



UNIDIR

# Peacekeeping in hostile environments: The impact of illicit arms on MINUSMA

NILS HOLGER ANDERS



## Abstract

Peacekeeping is getting more dangerous. Illicit arms, ammunition, and explosives are key factors in this increasingly hostile environment. The United Nations needs to adapt to ensure the safety of peacekeepers and their ability to implement mandated tasks. The United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) illustrates both the possible dangers to current missions as well as lessons learned in efforts to mitigate the impact of illicit arms. This brief reviews MINUSMA's experiences in these regards. It argues that greater efforts should be made to exploit the potential role of peacekeeping operations in monitoring and tracing illicit arms flows to enhance situational awareness and the fight against impunity.

## About the Building the Bridge Series

This issue brief represents a part of the *Building the Bridge* series, a collection of briefs developed under the Preventing Armed Conflict and Armed Violence pillar of the Conventional Arms and Ammunition Programme of the United Nations Institute for Disarmament Research. The series focuses on the impacts of illicit arms and ammunition and the integration of conventional arms and ammunition control into the work of the United Nations, including United Nations Peace Operations, Special Political Missions, and Country Teams.

## Acknowledgements

Support from UNIDIR core funders provides the foundation for all the Institute's activities. The Conventional Arms and Ammunition Programme wishes to thank France, Germany, the Netherlands, and Switzerland for their support for the Programme's work to prevent armed conflict and armed violence.

This brief is based on data that the author collected during his work at MINUSMA from 2014 to 2023 and is published as part of the United Nations Sabbatical Programme 2022. The author is grateful to the UNIDIR for its supervision of this brief.

## Notes

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. All views, opinions, and errors in this brief are those of the author alone and are not attributable to either MINUSMA, UNIDIR, the United Nations, or its entities more broadly.

# Contents

<b>Author, Acronyms</b>	<b>5</b>
<b>Executive Summary</b>	<b>6</b>
<b>I. INTRODUCTION</b>	<b>8</b>
<hr/>	
<b>2. DECADE OF INSECURITY, 2013–2022</b>	<b>11</b>
<hr/>	
2.1 Overview	11
2.2 Deteriorating security, 2014–2022	14
<b>3. ILLICIT ARMS PROLIFERATION IN MALI, 2014–2022</b>	<b>15</b>
<hr/>	
3.1 Types of materiel used by extremists in Mali	15
3.2 Producers and years of production	17
3.3 Sources of materiel	18
3.3.1 Domestic diversion	19
3.3.2 Illicit transnational trafficking	21
3.3.3 Commercial goods from national and subregional sources	21
<b>4. IMPACT ON MINUSMA</b>	<b>25</b>
<hr/>	
4.1 Attacks against MINUSMA	25
4.2 Changes in sophistication of attacks against MINUSMA	27
4.3 Human and materiel costs	28
4.4 Mandate implementation	30
<b>5. MITIGATION AND CHALLENGES</b>	<b>31</b>
<hr/>	
5.1 Examples of successful mitigation measures	31
5.1.1 Securing personnel and installations against IED attacks	31
5.1.2 Information gathering and intelligence on attacks	32
5.1.3 Fighting impunity	33
5.1.4 Monitoring illicit arms proliferation	33
5.2 Challenges to mitigation	34
5.2.1 Extremist adaption of tactics and techniques	37
5.2.2 Limits of peacekeeping-intelligence	37

<b>6. LESSONS LEARNED AND RECOMMENDATIONS</b>	<b>38</b>	
<hr/>		
6.1	Lessons learned	38
6.1.1	Need to adapt	38
6.1.2	IED threat mitigation	39
6.1.3	Challenges to peacekeeping-intelligence	39
6.1.4	Contribution of monitoring illicit arms flows	40
6.2	Recommendations	41
<b>Bibliography</b>		<b>42</b>

#### **BOXES, FIGURES, MAPS, AND TABLES**

---

Box 1:	Scope, terminology, and methodology	9
Box 2:	Examples of materiel used in attacks against MINUSMA	16
Box 3:	Specificity of materiel	18
Box 4:	Case study of ammunition diverted through capture on the battlefield	20
Box 5:	Case study in tracing recovered commercial goods	22
Box 6:	Diversion of commercial explosives	24
Box 7:	Changes in IED attacks, 2014–2022	28
Box 8:	UN Security Council Resolution 2616 (2021)	35
Box 9:	Arms embargo monitoring by other UN missions	36
Figure 1:	Annual number of recorded extremist attacks, Mali, 2014–2022	14
Figure 2:	Annual number of victims killed and injured in extremist attacks, Mali, 2014–2022	14
Figure 3:	Distribution of small arms ammunition samples per decade of their production	17
Figure 4:	Annual numbers of extremist attacks against MINUSMA, 2014–2022	26
Figure 5:	Distribution of types of attacks against MINUSMA, 2014–2022	26
Figure 6:	Annual distribution of attacks against MINUSMA per type of attack, 2014–2022	26
Figure 7:	Distribution of MINUSMA fatalities per type of attack, 2014–2022	29
Figure 8:	Annual number of MINUSMA fatalities per type of attack, 2014–2022	29
Figure 9:	Annual numbers of IED attacks against, and IED finds by, MINUSMA, 2014–2022	32
Map 1:	Map of Mali	10
Map 2:	Distribution of armed extremist groups in Mali, 2022	13
Map 3:	Diversion and subsequent distribution of ammunition	20
Table 1:	Simplified overview of relevant security developments	12

# Author



## Nils Anders

Senior researcher on arms proliferation with a technical specialization in identifying and tracing illicit arms and ammunition

From 2014 to 2023, the author worked as information analyst on terrorism and trafficking at the Joint Mission Analysis Center at MINUSMA, Mali. He previously worked with the embargo monitoring unit of the United Nations Operation in Côte d'Ivoire, with the United Nations Panel of Experts concerning Darfur, Sudan, as well as with the *Groupe de recherche et d'information sur la paix et la sécurité* (GRIP), Belgium. He holds a doctorate in peace studies and has published widely with a specific focus on armed conflicts in Africa.

# Acronyms

<b>EOD</b>	Explosive ordnance disposal
<b>IED</b>	Improvised explosive device
<b>JMAC</b>	Joint Mission Analysis Centre
<b>JNIM</b>	Jama'at Nasr al-Islam wal Muslimin
<b>MINUSMA</b>	Multidimensional Integrated Stabilization Mission in Mali
<b>UNPOL</b>	UN police

*The data for graphs 1 to 8 was collected by the author.*

# Executive Summary

Peacekeeping is getting more dangerous. It increasingly takes place in environments in which peacekeepers are exposed to direct attacks.<sup>1</sup> As noted in the 2017 Cruz report on *Improving Security of United Nations Peacekeepers*, “the United Nations .... need to adapt to a new reality: The blue helmet and the United Nations flag no longer offer ‘natural’ protection”.<sup>2</sup> The violence against peacekeepers is carried out with arms and ammunition that are typically produced and exported legally before being diverted and acquired by non-authorized users.

