east where Boko Haram factions are active. In a 30-day period during December 2019 and January 2020 three attacks in the Tillabéri region resulted in more than 200 soldiers dead or injured (S^4 Data Set, n.d.).

What explains the number of attacks on, and deaths of, uniformed personnel in the Lake Chad Basin region? A partial answer is bad luck. Peacekeepers and security personnel working in an active conflict zone face grave threats. They have something militants want: materiel. And they represent the state, which the militants want to, if not defeat, then certainly embarrass and demoralize. Ambushes against patrols, convoys, troop movements, and escort duties, are especially hard to defend against.

That said, lack of (working) equipment, leadership, training, and morale are all more prominent causal factors for the loss of life and materiel among security sector actors. The examples provided are skewed toward Nigerian actors reflecting the fact that Nigerian soil is home to most of the attacks by Boko Haram, and that the Nigerian media is comparatively robust and active, which is not surprising given that Nigeria's population is more than three times the size of Cameroon, Chad, and Niger *combined*. Box 1 (see below) aptly shows how a confluence of these factors can contribute to losses suffered in an attack. Each challenge is explained separately below.

1.1.1. Lack of (working) equipment

Insufficient quality and quantity of both lethal and non-lethal materiel for the security sector represents a long-standing issue. Robert Postings (2019b) summarizes the scope of the problem in Nigeria "ranging from boots to tanks", and has compiled a number of soldiers' grievances about insufficient body armour and ammunition, as well as "tanks only firing twice, armoured personnel carriers running for 10 to 15 minutes before overheating, machine guns jamming, and mortar shells failing to detonate." These concerns are not based on anecdotal accounts. They are systemic (see Kiley, 2014; Ross, 2015; ICG, 2016b; Anyadike, 2018; Postings, 2019a; Postings, 2019b).[18] A similar situation affected Cameroonian security forces' early efforts against Boko Haram.[19]

1.1.2. Endemic corruption

Corruption goes a long way to explaining why equipment is lacking. It is endemic within Nigerian society and current President Muhammadu Buhari acknowledged this, pledging to counter it as a central part of his first presidential campaign in 2015.[20] But the challenge facing the country is enormous (Ojo, et al., 2019) and progress has been slow and uneven (Page, 2018). Borno governor Babagana Zulum has railed against entrenched corruption within the military, ranging from extortion at checkpoints (Haruna, 2020) to implicitly accusing the military of purposely prolonging the conflict for their own ends (Ross, 2020).[21] Malfeasance within the defence sector is by no means limited to Nigeria. It is a problem throughout much of the world, including elsewhere in the sub-region.[22]

18 The military is well aware of the problem. For example, an article in a Nigerian Defence Academy publication acknowledges the adverse effect logistical shortcomings have had on the performance of Operation Zaman Lafiya (Osakwe and Audu, 2017a, p. 4).

19 Soldiers' materiel (e.g. body armour, weapons, night vision goggles) tended to be old, unreliable, or in short supply (ICG, 2016c, p. 22).

20 The Centre for Democracy and Development (CDD) has been keeping track of Buhari's various anti-corruption (and other) promises from both his 2015 and 2019 successful presidential runs, and has developed a "Buharimeter" to assess progress. (See, CDD, 2020, for a five-year overview of achievements and shortcomings.)

21 The governor is no friend of the militants either. His convoy was ambushed twice within a single week in September 2020, one of which employed a DBIED (Donkey-Borne Improvised Explosive Device). The attacks claimed many lives, but the governor's was not one of them (BBC, 2020).

22 A government audit in Niger, for example, determined that corruption resulted in $120m being misappropriated in recent procurement practices for military hardware (Aksar, 2020). Also in Niger, a prison director, with the aid of an army official, sold weapons to Boko Haram (Mangan and Nowak, 2019, p. 11). Corruption is a widespread problem among public sector actors in Cameroon, and security forces reportedly have engaged in numerous illegal activities including gun running and embezzlement of state funds (ICG, 2010a, pp. 9-11). Reports of improprieties persist. In June 2017, for example, Cameroonian soldiers serving in the MNJTF blocked a main road in the Far North to protest and bring attention to their allegations that senior officers had stolen their pension money (ICG, 2017b).

1.1.3. Diminished morale

Perhaps not surprisingly, these various shortcomings have had a marked effect on morale among men and women in uniform. Corruption that results in unserviceable, non-existent, or rationed materiel clearly would be demotivating for those serving on the front lines.[23] Corruption also leads to having to find creative solutions to operational challenges that can be more than sub-optimal: they can have very deadly consequences (Abdullahi, 2020). Extended tours are another extenuating problem. There are numerous reports of soldiers serving on tours for years, only to be redeployed after a short respite (Anyadike, 2018). Even elite troops have shown ill-discipline due to treatment they deemed to be unacceptable,[24] with fatigue from incessant deployments reportedly a contributing factor (Daniel, 2018).[25] And payments are often partial or delayed. Besides being inadequately armed and paid, soldiers are also poorly fed and housed. Soldiers have reportedly asked humanitarian officials for food and bedding supplies (Munshi, 2018). Soldiers also deem the medical care they receive to be unacceptable (Anyadike, 2018).

1.1.4. Lapses in battle readiness

Uniformed personnel have also at times made the jobs of attackers easier, even when such personnel possess the skills and materiel required to tackle enemy forces. For example, there have been reports of trenches having gone undug, and rudimentary but effective perimeter barriers having gone unbuilt. Lapses in battle readiness (such as a failure to wear furnished protective gear) and a reduction in the number of patrols and soldiers serving on sentry duty are said to partially explain the casualties Boko Haram was able to inflict on soldiers during an attack on a Cameroonian military base (de Marie Heungoup, 2017).

Box 1 – Attack on Jilli Military Base: 'bad luck'?

On 14 July 2018 militants raided a military base in Jilli, in Yobe state. The base was home to the 22nd Task Force Brigade of the Lagos-based 81st Division (Anyadike, 2018). The attackers arrived in vehicles painted in army colours and wore army uniforms. The gates to the base reportedly were opened for them (AFP, 2018).[26]

The base was not prepared to defend itself. The unit, which arrived at the site less than a month earlier, was at considerably less than full strength. Tanks meant for the force were still being serviced elsewhere at the time of the incident. Crew-served weaponry existed, but machine guns were old and unreliable: they would stop intermittently when being fired. Soldiers' assault rifles were no match for the attackers' weapons, which included anti-aircraft guns. Moreover, soldiers were caught unawares: uniforms were being distributed at the time of the strike (Ilo, 2018). To make matters worse, mortar shells fired in defence failed to explode. Bunkers and defensive obstacles meant to deter entry into the facility had yet to be built. Many of the contingent's soldiers had only recently completed training and were not battle-hardened. A sergeant who survived the attack described morale at the base prior to the incursion was at its lowest point (Anyadike, 2018).

23 Soldiers in Nigeria complained that they could not be expected to fight Boko Haram, a better armed adversary, when issued just 30 bullets and having received no food rations (VOA, 2016). This explains the frequent occurrence of large numbers of troops going missing when their positions are attacked. Again, this is not a problem unique to Nigeria. In Niger, the government identified dozens of uniformed personnel, including officers, who were determined to have performed poorly or to have deserted their positions after a militant attack on the Bosso military base. The loss of both personnel and equipment during the attack exacerbated pre-existing tensions among the soldiery on their hierarchy's mismanagement of the war effort (ICG, 2017a, p. 13).

24 In August 2018, Nigerian special forces refused to board planes in Maiduguri for a posting in a place they deemed to be less hospitable and considerably riskier than what they had expected. These soldiers fired their weapons in the air in protest and threatened to shoot a commanding officer if he showed up. The situation was contained before it escalated further (Sahara Reporters, 2018).

25 These examples refer to the experiences within the Nigerian armed forces. Again, the problems and challenges are not limited to Nigeria. ICG writes of similar problems facing Cameroonian soldiers serving in the Far North, and notes an instance when a soldier shot and killed his commanding officer (ICG, 2018, p. 4).

26 In another account, the attackers forced their way passed the gate with superior fire power (see Anyadike, 2018).

The human toll of the attack on the Nigerian military was great. Of the 734 uniformed personnel at the base at the time of the attack, 63 managed to make it safely to another military base some 60 km away (Abubakar, 2018). More than 60 soldiers were killed and 50 injured (Ilo, 2018). Hundreds remained unaccounted for days after the attack. Even three months later, in an extended newspaper story of the incident, the Nigerian army had officially acknowledged its forces had suffered (only) 31 fatalities, despite widespread media reports of 200 soldiers still 'missing' (Anyadike, 2018).

The attackers seized considerable quantities of both lethal and non-lethal materiel. The assailants drove away with three of the base's gun trucks—and destroyed four others, which they could not move (Ilo, 2018). Additional vehicles confiscated included the brigade commander's truck (replete with communications gear) and an ambulance. Besides arms and ammunition, additional booty included new army uniforms, petrol, oil and lubricants, and a half-month's food supply for the brigade (Ogundipe, 2018).

1.2. Loss of lethal materiel

The loss of materiel as a direct consequence of these attacks is substantial. A gun truck, fitted with a machine gun will frequently transport several tins of linked cartridges totalling hundreds of rounds of ammunition.[27] A soldier may carry at least two or three magazines of 20 or 30 bullets each on his or her person. When a base is overrun, crew-served weaponry such as machine guns, mortars and towed- as well as self-propelled artillery will frequently be left behind, as will thin-skinned and armoured vehicles. As noted above, sometimes the reliability and effectiveness of these vehicles and equipment is questionable. Yet, a lot of that materiel is in good enough condition to be of use to the militants.

Contingent-owned equipment secured through seizure from regional security forces likely dwarfs materiel received through other procurement channels. There are many ways in which armed groups obtain weapons and ammunition. Arms are reported to have arrived in Nigeria from regional conflicts via the black market (CAR, 2020; Florquin, Lipott, and Wairagu, 2019, p. 34; IRIN, 2014; Onuoha, 2013; SBM, 2020). Local artisans are also a source for lethal materiel (Nowak and Gsell, 2018), as are corrupt soldiers (VOA, 2016). And Boko Haram reportedly has some capacity to produce lethal materiel on its own, such as rockets (BBC, 2015b). Anecdotal information suggests that ISIS has provided numerous services to its province, but that military hardware is not one of them (Foucher, 2020). In early 2017, however, MNJTF Force Commander Maj-Gen. Lo Adeosun acknowledged that most of the equipment that his force recovered from militants originated from military positions the insurgents had themselves attacked (Besheer, 2017). Four years later, the same holds true, except the quantity of materiel held by the insurgents has greatly increased (S^4 Data Set, n.d.).