A case in point is the *United Nations Multidimensional Integrated Stabilization Mission in Mali* (MINUSMA), known as the “deadliest ongoing peace operation”.<sup>3</sup> In June 2023, the Security Council decided that, by the end of 2023, MINUSMA will cease operations. This ends a decade of peacekeeping in Mali during which peacekeepers faced persistent attacks. Specifically, violent extremists perceived MINUSMA as an enemy and a legitimate target. They killed and injured hundreds of peacekeepers in attacks on MINUSMA camps and convoys since the mission started in Mali in 2013.<sup>4</sup> Arms and ammunition used in these attacks are often materiel that violent extremists obtain in violation of the international arms embargo on Al Qaeda and Islamic State-linked groups.<sup>5</sup>

This brief looks at the ‘tools’ of the extremist violence, that is, the arms, ammunition, and related materiel that extremists use in their attacks in Mali. The materiel itself does not cause the violence, but it facilitates persistent insecurity. The brief also considers the impact of the use of illicit arms, ammunition, and explosives on MINUSMA as well as the Mission’s mitigation measures. To note, Security Council resolution 2616 of 22 December 2021 highlights the potential role of peacekeeping operations in contributing to combating illicit arms flows.<sup>6</sup> The brief, therefore, also looks at MINUSMA’s role in monitoring and combating illicit arms flows.

Specifically, the brief aims to:

- provide a snapshot of the current proliferation of illicit arms, ammunition, and explosives in Mali;
- clarify how this proliferation contributes to the hostile environment of peacekeeping in Mali; and
- identify possible lessons learned by MINUSMA and that may be useful to other peacekeeping missions.

---

1 United Nations, 2015, p. 21f.

2 Dos Santos Cruz, 2017, p. 4.

3 See, for example, Beale, 2021 and Sieff, 2017.

4 Ibid.

5 The arms embargo related to Al Qaeda was first introduced in Security Council resolution 1333 (2000) (Security Council, 2000) and was since expanded to also cover Islamic State. For more information, see <https://www.un.org/securitycouncil/sanctions/1267>.

6 Security Council, 2021.

The data informing the brief covers more than eight years of recorded extremist incidents in Mali as well as the analysis of hundreds of arms and thousands of ammunition shells that MINUSMA, French armed forces, or Malian authorities principally recovered from sites of such incidents. It is complemented with numerous exchanges that the author had with interlocutors in MINUSMA and other relevant structures in Mali since 2014. The brief shows how peacekeeping can contribute to combatting illicit flows of arms and ammunition that sustain hostile environments.

The brief first provides background on insecurity in Mali. It then turns to the analysis of extremist-used materiel and its origins as well as to how the materiel ends up in extremist possession. Following, the brief specifies the impact of extremist violence on MINUSMA. This is complemented with a presentation of mitigation measures that MINUSMA adopted, of implementation challenges, and of lessons learned.

### **Key findings**

- As of mid-2023, extremists in Mali retain their capacities to launch lethal, sophisticated attacks. Extremists retain access to military-type arms and ammunition, including heavy materiel of recent production.
- There is no evidence of State-sponsored arms transfers to extremists in Mali. Notwithstanding, most arms in extremist use were diverted from State actor stockpiles in Mali and neighbouring States. This includes illicit trafficking from Libya.
- For MINUSMA, improvised explosive devices were the most lethal tool in extremist use. The explosives include materiel that was diverted from commercial sources, including subregional sources from which they were illicitly trafficked to extremists in Mali. MINUSMA's ability to effectively mitigate against such diversion of explosives were limited.
- MINUSMA adopted novel measures that allowed the Mission to enhance its situational awareness. The collection and transfer of evidence of attacks against MINUSMA to Malian law enforcement authorities also aided in the combat of impunity for the attacks.
- Some of the lessons learned and tools used by MINUSMA may be relevant to other peacekeeping missions. This includes practical and low-tech means to monitor illicit arms flows and support investigations into the origins of these flows.



# 1. Introduction

United Nations peacekeeping needs to adapt to environments in which hostile actors directly attack United Nations camps and convoys. The 2017 Cruz report on the security of United Nations peacekeepers lists various recommendations to mitigate against this threat.<sup>7</sup> By discussing MINUSMA's experiences, this brief provides a case study on feasibility and challenges of relevant mitigation measures that are raised in the Cruz report.

In parallel, the brief looks at how to integrate conventional arms control and peacekeeping, and in particular, the possible role of peacekeeping operations in monitoring and tracing illicit arms flows. MINUSMA's experiences in this area may help clarify how such work can contribute to improved situational awareness and the fight against impunity. In turn, this can help inform targeted action to disrupt illicit arms flows.

Specifically addressed here are the following:

- What are the arms, ammunition, and explosives that extremists used in attacks of MINUSMA?
- Where did the materiel come from and how did extremists obtain the materiel?
- What were the direct and indirect costs of the use of this materiel for MINUSMA?
- How did MINUSMA mitigate against these costs and what are the challenges and lessons learned in the implementation of mitigation efforts?
- Lastly, which of these lessons may be relevant to other United Nations peacekeeping missions that operate in hostile environments?

The brief's scope, terminology, and methodology are described in box 1. Map 1 thereunder depicts Mali.

---

<sup>7</sup> Dos Santos Cruz, 2017, pp. 4–7.

# Box 1: Scope, terminology, and methodology

## Scope and terminology

This brief focuses on the arms, ammunition, and explosives that extremists used in attacks against MINUSMA. Broader issues of the impact of extremist violence in Mali as well as the subregion are excluded for reason of space.<sup>8</sup> Due to challenges in obtaining accurate and verifiable information, the data underpinning the brief does not claim to be comprehensive. Nevertheless, consistent efforts were made to ensure that this brief presents the best possible information available and restricts its focus to armed violence reasonably attributable to Al Qaeda or Islamic State-linked extremists in Mali.

The terms ‘arms’ and ‘materiel’ may be used hereafter generically and refer also to ammunition and explosives. The term ‘illicit’ refers to materiel that was legally produced but then diverted from authorized users or use. ‘Central’ Mali refers to Bandiagara, Douentza, Mopti, San, and Segou regions. ‘Northern’ Mali refers to Gao, Kidal, Menaka, Timbuktu, and Taoudeni regions (see map 1). The term ‘extremists’ refers to combatants with presumed links to Al Qaeda- or Islamic State-affiliated groups in Mali.

## Methodology

This brief utilizes a unique database developed and managed by the author as information analyst on terrorism and trafficking at MINUSMA’s Joint Mission Analysis Centre (JMAC) in Bamako, Mali from 2014 to 2023. The database contains mission-reported data on some 2,300 extremist attacks and related incidents as well as on some 800 arms and 12,000 individual ammunition casings that the author documented. The materiel was principally recovered from sites of extremist attacks, arms caches, or apprehended suspects. It is complemented with information gained from investigations as part of the author’s work.

The brief further benefits from the author’s numerous communications with civilian and uniformed (police/military) interlocutors in MINUSMA, the French armed forces in Mali, United Nations agencies, diplomatic representations, and local and international non-governmental organizations from 2014 to 2022. National interlocutors also included contacts in the Malian armed forces, Malian law enforcement agencies, and other government structures.<sup>9</sup> All communications were either electronic or in-person in Mali. The author conducted about two dozen additional semi-structured interviews for this brief in early and mid-2022 that helped clarify technical aspects and recommendations. All figures presented in the brief are based on data collected by the author between 2014 to 2023.

---

8 Also excluded are artisanal arms and hunting rifles. In the experience of the author, they do not play a significant role in the extremist violence in Mali that is discussed here.

9 Interviewees are not further identified in this brief to respect agreements on confidentiality that many interviewees requested to be able to freely express themselves.

Map 1. Map of Mali





## 2. Decade of insecurity, 2013–2022

By mid-2023, Mali had experienced more than a decade of violent extremism. Armed groups with links to Al Qaeda had emerged as prominent actors during the 2012 rebellion for independence in northern Mali. Following the liberation of major towns in northern Mali by national and international forces in early 2013, the groups started a lethal campaign of attacks against military and later also civilian targets. This included United Nations peacekeepers who arrived in Mali in mid-2013.

For reasons of space, this brief does not fully explore causes and dynamics of this violence. The following subsection thus limits itself to a few pertinent issues that will assist with the subsequent discussion of the experiences of MINUSMA.

### 2.1 Overview

Mali's current insecurity dates to the northern rebellion for independence that began in late 2011. The following year, Al Qaeda-linked groups 'hijacked' the rebellion to fight for the establishment of religious governance in northern Mali under their control.<sup>10</sup> Their attempts to dominate land and people, however, were thwarted by national and international forces who retook control of major population centres in northern Mali in early 2013. In July that year then, MINUSMA was deployed to Mali with an initial focus on peacekeeping and protecting major population centres in northern Mali.<sup>11</sup> This focus was later extended to central Mali.

---

<sup>10</sup> See Anders, 2015, pp. 158–161.

<sup>11</sup> Security Council, 2013, p. 8, para. 16.(c). (i).

The end of the 2012 rebellion marked the beginning of a decade of violent extremism. Extremist violence gradually spread towards central Mali where, in 2015, the northern extremist groups successfully created a new front with locally recruited combatants. This process of spreading frontlines through the creation of new cells has continued since then and has also included support for the emergence of extremist cells in southern and western Mali.<sup>12</sup> It was also in 2015 that defectors of Al Qaeda-linked groups in Mali created Islamic State in the Greater Sahara. Two years later, in 2017, the remaining Al Qaeda-linked groups in northern and central Mali merged to form *Jama'at Nasr al-Islam wal Muslimin* (JNIM), Mali's still dominant violent extremist coalition.

**Table 1. Simplified overview of relevant security developments**

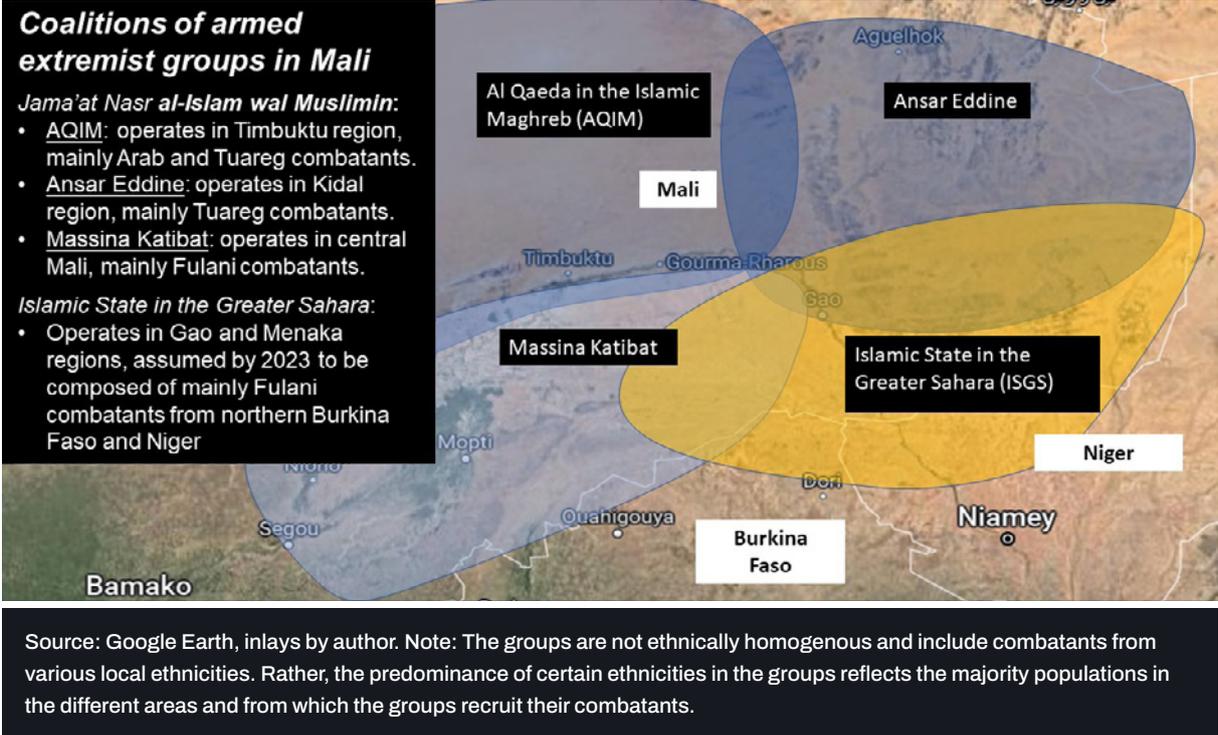
Overview of security developments	
PERIOD	DESCRIPTION
Late 2011	Start of rebellion for independence in northern Mali
2012	<b>Al Qaeda-linked</b> extremists 'hijack' secular rebellion (main extremist groups: Al Qaeda in the Islamic Maghreb (AQIM) and Ansar Eddine)
2013	National and international forces reclaim northern Mali (Gao, Kidal, Timbuktu regions); MINUSMA starts activities in Mali (July)
2014	Extremists accelerate their attacks against armed forces and peacekeepers in <b>northern Mali</b>
2015	Creation of new extremist front in <b>central Mali</b> that is led by locally recruited combatants (main group: Al Qaeda-linked Massina Katibat)
2015	Defectors from Al Qaeda-linked groups pledge loyalty to <b>Islamic State</b> and create <b>Islamic State in the Greater Sahara</b> that operates in especially Gao region
2017	Al Qaeda-linked groups in Mali (including AQIM, Ansar Eddine, Massina Katibat) merge to form <b>Jama'at Nasr al-Islam wal Muslimin</b> <sup>13</sup>

12 Information based on based on the JMAC database on terrorist and terrorist-related incidents that the author maintained as part of his duties from 2014 to 2022.