COE is also lost due to forced abandonment. Sometimes troops will leave a base in advance of an imminent or perceived attack. They may do so pursuant to direct orders or in keeping with tactical considerations. Sometimes substantial quantities of weaponry kept at the base as reserves can be taken with the departing forces. Other times that which cannot be taken is destroyed or made unusable. Often, however, the materiel falls into enemy hands. Logistical constraints or poor planning can also play a part: militants recovered military vehicles that soldiers had to abandon when they ran out of fuel (Ross, 2015).

The S^4 Data Set documents more than 500 incidents since 1 January 2015 in which security forces have reportedly come under attack from one of the two main Boko Haram factions. The militants have struck both mobile (e.g. patrols, troop and convey movements, and escort duties) as well as static targets (e.g. check points, forward operating bases, "Super Camps,"[28] and sector headquarters). They have done so in three Nigerian states and three regions in three neighbouring countries.

27 A tin of linked 7.62mm ammunition may total 200 rounds—around twice as many in a container of linked 12.7mm ammunition. A gun truck will carry many tins of ammunition.

28 The Nigerian army initiated its 'Super Camp' strategy in 2019. It established 20 or so large bases in locations it could better supply and protect to enhance its troops' security (but not necessarily to the benefit of the populace) (Wolf, 2020; Zenn, 2019).

More than 100 of the recorded attacks can be described as significant in terms of losses of materiel. "Significant" is defined as an incident in which one of the following three criterion is met: (a) 10 or more weapons are seized; (b) 1,000 or more rounds of ammunition are seized; or (c) 1 or more gun trucks—or "technicals" as these vehicles are frequently called—or armoured vehicles are seized.[29] The paper distinguishes among three types of such events (see Table 2).

Table 2 – The three categories of "significant" losses of materiel from security sector stockpiles

Category	Quantities of Type of Materiel Diverted				
	Weapons		Rounds of Ammunition		Technicals (or armoured vehicles)
Category 1	10 – 49	or	1,000 - 9,999	or	1 – 4
Category 2	50 – 99	or	10,000 - 99,999	or	5 – 9
Category 3	100+	or	100,000+	or	10+

Seventy "significant" events concerning likely loss of arms, ammunition, and military vehicles are recorded on Map 1 (below). This represents around half of those entered in the database that are believed to have resulted in the seizure of at least 10 weapons, 1,000 rounds of ammunition, or at least one gun truck. Geographic breadth and inclusion of major attacks largely explains the selection of incidents displayed. Events involving expected loss of lethal materiel from state stockpiles are displayed in 33 local government areas (LGAs) in three Nigerian states (including 23 of Borno's 27 LGAs),[30] and 10 of 16 departments in three regions of neighbouring Cameroon, Chad, and Niger.[31] This gives a good idea of the large swath of territories within which the two Boko Haram factions operate.

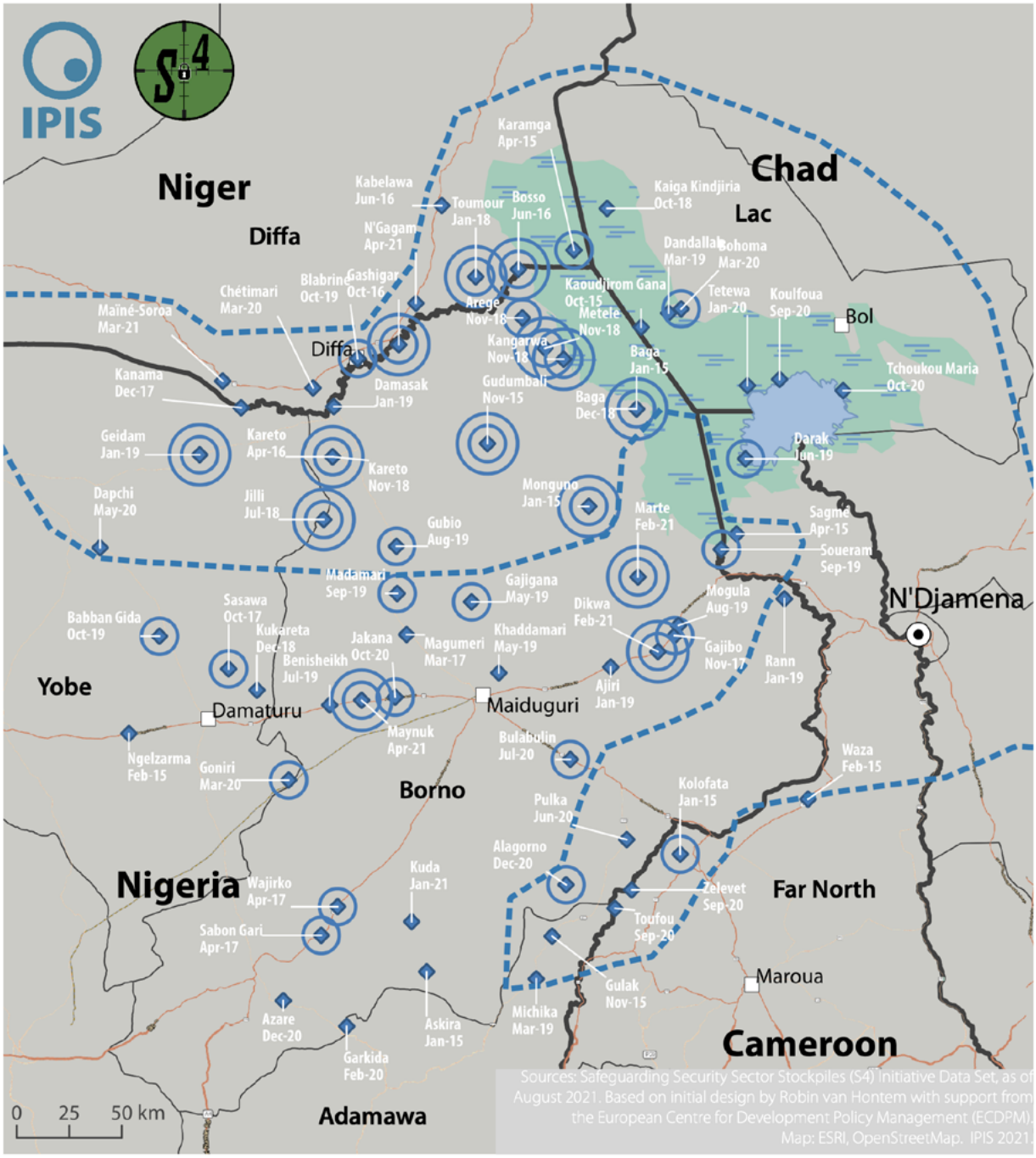
Detailed information on attacks is in short supply and hard to obtain, while misinformation (either to exaggerate or minimize losses inflicted or incurred) is plentiful and easy to access. Assumptions have been made when assessing likely losses. When better information becomes available, these assumptions are revised and categories changed as may be appropriate.

29 This S4 Data Set and the three categories of "significant" events differs from the Small Arms Survey's Peace Operations Data Set (PODS) in three notable ways: (1) S^4 includes diversions of security sector COE experienced both inside and outside of PSOs; (2) the methodology employed differs for assessing the levels of losses when information is not made available; and (3) S^4 documents large conventional weapon systems and non-lethal materiel seized.

30 The S^4 Data Set records attacks believed to qualify as significant events in three LGAs in Adamawa state (Gombi, Machika, and Madagali), and in seven LGAs in Yobe state (Bursari, Damaturu, Fune, Geidam, Gujba, Tarmua, and Yunusari). The four LGAs in Borno for which the database does not record an incident believed to qualify as Category 1 or greater are Bayo, Kwaya Kusar, Maidugari, and Shani.

31 The S^4 Data Set includes instances deemed to meet the requisite criteria set forth above in three departments in Cameroon's Far North region (Logone-et-Chari, Mayo-Sava, and Mayo-Tsanaga), three departments in Chad's Lac region (Fouli, Kaya, and Mamdi), and four departments in Niger's Diffa region (Bosso, Diffa, Maïné Soroa, and N'Guigmi). The territory in which significant events were recorded would be enlarged to include more of southern Borno and northern Adamawa states if the period covered included 2014 (see, for example, Ogala and Isine, 2015).

Map 1: Selected significant events of loss of security sector stockpiles in Lake Chad Basin region, January 2015 – April 2021



Through attacks on regional security forces, Boko Haram has managed to secure not just ubiquitous small arms and light weapons, but also heavy weapons and military vehicles (see Table 3). Firearms consist of assault rifles and rocket-propelled grenade launchers for use by the individual combatant, as well as crew-served weaponry such as heavy machine guns (HMGs) and artillery pieces. Larger conventional weapon systems include armoured personnel carriers (APCs) and numerous armoured fighting vehicles with armaments ranging from 7.62mm machine guns to 90mm tank guns. Self-propelled multiple-launch rocket systems (MLRS), and main battle tanks (MBTs) lost to insurgents are designed to engage targets at distances exceeding 16 km (or 10 miles), making perimeter security very challenging.

Any table that collates reporting of seized weaponry needs to acknowledge several limitations and potential shortcomings. There are definite gaps in reporting, with information skewed toward losses incurred from Nigerian stockpiles.[32] Reporting on losses incurred may be selective.[33] The identification of the materiel could be inaccurate,[34] and video footage from militants, on which much analysis and reporting is based, could be misleading. Data is also collated and included from MNJTF and its member governments' posts about materiel its forces have recovered in clearance operations. The table does not indicate how the equipment listed was sourced. Neither is it clear if the weaponry was built under license or reverse engineered, or if it still works.[35] Nor is it clear if the item listed represents one copy (as appears to be the case with the Grad BM-21 MLRS) or if it is ubiquitous (e.g. the Type 56 assault rifle).[36]

Still from a propaganda video showing a captured Russian BM-21 multiple-launch rocket system during an Islamic State West Africa Province attack on a military base in December 2018. © The Defense Post.

32 In early 2015, a Chadian official noted that 40 per cent of what its forces were recovering in operations against Boko Haram was French materiel (Vox Peccavi, 2015), but only four French weapon systems are listed in Table 3. The figure mentioned would have been likely skewed toward materiel militants in the area had recovered earlier that year and in 2014 from attacks on Cameroonian forces and not representative of a broader or more recent sample.

33 A country may be more willing to discuss the loss of foreign-produced equipment than that which is locally manufactured. And there could be a reluctance to acknowledge loss of particular weapon systems.

34 Some errors are easy to catch such as a six-wheeled armoured vehicle with a designation as a Soviet-era tank, known to be tracked (Sahara Reporters, 2014). Others are likely less obvious, might not get picked up, and could be repeated and cited as authoritative.

35 As previously noted, much equipment in service with state security forces in the region is in poor condition. Moreover, conventional weapon systems require know-how, spare parts, munitions, and for large armoured vehicles such as MBTs, quantities of petrol that may be in short supply (Grane, 2014).

36 It was reported that Shekau possessed at least 150 technicals (or gun trucks) just at his headquarters in Gwoza in early 2016 (ICG, 2016a, p. 3).