13 English translation: Group for Support to Islam and Muslims.

Map 2 below presents a map of Mali that illustrates the areas of the various extremist groups in Mali. The map highlights that JNIM-linked groups operate from northern Malian regions through the centre and parts of western and southern Mali. Islamic State in the Greater Sahara operates in especially the border regions with Burkina Faso and Niger in north-eastern Mali where it clashes with JNIM groups over control of the area.

**Map 2. Distribution of armed extremist groups in Mali, 2022**

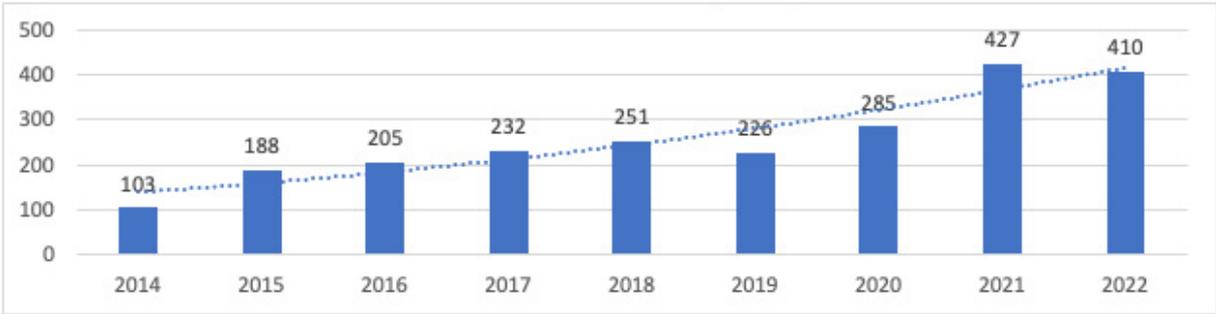


## 2.2 Deteriorating security, 2014–2022

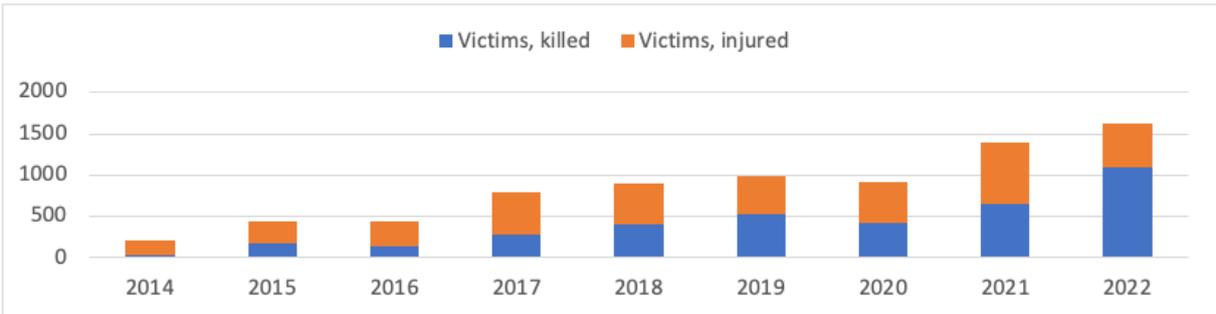
The spread of extremist groups through the creation of new fighting units (katibats) has been paralleled with an increase in the number of extremist attacks.<sup>14</sup> As per the data collected by the author, extremists conducted 2,327 armed attacks in Mali in the period 2014 to 2022. Of these attacks, 103 occurred in 2014. This number increased to 410 attacks in 2022 (see figure 1 below for the annual number of extremist attacks, 2014-2022). Notably, of the attacks in 2022, more than half (221 attacks) occurred in central Mali.

In parallel, the lethality of attacks increased. In 2014, extremists reportedly killed some 40 persons in their attacks in Mali. The victims were mainly members of national and international armed forces. In 2022, extremists killed more than 1,000 people in their attacks (see figure 2 below for the number of victims, 2014–2022). Also of note, civilians increasingly became victims in extremist attacks and, in 2022, accounted for some 50 per cent of people killed.

**Figure 1. Annual number of recorded extremist attacks, Mali, 2014–2022**



**Figure 2. Annual number of victims killed and injured in extremist attacks, Mali, 2014–2022**



14 Numbers presented in this subsection are based on the JMAC database on terrorist and terrorist-related incidents that the author maintained as part of his duties from 2014 to 2022. As attacks are counted here: attacks with improvised explosive devices (IED attacks, excluding IED-finds that are treated separately), with small arms (small arms fire attacks), with rockets and mortar rounds (indirect fire attacks), as well as with two or more of the preceding categories (complex attacks).



## 3. Illicit arms proliferation in Mali, 2014–2022

Extremist expansion and support for the creation of new groups and cells requires access to illicit arms, ammunition, and explosives with which to support new recruits. This section investigates the types as well as the countries and years of production of materiel that extremists use in their attacks. The section further considers the means through which extremists acquire the materiel. It is shown that extremists continue to have access to recently produced materiel.<sup>15</sup>

### 3.1 Types of materiel used by extremists in Mali

Extremists in Mali predominantly use small arms such as AK-47-pattern assault rifles (7.62x39 mm in calibre) and PKM-pattern general-purpose machine guns (7.62x54R mm in calibre). This is complemented with rocket-propelled grenades and, in some attacks, non-standard tactical vehicles, that is, 4-wheel-drive pick-ups with mounted heavy machine guns (calibres 12.7x108 and 14.5x114 mm). In addition, extremists in Mali employ anti-vehicle mines and improvised explosive devices (IEDs) in attacks on convoys and vehicles, as well as rockets (calibres 57, 107, 122, and 130 mm) and mortar rounds (60, 81, and 120 mm) in indirect fire attacks on military camps (see Box 2 for images). Of note is an anti-tank grenade (calibre 32 mm) that extremists first used in Kidal, Kidal Region, in northern Mali in August 2021.<sup>16</sup> Not previously encountered in the Malian conflict, the materiel is especially dangerous due to its armour-penetrating design.

<sup>15</sup> Case file references in footnotes below identify the location of otherwise unreported information in the JMAC databases on extremist incidents, propaganda claims, and recovered materiel. Public source reporting on incidents is included where available.

<sup>16</sup> Case file 210827 ATG-32, Kidal, JMAC cell on terrorism, MINUSMA.