Table 3 – Selected examples of materiel in service with, or recovered from, Boko Haram

	Type of Materiel	Model / Ammo type	Country of Origin
Ammunition	Rifle cartridge	(5.45x39mm)	Various
	Rifle cartridge	(5.56x45mm)	Various
	Rifle cartridge	(7.62x39mm)	Various
	Rifle cartridge	(7.62x51mm)	Various
	Rifle cartridge	(7.62x54mmR)	Various
	HMG cartridge	(12.7x99mm)	Various
	HMG cartridge	(12.7x108mm)	Various
	HMG cartridge	(14.5x114mm)	Various
Munitions	AA round	APT-T 23x152mm	China
	AGL round	(35x32mm)	Various
	AGL round	(40x53mm)	Various
	Cluster bomb	BLG 66 Beluga	France
	Hand grenade	SHG-60	Austria
	Hand grenade	SplHGR-80	Austria
	Hand grenade	Type 86P	China
	Mortar shells	(60/81/82/120mm)	Various
	Rocket	(122mm)	Various
	RPG round	F-7 HE FRAG	North Korea
	RPG round	OGi-7MA	Bulgaria
	RPG round	PG-7V/PG-7VM	Romania
	RPG round	RHEAT-7MA2	Bulgaria
	RPG round	RTB-7MA	Bulgaria
Small Arms	Assault rifle	AK-47 (+ variants)	Various
	Assault rifle	AK-74	Russian Federation
	Assault rifle	AK-103	Russian Federation
	Assault rifle	Beryl M762	Poland
	Assault rifle	FN FAL	Belgium
	Assault rifle	G3	Germany
	Assault rifle	Galil	Israel
	Assault rifle	K2	South Korea
	Assault rifle	M21	Serbia
	Assault rifle	Tavor TAR-21	Israel
	Assault rifle	Type 56	China
	GPMG	FN MAG	Belgium
	GMPG	HK21	Germany
	GPMG	M60	United States
	GPMG	PK/PKM	Russian Federation
	Sniper rifle	AR-10 Super SASS	United States
	Sniper rifle	Dragunov	Russian Federation
	Sniper rifle	M21	United States
	Sniper rifle	M76	Serbia

	Type of Materiel	Model / Ammo Type	Country of Origin
Light Weapons	AGL	QLZ-87	China
	AGL	UAG-40	Ukraine
	HMG	DShK	Russian Federation
	HMG	KPV	Russian Federation
	HMG	M02 Coyote	Serbia
	HMG	M2 Browning	United States
	HMG	NSV	Russian Federation
	HMG	W85	China
	HMG	ZPU-2	Russian Federation
	Mortar	(60/81/82/120mm)	Various
	Mortar	ECIA L-65	Spain
	Recoilless gun	SPG-9	Russian Federation
	RRG launcher	M80 Zolja	Ex-Yugoslavia
	RPG launcher	RPG-7	Russian Federation
	RPG launcher	Type 69	China
Other Conventional Weapon Systems	AFV	AML 60 Serval	France
	AFV	ERC 90 Sagaie	France
	APC	4K 4FA	Austria
	APC	4K 7FA	Austria
	APC	BTR-4	Ukraine
	APC	FV103 Spartan	United Kingdom
	APC	Igirigi	Nigeria
	APC	MT-LB	Poland
	APC	Piranha	Switzerland
	Gun truck	IVM G12	Nigeria
	IMV	Cobra	Turkey
	IMV	KLTV	South Korea
	IMV	Phantom II	UAE
	IMV	VBL M11	France
	IMV	Spartan Mk III	Canada
	Light tank	BMP-1	Russian Federation
	Light tank	FV101 Scorpion	United Kingdom
	MRAP	Caiman	United Kingdom
	MRAP	CS/VP3	China
	MRAP	Legion	Nigeria
	MRAP	Reva	South Africa
	MBT	Mk 3 Eagle	United Kingdom
	MBT	T-55	Russian Federation
	SP artillery	BM-21 Grad	Russian Federation
	Towed artillery	D-30	Russian Federation
	Towed artillery	Mod-56	Italy

Key:

- AA = Anti-Aircraft
- AFV = Armoured Fighting Vehicle
- AGL = Automatic Grenade Launcher
- APC = Armoured Personnel Carrier
- GPMG = General-Purpose Machine Gun
- HMG = Heavy Machine Gun
- IMV = Infantry Mobility Vehicle
- MBT = Main Battle Tank
- MLRS = Multiple-Launch Rocket System
- MRAP = Mine-Resistant Ambush-Protected (vehicle)
- RPG = Rocket-Propelled Grenade
- SP = Self-Propelled
- UAE = United Arab Emirates

Notes:

- Machine guns are organized into three types: "Light" (firing a cartridge with a calibre smaller than 7.62mm); "Medium" (firing a cartridge with a calibre 7.62mm up to, but not including, 12.7mm); and "Large" (firing a cartridge with a calibre of 12.7mm up to, but not including, 20mm). For the purposes of this chart, light and medium machine guns are combined under the term "GPMGs."
- Mortars are organized into three types: "Light" (firing a shell with a calibre 60mm or smaller); "Medium" (firing a shell with a calibre between 61 and 82mm); and "Heavy" (with a calibre 83mm and larger).

Sources: Calibre Obscura (2019a; 2019b; 2020); Postings (2019a; 2019b); S[4] Data Set, n.d.; Written correspondence with Stijn Mitzer, Oryx, 15 May 2021

Moreover, such a list is cumulative and not a snapshot of current holdings. Some of the equipment seized is recaptured or destroyed. The Nigerian air force, for example, is frequently called in after militants overrun one of the army's bases to pursue the attackers. The government has claimed success in neutralizing some of the larger weapon systems seized (e.g. a BM-21 Grad (Calibre Obscura, 2019a)), and some COE is recovered in clearance operations (such as at least one example of an OTO-Melara Mod 56 105mm howitzer (Calibre Obscura, 2019a)). Therefore, the list of materiel in Table 3 does not indicate what militants currently possess. According to the Nigerian army, its forces recovered 1,385 rounds (sic) of ammunition, 45 grenades, and 95 rifles (in addition to several gun trucks recovered and destroyed) from Boko Haram between 18 March and 30 December 2020 (NASPRI, 2020).[37]

Nevertheless, the panoply of hardware that both Boko Haram factions possess is a reason for concern. As recorded in Table 3, materiel from at least nine EU member states have been identified as in service with Boko Haram operatives. (As of April 2021, none of the T-72 MBTs in service with the Nigerian army that had been owned by Hungary and brokered by Czechia[38] had been reported seized).[39] The issue of weapons ending up being used in ways other than that which was intended is not specific to the EU. More than a dozen other countries from different parts of the world are in the same boat. Among these countries, two aspire to join the EU and one, the United Kingdom, was an EU member state until last December. Loss of materiel and stolen equipment raises questions for the EU and EU member states about how it can reduce this phenomenon or stop it from worsening, particularly in light of its newfound ability to provide lethal equipment through the EPF. The answer to this question is addressed in Part III. In the next section, we demonstrate that the situation in the Lake Chad Basin region is not an outlier. In fact, it exemplifies challenges faced elsewhere. This is particularly relevant for the newly acquired global scope of the EPF, which will need to consider the risk of loss of materiel and its consequences not only in Africa or in certain circumstances, but as a phenomenon that occurs in all parts of the world.

37 Routine press releases from the army concerning successes registered against militants as part of longstanding Operation Lafiya Dole ("Peace by All Means," which replaced in July 2015 replaced Operation Zaman Lafiya or "We will live in peace", ICG, 2016a, p. 7) report seizing (many) hundreds of rounds of small arms ammunition in a single recovery engagement, which suggests the figure for the ammunition recovered is likely a typo. That said, it is included here as an indication that very little is recovered compared to what is lost.

38 The exact quantity and full shipment details of the previously Hungarian-owned T-72 MBTs that Nigeria ordered from the Czech company Excalibur Group are not clear (Defence Web, 2015). At least four of the vehicles were flown from Czechia to Nigeria in January 2015 (Martin, 2015).

39 A propaganda photo circulated in 2019 of militants from a Boko Haram faction standing on top of a stationary T-72, purportedly seized after an attack on a Nigerian military base. It was not clear from the image, however, if the militants actively took possession of the vehicle. Moreover, the MBT in question may have come from a supplier other than Hungary.

2. LOSS OF COE AND RECOVERED MATERIEL A GLOBAL CHALLENGE

The loss of life and materiel experienced by the four principal states participating in and alongside the MNJTF is symptomatic of a challenge facing numerous countries and organizations undertaking PSOs of various kinds around the globe. Leaving aside the thorny issue of how to define a 'peace operation', which is not integral to this paper, it is sufficient to acknowledge that police- and troop-contributing countries in missions undertaken by diverse and well-resourced actors such as the EU, the Multinational Force and Observers (MFO), the North Atlantic Treaty Organization (NATO), and the UN have all had uniformed personnel come under attack,[40] and have all lost lethal material within their mission areas (Berman, 2019, pp. 35-36, 39-40; S^4 Data Set, n.d.). One may assume the same is true for missions undertaken by the Commonwealth of Independent States and the Gulf Cooperation Council (GCC) given the size and duration of their missions, their TCCs' different resources, and the complexity of the conflicts in which they were deployed.

Militants in other conflict zones secure COE similar to the ways in which Boko Haram has obtained materiel in the Lake Chad Basin region—as well as through some additional methods. Fixed sites have been attacked and overrun. Patrols have been ambushed and overpowered, as have supply convoys and troop movements. Improvised explosive devices (IEDs) are an increasingly common threat in many missions. Losses of materiel have also occurred as a result of corruption, burglaries, and robberies—and errant air drops (Berman, 2019, pp. 39-41).

This section is organized into two parts. The first looks at the experiences of the UN and other African-led operations. The second moves beyond the loss of lives and COE and focuses on challenges to oversight and proper management of non-COE equipment, with particular attention paid to recovered lethal materiel. To promote effective peace operations, the EU cannot just be concerned with securing materiel it may provide to a TCC or to the mission. It should also ensure that weapons and ammunition circulating in a mission area are not used to harm uniformed personnel and facilitate loss of their COE, or undermine the mission's effectiveness.[41]

2.1. Experiences of the United Nations and other African-led peace operations

Unlike many other organizations undertaking PSOs, the UN has been particularly transparent when it comes to reporting on fatalities of personnel serving in its missions. According to the UN, more than 4,000 people serving in more than 70 of its UN-led operations have died between 1948 and 2020 while on mission. More than 1 in 4 have died due to malicious acts (see Table 4). Blue Helmets represent the vast majority of the total deaths (3,255, or more than 80 percent) (UNOCC, 2021b). The number of casualties has grown steadily in recent decades, which has led the UN to take steps to reduce its losses.[42] Enhanced protection measures such as better training and equipment certainly merit support—even if UN peacekeeping is not quite as risky as commonly believed (van der Lijn and Smit, 2015)—but they alone will not make peacekeeping more effective.[43]

40 EU Training Missions (EUTMs), for example, have come under attack a number of times in Mali (at least twice), and in Somalia (also at least twice), resulting in several casualties, but not among EU nationals (see Diallo and Diarra, 2016; Maruf, 2018; AP, 2019; and Stocker, 2019).

41 Good practice concerning effective record-keeping, stockpile management, intelligence gathering, and, where appropriate, destruction of recovered materiel is critically important, but outside this paper's scope. De Tessières (2021) focuses on best practice within disarmament, Demobilisation, and reintegration (DDR) programme contexts that are equally applicable for managing lethal materiel recovered outside of DDR; it may be more difficult to generate the requisite resources—both human and financial—for such undertakings, however.

42 See dos Santos Cruz, Phillips, and Cusimano, 2017 for report detailing challenges Blue Helmets are increasingly facing in UN missions, and recommended actions for TCCs and the UN to take to address these risks.

43 A question worth asking is what are the costs for reducing casualties as far as mandate implementation is concerned? It is sometimes hard to document a TCC's failure to implement a mission's mandate to an unwillingness to provoke protagonists, or even to simply assume enhanced risks. Still, one can get glimpses of the effects that risk-adversity has on the safety and well-being of civilians within a mission by reading between the lines in several reports (see Albrecht, Cold-Ravnkilde, and Haugegaard, 2017; and Wells, 2017; regarding the UN missions in Mali and South Sudan, respectively). To fully grasp the myriad challenges, see UNSC, 2016.

Table 4 – UN personnel who have died in UN peace operations (1948-2020)									
Years	1948-1957	1958-1967	1968-1977	1978-1987	1988-1997	1998-2007	2008-2017	2018-2020	Totals
Deaths by Malicious Acts	13	157	36	72	277	145	284	70	1,054
Total Deaths	36	386	139	222	792	850	1280	331	4,036

Note: The tabulations include all traditional UN peacekeeping operations plus several special political missions.

Source: UNOCC, 2021a

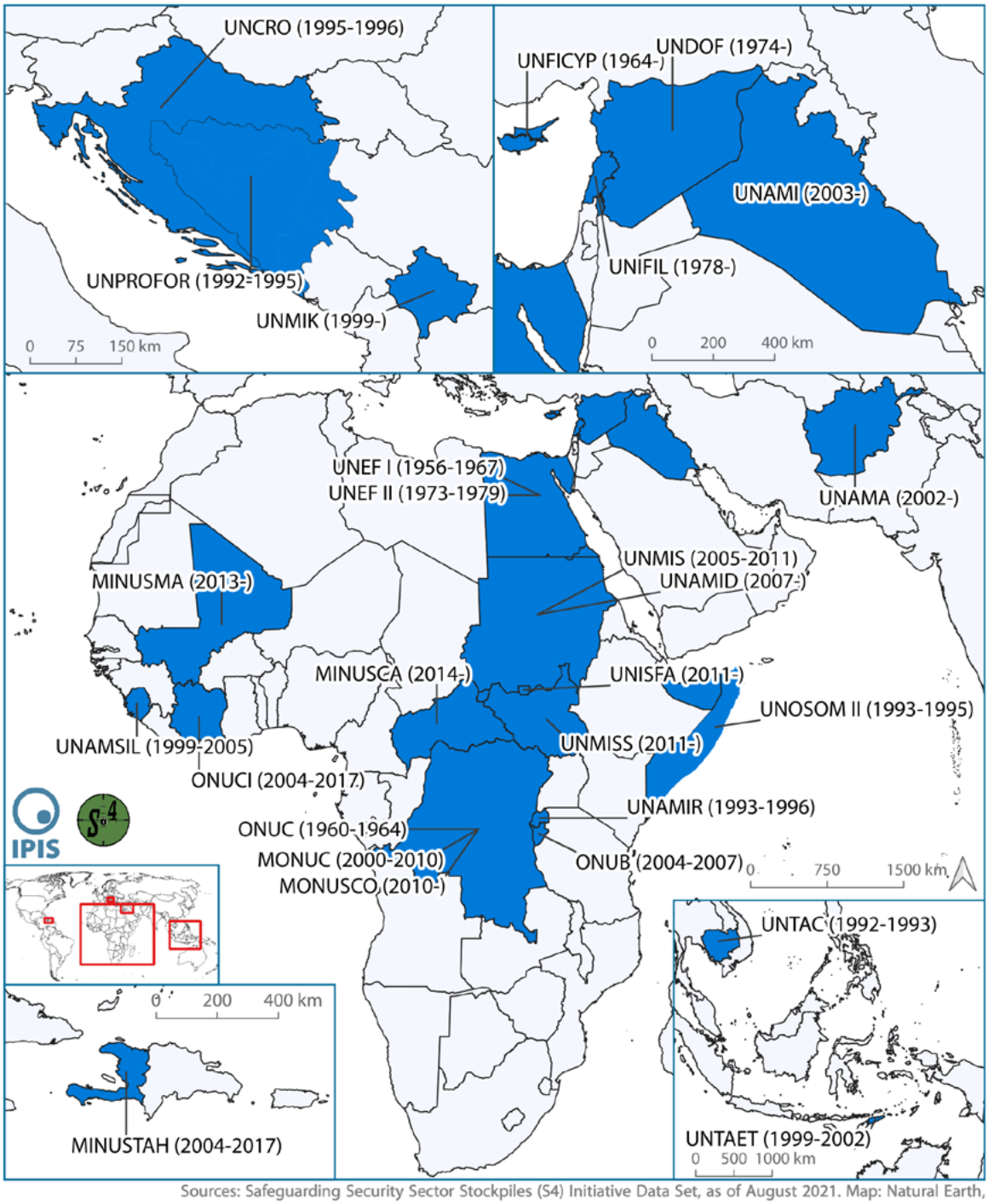
The United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) honours fallen Tanzanian peacekeepers (December, 2017). © UN Photo

The UN has been less open about the losses of materiel that its missions have experienced. Nevertheless, many incidents of attacks are recorded in reports that the Secretary-General regularly submits to the Security Council, which are usually made public (as civil society organizations, the media, and national parliaments also are sources of information on incidents of losses incurred).

Table 5 provides examples of lethal material lost in UN peacekeeping operations in missions that have taken place over the past 30 years. The information provided lists the scale of COE lost, by whom, where, and when. It does not ascribe causality. Nor does it mention loss of life or ramifications for the mission's effectiveness, such as its ability to protect civilians within the mission area. It is only meant to show that the diversion of materiel in peace operations is a more common occurrence than is widely appreciated, and affects a wide range of missions and troop-contributing countries.

Importantly, losses do not inherently imply "failure" or "culpability." The surest way for a country not to lose men or women in uniform, or any COE is to not participate in a mission. If the goal is to improve the safety of security sector personnel and materiel then one must accept that things sometimes will not go as planned. The idea is to reduce such instances and to learn from them so as to make them less likely to re-occur, and to hold people and governments accountable when appropriate. The examples chosen for Table 5 are not the biggest cases of loss of materiel. They were selected to represent a range of missions and nations whose uniformed personnel serving in those operations have lost lethal materiel. The S^4 Data Set has information on COE likely lost in at least 25 UN peace operations (see Map 2) from more than 50 TCCs (S^4 Data Set, n.d.).

Map 2. UN Peace Operations that experienced loss of lethal contingent-owned equipment



Sources: Safeguarding Security Sector Stockpiles (S4) Initiative Data Set, as of August 2021. Map: Natural Earth, IPIS 2021. IPIS cannot be held accountable for the quality of the limits, names and boundaries used on this map.

Moreover, for the most part, losses of arms in UN peace operations are largely isolated instances, and not on a large scale. Exceptions to this general characterization would include attacks on Blue Helmets in former-Yugoslavia between May and September 1995, in Sierra Leone in May and June 2000, in north-eastern DRC from September to December 2017, and in Mali from the mission's inception in April 2013 to the current day. Several African-led PSOs have suffered more consistent attacks and losses, however. Much has been written on the prolonged challenges that the Economic Community of West African States (ECOWAS) faced in its first two missions in Liberia and Sierra Leone. For example, Herbert Howe (1996, p. 146) estimated that an average of more than 100 soldiers died each of the first six years of the mission in Liberia. Its mission in Sierra Leone may have been even more costly in terms of lives lost among deployed uniformed.[44] A couple of examples of materiel lost from those missions are cited below. The AU Mission in Somalia (AMISOM), which has received substantial EU support through the African Peace Facility and will continue to receive support through the EPF as well, is a more relevant African-led peace operation to focus on for this paper. TCCs contributing to AMISOM have likely lost more than 1,500 men and women (Williams, 2019), as well as millions of rounds of ammunition, thousands of small arms, hundreds of light weapons, and dozens of other conventional weapon systems (see Box 2).

United Nations (UN) vehicle damaged in January 2019 attack on UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) base in Aguelhok, which resulted in 10 deaths and at least 26 injuries among Chadian UN Peacekeepers stationed there. © UN Photo

44 In October 1999, Nigerian President Olusegun Obasanjo acknowledged that Nigeria alone had lost more than 500 soldiers in Sierra Leone as part of the ECOWAS operation (Adeshina, 2002, p. 183). Nigeria provided about 80 per cent of the mission's strength (Osakwe and Audu, 2017b, p. 114). The last ECOWAS Cease-fire Monitoring Group (ECOMOG) troops departed Sierra Leone in May 2000 (Berman, 2000, p. 14).