## Box 2: Examples of materiel used in attacks against MINUSMA

The photos presented hereunder are of small arms and light weapons that MINUSMA recovered following an attack against its camp in Aguelhok, Kidal Region, on 2 April 2021. The attack started with assailants firing mortar rounds before targeting the camp and its watchtowers with small arms fire. Around 100 assailants participated in the attack that was later claimed by JNIM. Four peacekeepers died in the attack while another 36 were injured. Around 40 assailants also died in the attack.

In order from top left to bottom right, the photos show DSHK-type heavy machine guns, 12.7x108 mm (photo 1); PKM-type general purpose machine guns, 7.62x54R mm (photo 2); AK-47-type assault rifles, 7.62x39 mm (photo 3); mortar and mortar rounds, 60 mm (photo 4); rocket-propelled grenade launchers (photo 5); and rocket-propelled grenades (photo 6).



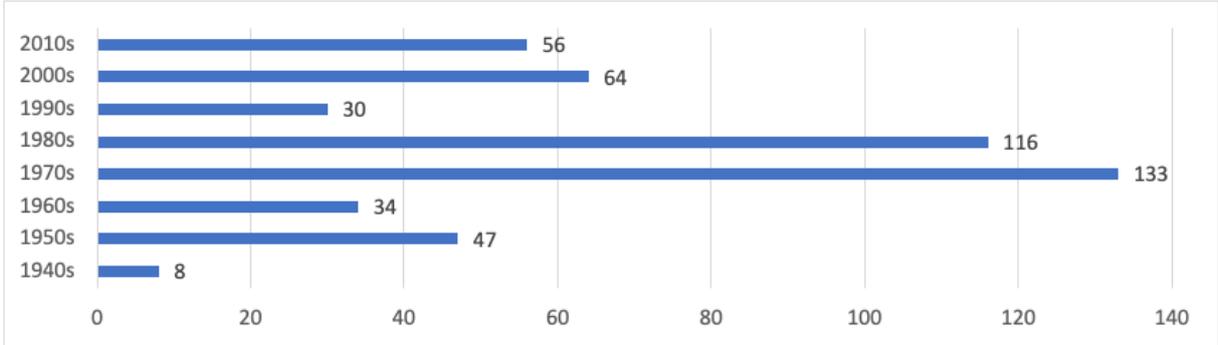
Source: Photos by author, 2021.

# 3.2 Producers and years of production

Ranges of producers and years of production of military materiel in extremist use in Mali vary. The broadest spread is found among assault rifles and their ammunition. Many of the rifles are of Cold War production in the Soviet Union, China, and Eastern Bloc States, including Yugoslavia. While this includes models from the late 1940s and 1950s, most are modernized versions from the 1970s onwards. There are also rarities, including assault rifles or ammunition from Algeria (produced in the 2000s and 2010s); North Korea (1960s and 1990s); Egypt (1980s, and 2010s); Sudan (2000s and 2010s); Iran (2000s); as well as Iraq and Syria (1980s). These rarities are present in only small numbers. For example, only two Iraqi rifles were among the documented arms. Their presence demonstrates that, if nothing else, there are a multitude of (domestic and subregional) sources that feed into the circulation of illicit arms and ammunition in Mali.

Figure 3 below presents an overview of the decades of production of small arms ammunition samples (defined by specific calibre, here: 7.62–14.5 mm, producer, and year-of-production) that the author documented following extremist use in Mali in the period 2014–2022 (total of 488 distinct samples). The figure illustrates that, indeed, there are substantial quantities of ammunition that were produced (and exported to Mali) during the Cold War. The figure also shows, however, that this already existing stock was complemented with significant quantities of ammunition produced after the Cold War.

**Figure 3. Distribution of small arms ammunition samples per decade of their production**



Of special note is materiel produced and exported to Mali after 2012, that is, materiel exported to Mali only after the start of the rebellion. This includes assault rifles, rocket-propelled grenades, as well as heavy arms. To illustrate, in November 2021 MINUSMA seized materiel in Menaka region that included a 12.7 mm heavy machine gun with production marks for 2019.<sup>17</sup> The presence of such materiel in extremist use demonstrates access to military materiel produced for State-actor markets only two years previously. This rapid turn-over from legal production and export to diversion and illicit use is also reflected by other findings. For example, 2015- and 2016-produced small arms ammunition appeared in extremist use in Mali in 2016 and 2017, respectively. For materiel other than small arms, ranges of year of production and of producers can be much narrower (see box 3).

17 Case file 211122 HMG-12,7, Menaka, JMAC cell on terrorism, MINUSMA.

## Box 3: Specificity of materiel

If small arms and their ammunition are the most diverse, heavy materiel is typically of more limited origins. 122 mm rockets and 120 mm mortars, for example, comprise only a few specific models. They are nearly all of Soviet production from the 1970s and 1980s. Similarly, anti-vehicle mines and 81 mm mortar rounds are almost exclusively of Belgian and French production from the 1970s, respectively. 57 mm rockets have always only been found from 2011-production in Bulgaria. The specificity of such materiel suggests that it feeds into proliferation in Mali from just one or only a handful of sources.<sup>18</sup>

At times, specific materiel has also only been found in particular locations. To illustrate, extremists used 81 mm mortar rounds in attacks in Timbuktu town in 2018 that were of Iranian production in 2001. The singularity of this materiel (not known from Malian armed forces or otherwise recorded in Mali) as well as its specific geographical use (only used in attacks in Timbuktu in mid-2018) suggest that only extremists in Timbuktu received a transfer of these specific rounds. Specificity of materiel can thus provide clues as to origins and pathways as well as to specific groups.

### 3.3 Sources of materiel

Producers of materiel eventually ending up in extremist use in Mali are many. But China and the Soviet Union/Russian Federation are the main countries of production of this materiel. This is illustrated by small arms ammunition. Of the 488 ammunition samples (defined by their specific calibre, producer, and year of production), nearly 50 per cent (281 samples) were produced in those countries. The remaining ammunition samples were produced in another 34 countries that include Eastern European producer States, African producer States such as Algeria, Egypt, Sudan, and Zimbabwe, as well as States from Europe and Asia.<sup>18</sup>

There is no evidence that any arms-producing State supplies extremists in Mali with arms or other materiel. Instead, extremists seem to invariably obtain arms and ammunition after the materiel's diversion from State-actor stockpiles in Mali and the subregion. This includes arms and ammunition already in illicit circulation and possession at the start of the 2012 insurgency. As shown above though, evidence suggests that extremists continued to acquire materiel thereafter. Indeed, available data suggests that probably around 60 per cent of the arms and ammunition that extremists currently use come from post-2012 diversion and trafficking.<sup>19</sup>

---

<sup>18</sup> Assessment based on author's work in Mali, 2014–2022.

<sup>19</sup> Ibid.