Table 5 – Selected examples of lethal materiel likely lost in UN peace operations

DATE mm.yy	MISSION & (LOCATION)	(Principal) P/TCC(s)	SCALE OF MATERIEL LIKELY LOST AND BRIEF DESCRIPTION	
			S⁴ Cat.	Cat. 1: 10 - 49 weapons or 1,000 - 9,999 rounds of ammunition Cat. 2: 50 - 99 weapons or 10,000 - 99,000 rounds of ammunition Cat. 3: 100+ weapons or 100,000+ rounds of ammunition
12.92	UNTAC (Cambodia)	Indonesia	1	Party to peace process detained platoon and seized its COE
06.93	UNOSOM II (Somalia)	Pakistan	2	Militants attacked peacekeepers, killed many, and seized materiel
07.93	UNOSOM II (Somalia)	Italy	1	Peacekeepers attacked: suffered casualties and abandoned posts
04.94	UNAMIR (Rwanda)	Ghana	2	Formed unit redeployed in haste; abandoned ammunition
04.94	UNAMIR (Rwanda)	Belgium	1	Peacekeepers killed and their position was overtaken
05.95	UNCRO (Croatia)	Argentina/Nepal	2	(Combined account) Peacekeepers disarmed and used as human shields; UN vehicles seized
05.95	UNPROFOR (BiH)	Several (see note)	3	Peacekeepers from Canada, France, Ukraine, and United Kingdom taken hostage and disarmed; armoured vehicles seized
07.95	UNPROFOR (BiH)	Netherlands	3	Company disarmed and taken hostage; significant materiel seized
08.95	UNCRO (Croatia)	Denmark	1	Peacekeepers seized and disarmed
01.00	UNAMSIL (Sierra Leone)	Guinea	3	Militant group took COE from battalion deploying to mission area
05.00	UNAMSIL (Sierra Leone)	Kenya	2	Base abandoned; materiel seized
05.00	UNAMSIL (Sierra Leone)	Zambia	3	Three companies on rescue mission taken hostage and disarmed
01.06	ONUCI (Côte d'Ivoire)	Bangladesh	3	Forced abandonment of COE in effort to defuse confrontation
01.06	MONUC (DRC)	Guatemala	1	Patrol attacked and killed by militant group; weapons seized
01.06	MINUSTAH (Haiti)	Uruguay	1	Patrol attacked: armoured vehicle disabled and abandoned
04.08	UNAMID (Sudan)	(see note)	3	Robbers seized 600,000 rounds of ammo belonging to a TCC during transport by private company (outside of mission area)
07.08	UNAMID (Sudan)	Rwanda	2	Convoy of roughly 60 peacekeepers attacked; vehicles seized
03.10	UNAMID (Sudan)	Nigeria	2	Patrol of roughly 60 peacekeepers disarmed
04.11	UNAMID (Sudan)	Sierra Leone	1	Patrol attacked; vehicle seized
06.12	ONUCI (Côte d'Ivoire)	Niger	1	Patrol ambushed, peacekeepers killed, equipment taken
03.13	UNDOF (Syria)	Philippines	1	Platoon taken hostage by militant group; weapons seized
12.13	UNMISS (South Sudan)	India	2	Base attacked, materiel seized
10.14	UNAMID (Sudan)	South Africa	2	Patrol of roughly 40 peacekeepers disarmed
07.15	MINUSMA (Mali)	Burkina Faso	1	Convoy ambushed resulting in many casualties; vehicles seized
07.15	UNMISS (South Sudan)	China	1	Peacekeepers abandoned positions during political unrest
12.16	UNAMI (Iraq)	Fiji	2	Weapons and ammunition stolen from depot
05.17	MINUSCA (CAR)	Cambodia Morocco	1	(Combined account) Attack on peacekeeping convoy resulted in 5 deaths and 10 injuries; COE believed to have been seized
12.17	MONUSCO (DRC)	Tanzania	2	Militants attacked UN base, overrunning it; materiel looted
04.18	MINUSCA (CAR)	Gabon	1	Peacekeeper caught selling COE ammunition he stole
05.18	MONUSCO (DRC)	Benin	1	Militants ambushed section of platoon; abducted peacekeepers
01.19	MINUSMA (Mali)	Chad	1	UN base suffered complex attack; dozens killed and wounded
02.21	MINUSMA (Mali)	Togo	2	Militants raided base in complex attack resulting in many casualties

Key:

- AU = African Union
- BiH = Bosnia and Herzegovina
- CAR = Central African Republic
- Cat. = Category
- COE = Contingent-owned equipment
- DRC = Democratic Republic of the Congo
- 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
- MONUC = UN Organization Mission in the Democratic Republic of the Congo
- MONUSCO = UN Organization Stabilization Mission in the Democratic Republic of the Congo
- ONUCI = UN Operation in Côte d'Ivoire
- P/TCC = Police-/Troop-contributing country
- S⁴ = Safeguarding Security Sector Stockpiles (Initiative)
- UN = United Nations
- UNAMI = UN Assistance Mission in Iraq
- UNAMIR = UN Assistance Mission for Rwanda
- UNAMID = UN-AU Hybrid Operation in Darfur
- UNAMSIL = UN Mission in Sierra Leone
- UNCRO = UN Confidence Restoration Operation in Croatia
- UNDOF = UN Disengagement Observer Force
- UNMISS = UN Mission in the Republic of South Sudan
- UNOSOM = UN Operation in Somalia
- UNPROFOR = UN Protection Force
- UNTAC = UN Transitional Authority in Cambodia

Sources: Berman, 2000, pp. 19-20; Berman and Racovita, 2015, pp. 104-117; Berman, Racovita, and Schroeder, 2017, pp. 25, 28-31; S⁴ Data Set, n.d

Box 2 – AMISOM: similar challenges to the MNJTF concerning attacks and security of materiel

The AU Mission in Somalia (AMISOM) shares many similarities with the MNJTF. Formed units from the same troop-contributing countries (TCCs) that formally serve within the mission are co-deployed within their sectors. Both missions' uniformed personnel have suffered many more fatalities due to malicious acts than the UN has (in its entire history). And militants have secured a formidable arsenal of lethal materiel from contingent-owned equipment (COE) seized from the security forces that comprise the peace operation—both those within the formal mission and those serving alongside it. Moreover, the seized COE includes high-grade military explosives that are useful for constructing improvised explosive devices (IEDs) and used against the informed personnel from whom the material is taken.[45]

The militant group al-Shabaab has obtained considerable materiel and inflicted many casualties by attacks on AMISOM patrols, convoys, and fixed sites. Al-Shabaab's indirect attacks and use of improvised explosive devices are routine occurrences and have caused hundreds of casualties among AMISOM personnel.[46] Significant incidents of loss of life—and likely of materiel as well—occurred in October 2011 in Deynile (Burundian patrol ambushed), in June 2015 in Leego (Burundian base attacked), in September 2015 in Janaale (Ugandan base attacked), in January 2016 in El Adde (Kenyan base attacked), in June 2016 in Halgan (Ethiopian base attacked), in January 2017 in Kulbiyow (Kenyan base attacked), in July 2017 in Golweyn (Ugandan convoy ambushed), in April 2018 in Bulo Marer (Ugandan base attacked), and in January 2019 in Hawaal Alundo (Ethiopian convoy ambushed).

Details on the extent of losses AMISOM has suffered are difficult to obtain. The mission and affected TCCs are understandably reluctant to discuss details and al-Shabaab's reporting of these incidents may be exaggerated for propaganda purposes. That said, the attack on El Adde is instructive as there is little doubt of what happened: al-Shabaab overran the base, killing more than 170 Kenyan troops (and taking more troops hostage), and secured the base with ample time to entirely loot its contents (Williams, 2020). Militants likely carted away munitions and arms (including assault rifles, rocket-propelled grenade launchers, heavy machine guns, and mortars) meant to keep the company-plus operational in an active conflict zone for considerably more than a month (as re-supply lines were tenuous)—much of which would have been transported in the dozens of vehicles kept at the base that al-Shabaab also took.

Additional sources: Berman, Racovita, and Schroeder, 2017, p. 37; S[4] Data Set, n.d.

2.2. Oversight and management of non-COE materiel

Any discussion of weapons and ammunition management in conflict zones must also examine lethal materiel that armed groups operating in a PSO's area of operations possess, and which the PSO and security sector forces serving alongside them either manage or recover. Peacekeepers can take control of, or assume responsibility for, lethal materiel other than the COE given to them in a variety of ways: through DDR programmes, confidence-building and conflict-resolution measures (both of which are often ad hoc), and securing materiel through battlefield capture or through cordon and search operations. Each one of these is examined in turn.

45 Written correspondence with Nikhil Acharya, Senior Regional Advisor, Weapons/Ammunition Control, BICC-RECSA, Bonn International Center for Conversion, 16 April 2021.

46 From just 2007-2009, an Uppsala University data set recorded more than 100 attacks on AMISOM troops and positions, in which 50 peacekeepers were killed (Elfversson, Bromley, and Williams, 2019, p. 162). Between October 2017 and April 2018, al-Shabaab claimed to have attacked AMISOM more than 100 times (and Somali forces more than 200) (Roggio and Weiss, 2018).

Propaganda photo released by al-Shabaab purported to show its militants examining crates of materiel seized during its January 2016 attack on the Kenyan base in El Adde. © BBC

2.2.1. Disarmament, demobilisation, and reintegration (DDR) programmes

DDR programmes, which likely account for the largest quantities of materiel that peacekeepers control (or for which they are in some manner responsible outside of their COE), have received considerable attention and their standards have improved. This equipment is usually well documented and well secured. The UN, for example, invested considerable time and effort in developing its Integrated DDR Standards (IDDRS). Since the IDDRS was first launched in 2006, it has been updated twice, benefitting from consultations with an inter-agency working group of two-dozen-plus UN entities (UN DDRRC, n.d.).[47] The revised—and additional—modules on WAM incorporate relevant International arms control standards and guidelines, including the Modular Small-arms-control Implementation Compendium (MOSAIC) and the International Ammunition Technical Guidelines (IATG) that the UN developed after the initial IDDRS was completed. In 2018, the UN supplemented these efforts by publishing a practical handbook on WAM for DDR practitioners (de Tessières, 2018), which promotes good practice on WAM in peace operations, and for which the UN has developed training courses.[48] DDR programmes are usually a well-resourced component of approved peacekeeping budgets and enjoy generous supplemental funding. This partial overview, while incomplete, underscores the seriousness with which the UN approaches DDR, and gives a sense of how complex an undertaking it is.

Even with established best practice, checks and balances, expertise, and resources, materiel received in DDR frameworks sometimes re-enters illicit markets and recirculates with armed groups outside of state control. Convoys transferring this materiel between depots or for destruction have been attacked with the contents seized. The problem is considerably greater for other organizations undertaking such activities with less experience and fewer resources,[49] but even well-resourced initiatives allegedly have not always gone smoothly.[50]

2.2.2. Confidence-building and conflict-resolution measures

Confidence-building and conflict-resolution measures that missions have undertaken and which involve 'securing' lethal materiel outside of national DDR programmes have proven more problematic. Sometimes these initiatives achieve their goals and enhance trust or diffuse a tense situation. Examples include

47 The UN also engaged civil society organizations, many of which participated energetically and constructively in the process.
48 Moreover, the Handbook has been well received and the UN has undertaken a second edition of the Handbook, which was issued in April 2021.
49 In 1994, for example, a TCC serving in ECOMOG in Liberia was ambushed while transporting almost 500 weapons the mission had collected from combatants who had disarmed. To add insult to injury, the contingent had its weapons seized as well (UNSC, 1994, para. 31).
50 Questions have been raised about some of the weapons the United States-led Multinational Force (MNF) collected having been recirculated either through the Haitian police or through seizure (Muggah, 2005, pp. 34-35).

creating cantonment sites for combatants, and collecting weapons for safe-keeping. Often, these efforts achieve the desired effect.[51] Other times, however, not so much.[52]

They have also had unintended consequences.[53] The management of such storage sites can have deadly consequences and serious ramifications for peace and security even when no weapons are diverted.[54]

2.2.3. *Other measures and initiatives*

Materiel recovered outside of DDR or agreed-upon weapons storage arrangements is considerably murkier and more complicated. Increasingly, peacekeepers secure weapons and ammunition through cordon and search operations, as well as engagements with hostile forces. Oversight of this materiel is often quite minimal, which can lend itself to creative bookkeeping or extracurricular activities that facilitate corrupt practices. Sometimes this materiel goes back to non-state armed groups at the initiative of an individual soldier.[55] Other times the recirculation of arms and ammunition is part of a TCC's policy and conducted in concert with political guidance received[56] or military objectives.[57] As numerous examples demonstrate, such guidance or objectives may not be well thought through or may have unexpected consequences.

Even when good records are kept, the ability to safely store the materiel may be quite limited. This can happen for any number of reasons, such as scant resources or a less-than-ideal location due to exigencies of the mission.[58] Research and consultations with peacekeeping practitioners over the past ten years showed time and time again that force commanders, sector commanders, and contingent commanders had neither the guidance nor the dedicated resources to properly account for and secure such materiel. In the past two years, both the African Union and the United Nations have developed policies to address this issue. Other frameworks and policies exist that could help secure or properly dispose of recovered materiel. These are discussed in the paper's third part to which we now turn.

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51 In 2014, after a flareup of hostilities, the UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) managed to reduce tensions by providing sanctuary for more than 1,000 Malian armed forces under an arrangement with the protagonists that the soldiers would disarm and the UN would safeguard their weapons and ammunition.

52 The storage areas the UN created for heavy weapons of the local ethnic Serbian forces in both Bosnia and Herzegovina as well as in Croatia were ineffective in reducing tensions or in stopping conflict from escalating. Neither the UN Protection Force (UNPROFOR) nor the UN Confidence Restoration Operation in Croatia (UNCRO) stopped the protagonists in the conflict from reclaiming these weapons and using them when it suited their interests. Another failed initiative of note involved voluntary disarmament of Rwandan militants in the DRC, which was part of the original mandate for the UN Organization Mission in the Democratic Republic of the Congo (MONUC). If not a poisoned chalice, the mandate certainly represented a thankless—if not impossible—task, and on the night of 31 October 2002 more than 1,500 disarmed Rwandan militants at a DRC-run military base in Kamina looted the armoury. Events of that night are disputed, but there is general agreement that around 400 militants who had been disarmed as part of the UN-overseen process and based in Kamina could not be accounted for in the aftermath of the flare-up—the surviving militants claiming their colleagues had been killed (ICG, 2003, pp. 16-17).

53 In the UN Mission in the Republic of South Sudan (UNMISS), peacekeepers collected weapons from government soldiers in Bentiu to provide them security and to enhance the security of co-located civilians. But the situation became more complicated when some of these weapons were turned over to opposition forces without formal approval and outside of any established political process or agreement. This created ill-will and made a challenging situation even more difficult as control over the area changed hands repeatedly in the coming months (Craze and Tubiana with Gramizzi, 2016, pp. 45-47).

54 Perhaps the best and most tragic example of this occurred during the second UN Operation in Somalia (UNOSOM II). Authorized Weapon Storage Sites (AWSSs) had been set up under the auspices of the United Task Force (UNITAF), a UN-authorized US-led mission that bridged UNOSOM I and UNOSOM II. The sites were part of a series of confidence-building measures worked out between UNITAF and 15 Somali factions. The manner in which UNITAF liaised with faction leaders when conducting inspections of AWSSs was not the same as UNOSOM II had done. This directly led to the attacks on Pakistani Blue Helmets in June 1993, which in turn led to the decision to change the UN mandate to go after Mohamed Aidid (formerly arguably an ally of the international community and partner in trying to find a political solution to the conflict) (PBS, n.d.). The country's political and security situation deteriorated further.

55 There have been persistent and credible allegations that MONUC peacekeepers in the UN bartered weapons they recovered from negative forces with non-state armed groups in exchange for gold (Berman, Racovita, and Schroeder, 2017, p. 27).

56 Numerous TCCs serving in UNPROFOR and ECOMOG in Liberia provided arms to protagonists in those missions on instructions from capitals (Berman, Racovita, and Schroeder, 2017, p. 27; and Berman, 2019, pp. 40-41).

57 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) (Berman, Racovita, and Schroeder, 2017, p. 27). Nigerian troops serving with ECOMOG in Sierra Leone similarly provided arms to the Kamajors who fought alongside them against the Revolutionary United Front (Berman, 2000, p. 21).

58 The international community, for example, has provided significant support to the Somali government for developing the Halane armoury in central Mogadishu even though its location is close to the airport and its storage of explosive materiel is potentially very problematic (written correspondence with Nikhil Acharya, Senior Regional Advisor, Weapons/Ammunition Control, BICC-RECSA, Bonn International Center for Conversion, 14 April 2021). For more on the Halane armoury, and Somali and international efforts to promote WAM initiatives in that country, see UNSC, 2019).

3. ARMS CONTROL AND ACCOUNTABILITY FRAMEWORKS

State transfers of lethal materiel are subject to numerous vetting processes and control measures. Typical elements of any proposed transfer would include decision-making, transfer and transport protocols, stockpile management, and accountability provisions. Each component is complex and requires significant checks and balances involving substantial time and money. Some states' structures are more elaborate than others. Some are better resourced.[59] EU member states have put in place a novel peer-review mechanism in which they share their intentions to export lethal materiel with fellow members for comment before finalizing their decisions to promote transparency and potentially benefit from information they did not possess. A review of these various procedures is outside this paper's scope, however, and there is no shortage of studies and writings about how to improve on present practice (e.g. Bromley, et al., 2013; Close and Isbister, 2008; OSCE, 2012; Vranckx, 2016; Cops, 2018).[60] However, apart from End-Use Certificates, placing restrictions on re-transfers (which frequently are not respected), comparatively little effort went into what happened after a legal transfer was successfully completed.[61]

There is now a widespread appreciation that recipients of lethal materiel as well as its producers and exporters must do a better job to help ensure that transfers remain with the entities for whose use they are intended.[62] This is especially true in Africa where several conflicts in the wake of the Cold War sensitized governments about the threat that illicit proliferation of small arms posed to human security and governments alike—and the challenges peace operations faced in upholding law and order across the continent. Several African regional organizations developed arms control frameworks, and African governments were among the most ardent supporters of the UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons (PoA), agreed upon in 2001.

This part is organized into two sections. The first examines African regional frameworks with implications for promoting WAM within, and in support of, peace operations. It pays particular attention to two of them that have explicit references to weapons and ammunition management in PSOs. The second explores various elements of international support for the small arms control efforts of these organizations' members. The EU member states and the EU itself have generously funded numerous aspects of the various initiatives described below.[63] The overview that follows is intended more as an introduction to these initiatives rather than an assessment of these programmes' effectiveness, which is outside the scope of this paper. The important takeaway from this section is that the EU would be well served to effectively link these frameworks and initiatives to weapons and ammunition management of both COE and of recovered weapons in peace operations, especially in those missions and with TCCs it supports. This takes on added urgency if part of this support includes the provision of lethal materiel.

3.1. African regional small arms control frameworks

The proliferation of illicit small arms in Africa has led to an expansion of regional small arms control frameworks undertaken to address this challenge. Table 6 shows some of the more recent and better-known initiatives. More than a dozen other African organizations have undertaken programmes and

59 The United States, for example, has in place provisions to monitor end-use certificates and transfers of both commercial military sales and transfers of defence articles under its Blue Lantern and Golden Sentry programmes, respectively, to help protect against diversion.

60 RevCon3 (2018b) provides an overview on recent EU efforts to improve on present practice. The focus is on small arms, but some initiatives, such as support for the Arms Trade Treaty, cover conventional weapons systems as well.

61 Varisco, Brockmann, and Robin (2020), provide an overview of current practice among EU member states and suggest that post-shipment control measures are beginning to receive greater attention.

62 In many ways, the EU was ahead of the curve in recognizing the challenges arms transfers posed to recipient countries, and was generous in supporting various regional initiatives to counter illicit proliferation. But operationalizing this knowledge has proved challenging (Poitevin, 2013).

63 For example, the EU provided EUR 5.7m for the provision of marking machines and associated training for much of the AU's member states during the 2010-2015 period (Alusala, 2016, p. 13). Another project of note undertaken with EU support included five UN-provided workshops for senior physical security and stockpile management (PSSM) technical experts and practitioners, and the rehabilitation and construction of armouries in numerous West African countries (UN RevCon3, 2018a, p. 7).

projects to counter illicit small arms proliferation (see Berman and Maze, 2016, pp. 26-69). The African Union has helped promote good practice through frequent meetings with the continent's eight regional economic commissions (RECs)[64] and three other organizations that actively promote small arms control (the Regional Centre on Small Arms in the Great Lakes Region, the Horn of Africa and Bordering States (RECSA), and the Sub-Regional Arms Control Mechanism (SARCOM)), and the International Conference on the Great Lakes Region (ICGLR). The AU has also initiated a new policy to counter illicit proliferation through managing small arms recovered in peace operations it authorizes and mandates.

The small arms control frameworks of the Economic Communities of Central and West African States (ECCAS and ECOWAS, respectively) are of particular interest for this study. Like several other regional organizations, these frameworks address transfers of materiel, WAM, and brokering activities among other provisions. Similar to the small arms control frameworks of RECSA and the Southern African Development Community (SADC), the ones by ECCAS and ECOWAS are also legally binding for member states. But ECOWAS and ECCAS make explicit mention of the need to adhere to provisions within PSOs, which the RECSA and SADC Protocols do not. The 26 member states of these two organizations are among the most active police- and troop-contributing countries to UN missions, and are also active in African-led missions such as those undertaken by the AU, the Lake Chad Basin Commission (LCBC) and the Group of Five Sahel (G5 Sahel) (see Table 7).

The representative of Nigeria addresses the Second Review Conference of the United Nations Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons at UN Headquarters in 2012. © UN Photo

64 The eight RECs are: the Arab Maghreb Union (AMU); the Common Market of Eastern and Southern Africa (COMESA); the Community of Sahel-Saharan States (CEN-SAD); the East African Community (EAC); ECCAS; ECOWAS; the Intergovernmental Authority on Development (IGAD); and the Southern African Development Community (SADC).