### 3.3.1 Domestic diversion

The principal source of extremist-used arms and ammunition appears to be materiel formerly under control of the Malian armed forces.<sup>20</sup> In 2015, investigators inspected empty ammunition crates in then-abandoned army warehouses in Gao, Gao Region. The packaging for the 57 and 122 mm rockets bore production marks identical to those on rockets that were recovered in Kidal, Gao, and Menaka regions.<sup>21</sup> It is thus likely that the rockets recovered in these areas were looted from, among others, army stockpiles in Gao in 2012. An assessment of 2012 footage in propaganda videos of captured stockpiles in Aguelhok, Tessalit, and Kidal (all Kidal Region) also suggests the capture of several thousand 122 mm rockets and 120 mm mortar rounds.<sup>22</sup>

In addition, extremists captured at least hundreds of arms and tens of thousands of rounds of ammunition in attacks on Malian defence and security forces since 2012.<sup>23</sup> Extremists frequently publish images of such looted materiel when captured. Such battlefield capture is a key source for extremists of newly produced materiel that was previously distributed among national armed forces in Mali. For example, extremists obtained much of the mentioned ammunition produced in 2015 and 2016 through attacks in central Mali from 2015 onwards (see box 4 for an example).

In a few cases, authorities could recover materiel that extremists had only obtained shortly beforehand. In 2021, authorities recovered a 2017-produced assault rifle with secondary markings identifying it as (previously) belonging to the Malian armed forces.<sup>24</sup> Within just a few years (2017–2021), therefore, the rifle was captured by extremists and then recaptured by the Malian armed forces. In more general terms, materiel captured by extremists in attacks on armed forces in Mali since 2014 typically include the types of small arms and related ammunition as presented in box 2 above, as well as vehicles.



20 Ibid. This includes materiel from pre-2012 as well as post-2012 production.

21 See also Conflict Armament Research, 2016, pp. 29–32.

22 Assessment based on author's work in Mali, 2014–2022.

23 Assessment based on author's work that included visual verification of materiel presented by extremist groups in propaganda claims as captured in attacks on Malian armed forces, 2014–2022.

24 Case file 210402 Complex attack, Aguelhok, JMAC cell on terrorism, MINUSMA. United Nations News, 2021b.

## Box 4: Case study of ammunition diverted through capture on the battlefield

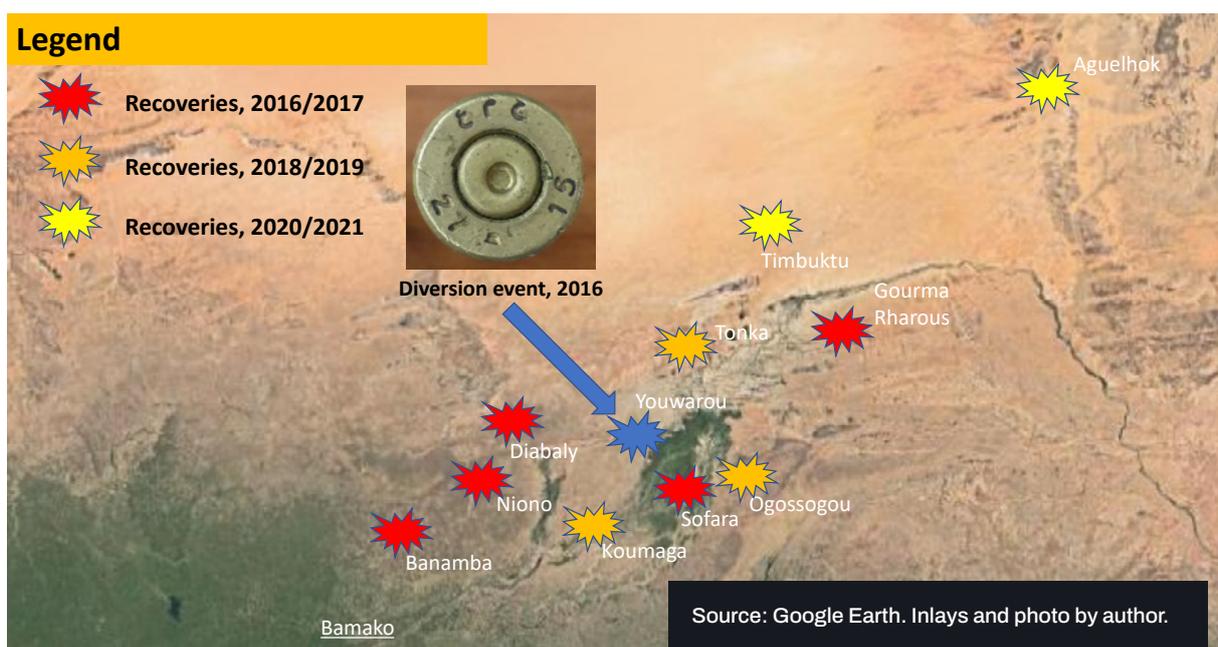
On 14 September 2016, extremists killed the imam of Sofara village, Mopti Region. Ammunition casings recovered from the site included Egyptian-produced ammunition (7.62x39 mm) from 2015. It was the first time that this ammunition sample was recorded in extremist use in Mali. Subsequent research identified that Malian armed forces had obtained this ammunition as part of an Egyptian counter-terrorism support package. Extremists obtained the ammunition through capture on the battlefield in the Youwarou area, Mopti Region, in August 2016.

In the following months and years, more cartridges of the same sample were recovered from several sites of extremist attacks in central Mali and neighbouring areas south of the Niger river in Timbuktu Region. In the absence of other known diversion events of this sample, the recoveries suggested that assailants in the different attacks had shared supply lines. The geographical distribution of incidents also closely paralleled known areas of operation of the Massina Katibat, thereby allowing for linking the events to this katibat.

Notably, it was only in 2021 that samples of this ammunition started to also be recovered north of the Niger river. This then suggests that ammunition from this sample diverted in central Mali in August 2016 eventually also found its way into extremist use in northern Mali. This also illustrates that the geographical specificity of ammunition samples may decline over time.

Map 3 below presents the locations of the initial diversion event as well as of the areas in which cartridges were later recovered from sites of extremist attacks.

Map 3. Diversion and subsequent distribution of extremist-captured ammunition<sup>25</sup>



25 Case file\_15\_27\_2016, JMAC cell on terrorism, MINUSMA.

### 3.3.2 Illicit transnational trafficking

Illicit trafficking of arms and ammunition from Libya are, next to diversion from Malian army stockpiles, a prominent source of material in extremist use in especially northern Mali. Often, this trafficking pertains to specific materiel not or only rarely found otherwise in the subregion. To illustrate, Belgian anti-vehicle mines as well as Belgian 60 mm and French 81 mm mortar rounds in extremist use in Mali, the latter both from the 1970s, seem to exclusively have come from former army stockpiles in Libya.<sup>26</sup> In 2021, further materiel from likely Libyan sources appeared in Mali. The type of 32 mm anti-tank grenade documented in Kidal in August 2021 (referred to above, produced in Jordan since 2013) is known from illicit possession in Libya since 2019.<sup>27</sup> Not known from elsewhere in the subregion, it is likely that the grenade used in Kidal originated with illicit circulation in Libya.