Table 6 – Selected African regional organizations with small arms control frameworks

Regional Organization	Year Instrument… was created	Year Instrument… entered into force	Member States	Notes
ECCAS	2010	2017	**11**: Angola; Burundi; Cameroon; Central African Republic (CAR); Chad; Congo; Democratic Republic of the Congo (DRC); Equatorial Guinea; Gabon; Rwanda; and São Tomé and Príncipe	At time of Convention's signing, 7 ECCAS members had already signed 3 legally binding frameworks that had already entered into force: the RECSA and SADC and small arms Protocols, and the United Nations Firearms Protocol.
ECOWAS	2006	2009	**15**: Benin; Burkina Faso: Cabo Verde; Côte d'Ivoire; Gambia; Ghana; Guinea; Guinea-Bissau; Liberia; Mali; Niger; Nigeria; Senegal; Sierra Leone; and Togo	The ECOWAS Convention was preceded by an ambitious politically-binding document (known as the Small Arms "Moratorium") dating back to 1998.
RECSA	2004	2005	**15**: Burundi; CAR; Congo; Djibouti; DRC; Eritrea; Ethiopia; Kenya; Rwanda; Seychelles; Somalia; South Sudan; Sudan; Tanzania; and Uganda	RECSA supports the Nairobi Protocol's implementation. The Protocol succeeded the Nairobi Declaration of 2000, which was politically binding.
SADC	2001	2004	**16**: Angola; Botswana; Comoros; DRC; Eswatini; Lesotho; Madagascar; Malawi; Mauritius; Mozambique; Namibia; Seychelles; South Africa: Tanzania; Zambia; and Zimbabwe	Article 11 of the SADC Protocol on Disposal of Confiscated and Illicit Firearms has positive implications for peace operations settings. SADC has undertaken 4 missions.
SARCOM	2012	Not applicable	**05**: CAR; Chad; DRC; Libya; and Sudan	Khartoum Declaration calls for cooperation among signatories on initiatives to counter small arms proliferation. South Sudan is an active Observer but not yet a Member.

Key:
- ECCAS = Economic Community of Central African States
- ECOWAS = Economic Community of West African States
- RECSA = Regional Centre on Small Arms in the Great Lakes Region, the Horn of Africa and Bordering States
- SADC = Southern African Development Community
- SARCOM = Sub-regional Arms Control Mechanism

Sources: Berman and Maze, 2016, pp. 42-45, 50-51, and 60-65; S[4] Data Set, n.d.

On paper, checks and balances regarding COE of ECOWAS member states participating in PSOs are very comprehensive as far as small arms are concerned. Pursuant to Article 11 of the Convention, states are required to report to the organization's Commission what small arms, light weapons, ammunition, parts, and accessories their forces bring into a mission, what they resupply, what they recover, what they destroy, and what they take back home from the mission with them (ECOWAS, 2006, Article 11). If adhered to, this would implicitly also cover ammunition consumed and materiel lost or otherwise transferred or diverted. The Convention does not limit adherence to operations undertaken only by the organization itself, of which there have been eight.[65] The ECOWAS Secretariat, however, is not presently sufficiently resourced—either with requisite equipment or staff—to discharge such responsibilities.

65 The eight PSOs that ECOWAS has undertaken have involved deploying uniformed personnel from their 15 members in six of their members' states: Côte d'Ivoire, the Gambia, Guinea-Bissau (twice); Liberia (twice); Mali, and Sierra Leone. The mission in the Gambia is ongoing. The mission in Mali merits some additional explanation. ECOWAS considers the initial deployment of the African-led force in Mali to have been an ECOWAS peace operation. For ECOWAS it became an African Union-led mission when the AU Special Representative arrived in Bamako weeks after the mission had already become operational.

The ECOWAS Secretariat has recently taken initial steps to address the gap between commitments and actions. It has developed reporting templates for its members to use in order to meet their commitments under the Convention. And it has briefed its members on at least two occasions on both their commitments and on how they can successfully meet them. This represents an important accomplishment after many years of inaction. Further progress will require sustained political guidance and support, and considerably more resources than currently dedicated to this effort.

Table 7 – ECCAS and ECOWAS member states and their participation in selected PSOs

Police- / Troop- Contributing Country (P/TCC)	Membership in Regional Organization				FC-G5S	MNJTF	AMISOM	MINUSCA	MINUSMA
	ECCAS	ECOWAS	G5 Sahel	LCBC					
Angola	■								
Benin		■				■		■	■
Burkina Faso		■	■		■			■	■
Burundi	■						■	■	
Cabo Verde		■							
Cameroon	■			■		■		■	■
Central African Republic	■			■					
Chad	■		■	■	■	■		■	■
Congo	■							■	
Côte d'Ivoire		■						■	■
Democratic Republic of the Congo	■								■
Equatorial Guinea	■								
Gabon	■							■	
Gambia		■						■	■
Ghana		■					■	■	■
Guinea		■						■	■
Guinea-Bissau		■							■
Liberia		■							■
Mali		■	■		■			■	
Niger		■	■	■	■	■			■
Nigeria		■		■		■	■	■	■
Rwanda	■							■	■
São Tomé and Príncipe	■							■	
Senegal		■						■	■
Sierra Leone		■					■		■
Togo		■						■	■

Key:

- AMISOM = African Union Mission in Somalia
- ECCAS = Economic Community of Central African States
- ECOWAS = Economic Community of West African States
- FC-G5S = Group of Five Sahel Joint Force
- G5 Sahel = Group of Five Sahel
- LCBC = Lake Chad Basin Commission
- MINUSCA = UN Multidimensional Integrated Stabilization Mission in the Central African Republic
- MINUSMA = UN Multidimensional Integrated Stabilization Mission in Mali
- MNJTF = Multinational Joint Task Force
- PSO = Peace support operation

Note: Libya is also a member of LCBC. Mauritania is a member of G5 Sahel (and used to be a member of ECOWAS).

Source: S[4] Data Set, n.d.

The situation is somewhat less clear-cut regarding COE of ECCAS states in PSOs, but the potential to mirror demands made of ECOWAS members in terms of reporting on small arms-related matters in such missions exists. Article 22 of the Kinshasa Convention, as the organization's small arms control framework is known, also stipulates that its members must report on small arms they bring into such an operation. The commitment differs from what was described above as records must be kept for 30 years rather than indefinitely, and the components of what must be reported are not specified. The Convention leaves it up to the Secretary-General to establish and maintain an electronic database. This certainly leaves room to copy or even improve on what ECOWAS has done. Moreover, The Kinshasa Convention requires the database to incorporate information on weapons and ammunition collected during DDR operations (ECCAS, 2010, art. 22) which arguably improves on ECOWAS' current good practice.

The potential of the Kinshasa Convention remains largely unexplored. It did not build on a politically binding document (as did the ECOWAS Convention). It was also adopted in 2010, relatively late compared to other initiatives on the continent, and it took seven years before it entered into force. In 2018, at the first review conference of the Convention, members did discuss Article 22 and both the Chair of the conference (Cameroon) and the Secretariat expressed an eagerness to make meaningful progress on its implementation.

3.2. Training and equipment initiatives of note

ECCAS and ECOWAS have both made considerably more progress when it comes to assisting their members on training and equipment initiatives. This is generally also true for other regional organizations on the continent. Indeed, donors engaged the African Union Commission, and RECSA to not just provide marking machines, record-keeping software, and associated training for RECSA's 15 members, but for member states of ECOWAS and SADC that were not part of RECSA. This was done largely in respect for the relative capacities of the RECSA secretariat compared to that of its peers at other institutions, rather than success RECSA had enjoyed in implementing its programmes among its own members. Most of the 15 ECOWAS and 11 ECCAS member states have received at least two marking machines and corresponding record-keeping software. Many other countries on the continent have received similar levels of support.

However, the mere receipt of marking machines and record-keeping software, even with corresponding training, does not necessarily indicate effectiveness. Many focal points responsible for procuring this equipment and training, and for coordinating its implementation are making the best of the often meagre resources they are given[66] and uneven enthusiasm among services within the security sector.[67] There are numerous examples of states receiving the material and then not using or repairing it (Bevan and King, 2013). The use of the machines by one security force (more frequently the police) does not necessarily indicate the willingness to do the same among other parts of the state's security apparatus (frequently the military). Moreover, old habits such as paper record-keeping remained in place in some countries despite having updated technological capacity.[68]

Some progress has been made regarding enhancements to physical security and stockpile management (PSSM) of storage sites and destruction of surplus materiel. Initial efforts to locate, secure and destroy guided portable missiles received generous support.[69] Some depots were refurbished; some built anew.

66 To get a good sense of the complexities—and associated costs—involved in marking and registering civilian arms, see Acharya, Wiegink, and Idris, 2015.

67 Responsibility for taking the lead in coordinating implementing the UN PoA rests with many different parts of government in various countries, and resources states provide the designated heads of these bodies vary greatly and the resources bestowed upon them are rarely commensurate with the task at hand (Berman, et al., 2014a). Bureaucratic politics along with a dearth of national expertise and standard operating procedures (SOPs) (especially in the early years of implementation) create additional challenges (Isikozlu, Krötz, and Trancart, 2017, pp. 18-19).

68 Some states remain reluctant to use electronic record-keeping software citing concerns that measures taken to secure sensitive data could be breached (written correspondence with Nikhil Acharya, Senior Regional Advisor, Weapons/Ammunition Control, BICC-RECSA, Bonn International Center for Conversion, 14 April 2021). That said, several countries that received the record-keeping software and training, yet continued to rely on paper record-keeping for several years, have begun to make use of this software, and have improved their oversight practices generally speaking.

69 The United States, alone, destroyed more than 30,000 man-portable air-defence systems (MANPADS) in more than 30 countries (including Burundi and Liberia (US DOS, n.d.)).

Munitions in some countries were tested and much of the old and unstable materiel was destroyed. Much of this is done with foreign assistance—and foreign companies (Farha, Krotz, Mohammed, 2019)—but could not be implemented without buy-in from recipient governments, along with the subject-matter expertise and administrative oversight that regional organizations often possess.[70]

Increasingly, the focus has been on transferring skills. The Multinational Small Arms and Ammunition Group (MSAG), a group of a dozen-plus like-minded countries interested in promoting good practice when it comes to weapons and ammunition management (Berman and Reina, 2014b, p. 104), carried out training of trainers using relevant best practice developed by the UN in its Modular Implementation Small-arms-control Implementation Compendium (MOSAIC) modules, and International Ammunition Technical Guidelines (IATG). MSAG worked with the International Peace Support Training Centre (IPSTC), the Bonn International Center for Conversion (BICC), and RECSA over many years to train more than 300 military personnel in PSSM skills from 18 countries in the sub-region (BICC, 2019). Some of the men and women who participated in this programme have not only contributed to their own country's training needs, but have also participated in a subsequent train-the-trainer initiative for other RECSA member states—and, in one instance, have contributed to PSSM training outside the "RECSA region."[71]

The EU has provided significant support to these states, these regional organizations, and to various missions on a bilateral basis, through the EU, and through the UN. The paper's concluding section addresses what can be done to take advantage of existing frameworks, stated political will, and emerging expertise, while addressing resource constraints.

70 Notwithstanding the headway that has been made, the March 2021 explosion at a state-run munitions depot in Bata, Equatorial Guinea, which killed more than 300 people, underscored the challenges that remain to be addressed in the region. ECCAS has drawn up a five-year plan to implement the Kinshasa Convention with PSSM and WAM measures a central pillar (Written correspondence with Missak Kasongo, Head of the Anti-Crime Unit, ECCAS Secretariat, 19 April 2021.)