But Libya is not the only subregional source of illicit military materiel used by extremists in Mali. Already in 2015, there existed indications of illicit trafficking of small arms ammunition likely diverted from government stockpiles in Burkina Faso and Niger.<sup>28</sup> In November 2021, Malian authorities recovered 2016-produced small arms ammunition from Algeria in an extremist camp in Timbuktu Region.<sup>29</sup> It is likely that Algerian-based extremists first diverted the ammunition in Algeria and then transferred it to combatants in northern Mali. While not further discussed here, other cases concern military materiel (assault rifles as well as the mentioned 81 mm mortar rounds produced in Iran in 2001) possibly diverted in and illicitly trafficked to Mali from West African coastal states.<sup>30</sup>

### 3.3.3 Commercial goods from national and subregional sources

Next to military materiel, extremists also use commercially available goods in their attacks in Mali. In 2019, extremists used a 2017-produced pick-up truck in an attack in Koulikoro, Koulikoro Region. Malian investigators traced the vehicle back to its theft when en route from Bamako to a government agency in Timbuktu, Timbuktu Region, in 2018.<sup>31</sup> Likewise, extremists used a vehicle in an attack in Timbuktu Region in June 2021 that had been stolen from a United Nations agency in Gao only some months previously.<sup>32</sup>

The analysis of an unexploded suicide-vehicle borne IED that extremists used in an attack in Ber, Timbuktu Region, in October 2018 also revealed a wide range of subregional sources of items (see Box 5). The recovery on an IED cache in Mopti Region in 2017 identified 2016-produced commercial explosives as illicitly trafficked from a West African coastal State (see Box 6).<sup>33</sup>

---

26 Assessment based on author's work in Mali, 2014–2022.

27 Case file 210402 Complex attack, Aguelhok, JMAC cell on terrorism, MINUSMA.

28 Assessment based on author's work in Mali, 2014–2022.

29 Case file 211111 Seizure, Timbuktu Region, JMAC cell on terrorism, MINUSMA.

30 Assessment based on author's work in Mali, 2014–2022.

31 Case file 190224 SVBIED, Koulikoro, JMAC cell on terrorism, MINUSMA. See also Kane, 2019 and Studio Tamani, 2019.

32 Case file 210625 VBIED, Gao, JMAC cell on terrorism, MINUSMA. See also Deutsche Welle, 2021.

33 Case file 170430 IED cache, Mopti, JMAC cell on terrorism, MINUSMA.

## Box 5: Case study in tracing recovered commercial goods

On 27 October 2018, some 60 assailants onboard 13 pick-up trucks attacked the MINUSMA peacekeeper camp in Ber, Timbuktu Region. The attack included small arms fire with vehicle-mounted 14.5 mm heavy machine guns, general-purpose machine guns, and assault rifles as well as rocket-propelled grenades and 60 mm mortar rounds. Assailants also employed two suicide vehicles carrying explosives. One of the vehicles failed to detonate. As later identified, this was because of a faulty trigger mechanism.

The post-attack analysis of the undetonated vehicle allowed for a detailed snapshot of sources and pathways of material that assailants had assembled. Items analysed and traced by MINUSMA included the vehicle itself, detonators, and other explosives, as well as the barrels in which explosives were stored. The explosives included ammonium nitrate for mining purposes as well as sugar that assailants added to fuel the intended explosion. The photos below present some of the analysed items. The texts next to the photos provide outcomes of the tracing operations.

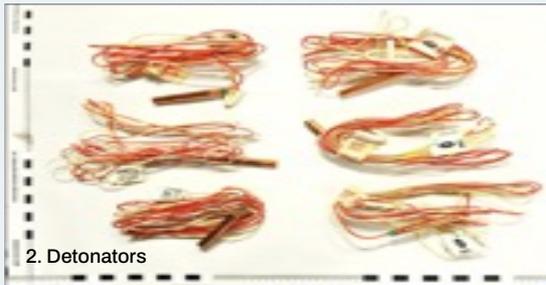
**Assessment:** As shown hereunder, assailants used items that they likely acquired opportunistically from local and subregional markets without there being any specific country or producer that would knowingly have transferred items to extremists in northern Mali. Indeed, the near globe-spanning production of items but subregional and local acquisition by assailants highlights the glocal acquisition chains through which assailants obtain the tools of their violence.



1. Vehicle that failed to detonate

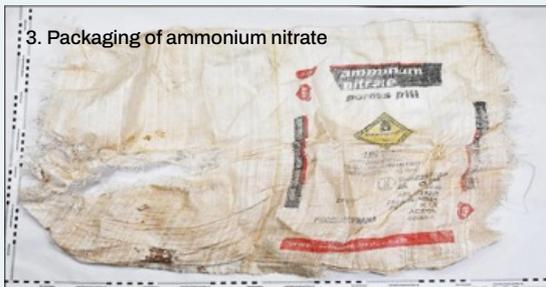
1. Based on the Vehicle Identification Number, the vehicle was identified as produced in Japan in February 2009. A tracing operation identified the vehicle as exported to a vehicle dealer in Oman who sold the vehicle to a Libyan national (no further information could be gained on subsequent transfers of the vehicle). A red barrel seen on the back of the vehicle was one of several barrels in which assailants stored explosives and related fuel.

*Box 5 continues on the following page*



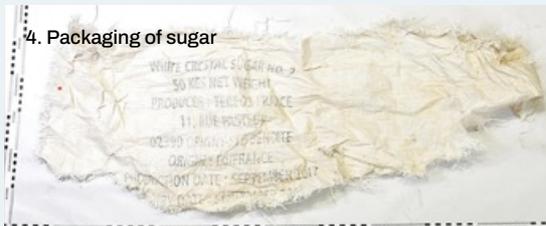
2. Detonators

2. Several detonators were found in the vehicle's glove department (presumably forgotten there by the IED maker). The detonators still had identification labels attached. Their South African producer could thus confirm to have exported the detonators to West Africa. But, in the absence of registering sales based on batch numbers, the producer could not identify the specific client(s) that purchased them.



3. Packaging of ammonium nitrate

3. One of the barrels contained ammonium nitrate (AN) for the mining sector in its original packaging. Information on the packaging identified the AN as produced by a commercial company in Ghana that provides mining explosives across the subregion. In the absence of a visible batch number on the packaging, the producer could not identify the intended end-user of the material.



4. Packaging of sugar

4. Also contained in the barrels was a bag of sugar, this time containing a readable production year and batch number. The sugar was produced in France in 2017 and transferred to a commercial company in Mauritania. No further information about subsequent transfers could be obtained.



5. Lids of barrels used for storing explosives

5. Barrels used for storage of explosives came from a chemical producer in South Korea as well as the petroleum industry in Algeria. Regarding the former, it could be established that the barrels were exported to Syria where, after use of the chemicals, the empty barrels were bought up by traders in Türkiye and used as second-hand shipment containers that are sold in northern Africa.