71 The successful transfer of skills represents a notable achievement worthy of further investigation. Any such study should explore if national SOPs are in keeping with international standards that have been taught. This is important for continuity and sustainability purposes.

CONCLUDING REMARKS

Key Findings

The regional response to the "Boko Haram" conflict underscores both the need for EU support—for example through the direct provision of lethal materiel and training via the EPF—and an assessment of the risks inherent in any kind of engagement.

The levels of loss of uniformed personnel and the seizure of lethal materiel from state stockpiles in the Lake Chad Basin region are astonishingly high. In six years (between 2015 and 2020) several times as many uniformed personnel serving in and alongside the Multinational Joint Task Force were killed due to 'malicious acts' than those who have served in UN peacekeeping operations over a span of more than 70 years. Reporting suggests that Boko Haram factions have seized contingent-owned equipment that includes a wide-range of heavy weapon systems. Some of the armoured vehicles and towed artillery lost to Boko Haram originated from EU member states. The quantity of small arms and light weapons—many of which also were manufactured in the EU—is so great that it has sustained the insurgency for over a decade.

Moreover, the report almost certainly significantly underestimates the true scale and scope of the challenge. Just as the above-mentioned 2015 publication on the experiences of PSOs in South Sudan and in Sudan was shown to under-report the number of attacks on security sector personnel and the level of losses of materiel suffered in Darfur (Berman, Racovita, and Schroeder, 2017, pp. 24-26), the same is likely true for this study on the Lake Chad Basin region. The data compiled for this paper comes solely from open sources. It probably captures only fragments of the full picture for the period of time covered. And the report only covers January 2015 to April 2021. Boko Haram's attacks on uniformed personnel between 2011 and 2014 were frequent (according to the Council on Foreign Relation's Nigerian Security Tracker, more than 1,000 Nigerian soldiers, alone, were killed in Adamawa, Borno, and Yobe states during this period), and were not limited to Nigeria. A comprehensive and detailed accounting of military equipment that security forces engaging Boko Haram have lost was not possible.

Insufficient quality and quantities of lethal materiel have certainly had an adverse effect on morale and have contributed to operational shortcomings. The report documents instances in which the lack of working weaponry—or of ammunition—has led to casualties or a dereliction of duty. Men and women on the front lines deserve to be given the means by which to defend themselves and to provide for security of the general population as well as the humanitarian aid community.

More equipment alone, however, clearly is not the answer. As the paper demonstrates, poor leadership, training and "esprit de corps" (outside of just a question of levels of armament), also explain the challenges facing security personnel in the Lake Chad Basin region. The situation is particularly dire in Nigeria. Yet corrupt procurement practices and benefits withheld from soldiers exist in other MNJTF troop-contributing countries, so this should not be dismissed as a problem unique to Nigeria.

The paper notes attacks on security sector personnel serving in peace operations or otherwise in conflict zones that have resulted in seizure of considerable quantities of lethal materiel to non-state armed groups outside of the Lake Chad Basin region. Improving the safety and security of unformed personnel—and of their COE—is clearly worthwhile. It needs to be done in a way that does not reduce commitments to missions' mandates, including the protection of the civilian population.

Considerable attention has been paid to weapons and ammunition management of materiel as part of DDR frameworks and also of security forces' contingent-owned equipment. Relatively less effort and thought has gone into confidence building and conflict resolution initiatives that involve aspects of WAM, however. Recovered materiel outside of DDR has recently received greater scrutiny. The AU and the UN have both recently created new policies to address this gap. It is too early to say what effect these initiatives have had. They deserve both support and further analysis.

The situation is not hopeless and the ability to improve on weapons and ammunition management within peace support operations' settings is certainly possible. Arms control frameworks exist and new policies are being created that are meritorious and address real needs. There is no shortage of activity. But there is a clear gap between actions and commitments—even legally binding ones. The ECCAS and ECOWAS small arms conventions require member states of those respective bodies to submit to oversight mechanisms that substantially enhance accountability; or would do so if adhered to. These conventions also have implications for UN missions as well as the MNJTF in the Lake Chad Basin region, and the Group of Five Sahel (G5S) Joint Force (FC-G5S, the mission countering militants active in the Sahel). Donors should take advantage of these provisions and promote them. The two conventions do not address heavy weapon systems, however, which this report has shown have been lost to non-state armed groups. This needs to be explored, understood, and redressed.

Considerations for the EU Moving Forward

The European Union can play an instrumental role in enhancing coordination and promoting accountability in terms of provision and use of lethal equipment in peace operations. The European Peace Facility offers the EU and its partners a platform and enhanced resources to improve on WAM and reduce the illicit proliferation of arms and conventional weapon systems. This section provides some suggestions for what to consider and how best to move forward.

The EU can do a lot on its own.

Develop its Integrated Methodological Framework and Promote Transparency: The EU's nascent Integrated Methodological Framework (IMF) covers a broad range of concerns that address such issues as risk assessment and oversight mechanisms, which will be important to aid decision-making, establish effective checks and balances, and promote accountability. Any analysis should be aware of a potential recipient's general performance and concerns outside of the mission area, as well as mission-specific needs and challenges. The mechanism needs to ensure that provision of weapons does not undermine relevant embargoes, and arms control frameworks need to be promoted. Recipients should be expected to account for all materiel received and agree formally to not undertake any transfer without explicit approval. Funding should be provided to help secure stockpiles. Spot inspections would be advisable. An external body providing independent research and analysis should supplement any internal processes. The EU should make its decisions and supplemental oversight public and be as transparent as possible about the inner workings of the process.

***Ask More of its Partners*:** The EU should ask its partners undertaking PSOs and overseeing arms control frameworks for a baseline of current practices, implementation, and small arms that its members have lost. These self-assessments will almost certainly only be partially complete, but even collating incomplete data will give the partner, its member states, the EU—and other donors (see below)—important insights into what is working, what is not, and what needs to be prioritized. Ideally, this self-assessment would be complemented or supplemented with an external evaluation to better allow for a fuller baseline to be established, for goals to be set, and for progress to be tracked. But a self-assessment is an important initial step. It will help an organization's secretariat evaluate its members' seriousness and responsiveness, and it will help the organization's secretariat to determine its own needs and come up with a plan to address them.

The EU can also help shape the international and regional agendas.

***The EU should engage the African Union to Counter the Illicit Proliferation of COE and Promote Effective Management of Recovered Lethal Materiel*:** The AU's role as a promoter and developer of good practice, as well as a check against questionable initiatives should be maintained and enhanced even if EU financial support is not always channelled through it, as was the case under the African Peace Facility structure. The AU has demonstrated that it can help promote transparency, good practice, and constructive engagement with its eight regional economic commissions, other regional organizations—and with civil society—on sensitive issues like illicit small arms proliferation on the continent. The EU,

working with other important donors, could support an AU-led workshop on countering illicit proliferation of COE and promoting effective management of recovered lethal materiel in PSOs. The workshop would engage appropriate stakeholders that includes policymakers, programmers, implementers, funders, and experts. It would share relevant experiences of ongoing PSOs (AMISOM, the ECOWAS Mission in the Gambia, FC-G5S, and MNJTF), promote emerging good practice (including the new AU and UN policies on recovered materiel in peace operations), and provide a frank assessment of progress made and challenges experienced regarding small arms management. The workshop report that would emerge would provide a valuable stocktaking of what has worked, what has not, and would help inform future investment and next steps.

***The EU should engage ECCAS and ECOWAS to Help Operationalize Articles 22 and 11 of their Respective Conventions*:** ECOWAS and ECCAS both have legally-binding small arms conventions that have entered into force since 2009 and 2017, respectively. The EU, working with other important donors, could support both organizations' secretariats and their member states to help them make good on their existing commitments as far as management of COE and recovered materiel is concerned. Prior to any workshop or conference that engaged appropriate stakeholders such as those listed above, the EU—perhaps working with civil society—should engage each secretariat to learn of their relevant experiences, thereby paying special attention to internal bureaucratic challenges and structures.

***The EU should convene a workshop and produce a study to take stock of challenges in the Sahel-West Africa region*:** The challenges facing the Group of Five Sahel Joint Force merits close attention.[72] A study on the situation in the FC-G5S areas of operation similar to the case study on the MNJTF and the Lake Chad Basin region in this report would be valuable. The panoply of players knowledgeable about the conflict dynamics in the sub-region should contribute. Any such list would include Operation Barkhane, Task Force Takuba, MINUSMA, the EU Training Mission (EUTM) in Mali, and partners providing bilateral security assistance and supporting weapons and ammunition management projects. This list is exemplative and not exhaustive.

***The EU should engage the UN Programme of Action (PoA) on Small Arms framework*:** What was once a contentious issue (loss of COE within missions) or an unexplored issue (recirculation of recovered materiel within PSOs) are now mainstream issues that have been flagged but not fully explored within the PoA framework. As above, the chance to engage actors other than "the usual suspects" is key. Besides working with the small arms control and peace operations communities (which includes mine action,[73] security sector reform and DDR units), it would be valuable to hold a side event that engages the Counter-Terrorism Committee Executive Directorate (CTED), the Department for Safety and Security (DSS), the UN Development Programme (UNDP), and the Office for Internal Oversight Services (OIOS) too. The existing EU-UN platform to share (challenges to) best practices, which engages the EU Consortium on Non-Proliferation and Disarmament can feed into this process and also serve as a bridge to the PoA's Eighth Biennial Meeting of States (BMS8).

In January 2015, militants overran the old MNJTF headquarters in Baga, and the EU was approached to help build the force a new one in N'Djamena. In June 2018 militants overran the FC-G5S headquarters in Sévaré (in the Mopti region of Mali) and the EU stepped in to build the force a new HQ in Bamako. As generous and timely as this intervention was, best practice cannot be to move, re-build—and now, with the EPF framework, *re-stock* PSOs' command centres. Much more needs to be done to secure the lethal materiel that security forces serving in and alongside these missions already possess. The EU, through the EPF, has the ability to support its partners in an enhanced manner than was previously possible. As this paper shows, these new resources and structures can be put to good use. To succeed, however, more must be asked of donors, recipients and partners than is currently the case.

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72 In May 2020, UN Secretary-General Antonio Guterres reported on attacks on nine military bases of four of the G5S member states between November 2019 and April 2020, in which more than 300 uniformed personnel were killed (UNSC, 2020a, paras. 3-5, 12). Whether these troops were formally part of the joint force or not is not important. It underscores how vulnerable these troops—and their equipment—are. In his November 2020 report, Guterres noted that logistical constraints have reportedly led to morale issues for the forces that comprise the mission (UNSC, 2020b, paras. 20-21).

73 The UN Mine Action Service (UNMAS) within the Department for Peace Operations has for many years now undertaken weapons and ammunition management activities as well, increasingly within PSO settings.

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