Source: Photos by Ber investigation team, MINUSMA, 2018.

## **Box 6: Diversion of commercial explosives**

In April 2017, MINUSMA reported the recovery of an IED cache in now Douentza Region. The cache included mining explosives that had been produced in Poland in 2016. When contacted, the producer confirmed the export of the explosives with all necessary transfer authorizations to a mining service company in Ghana. In turn, the service company eventually stated that the explosives were likely stolen during one of its operations in late 2016. Again, the case illustrates rapid diversion from legal production and export to illicit subregional circulation and eventual extremist use in Mali.



## 4. Impact on MINUSMA

This section considers the impact of extremist violence on MINUSMA. The section first looks at developments in extremist tactics in attacks against MINUSMA. It then turns to the direct and indirect costs of this violence and the constraints it imposed on MINUSMA's capacity for mandate implementation. It is argued that despite more attacks in the early 2020s, extremists killed fewer peacekeepers than previously.

### 4.1 Attacks against MINUSMA

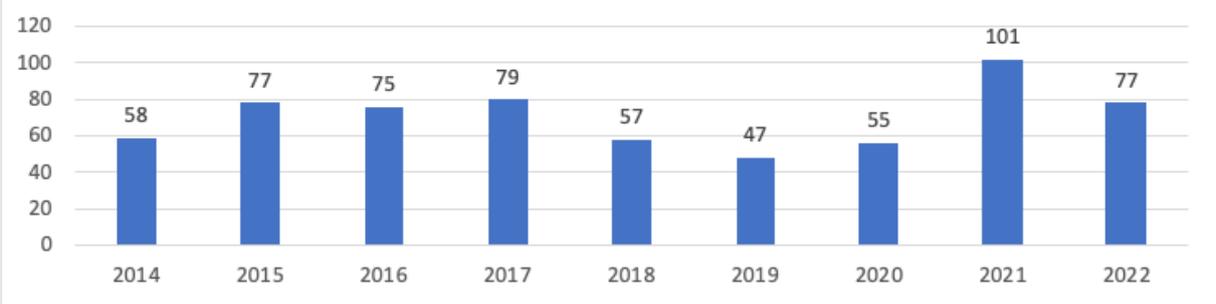
Of the 2,327 extremist attacks that the author recorded in Mali in the period 2014–2022, 626 attacks targeted United Nations peacekeepers. This represents 27 per cent of attacks during this period and an average of around 70 attacks per year on MINUSMA, or one attack every five days. Figure 3 below presents an overview of the annual numbers of extremist attacks against MINUSMA in the period 2014–2022. The distribution among types of attacks remained stable during this period. IED attacks were the most common (307 attacks, equivalent to around 50 per cent of attacks), followed by indirect fire attacks (165 attacks with projected rockets and mortar rounds, approximately 25 per cent), small arms fire attacks (108 attacks, or around 17 per cent), and complex attacks (46 attacks involving one or more of the previous types of attack, around 8 per cent).<sup>34</sup>

34 Ibid

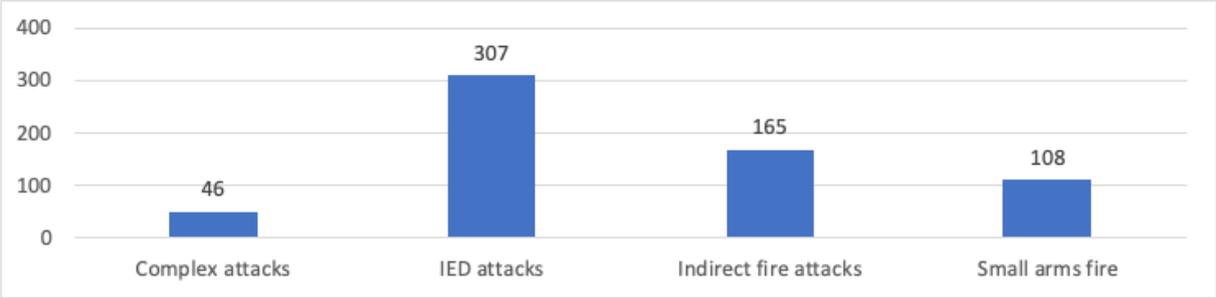
Figure 4 below presents an overview of the numbers of the different types of extremist attacks against MINUSMA in the period 2014–2022. The numbers highlight that the most frequent type of attack against MINUSMA was IED attacks (targeting MINUSMA convoys and patrols), followed by shelling of camps with mortars and rockets (indirect fire attacks) with the remaining attacks targeting both convoys and patrols as well as camps (small arms fire and complex attacks).

Figure 5 below shows the annual numbers for the different types of attacks against MINUSMA in the period 2014–2022.

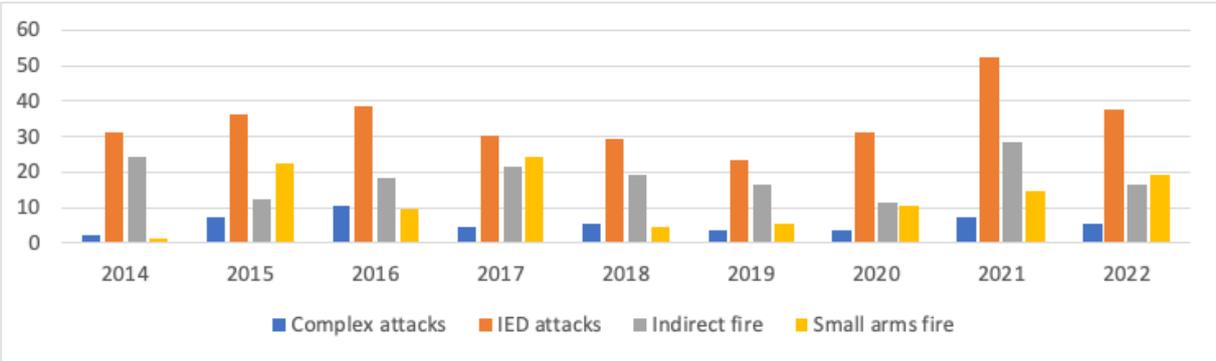
**Figure 4. Annual numbers of extremist attacks against MINUSMA, 2014–2022**



**Figure 5. Distribution of types of attacks against MINUSMA, 2014–2022**



**Figure 6. Annual distribution of attacks against MINUSMA per type of attack, 2014–2022**



## 4.2 Changes in sophistication of attacks against MINUSMA

While the relative distribution of the types of attacks against MINUSMA remained stable in the period 2014–2022, extremists continuously sought to increase destructive potential and sophistication in their attacks. In illustration, IEDs that extremists planted to attack MINUSMA convoys in 2014 were often single anti-vehicle mines containing some 6 kg of explosives. By 2016, extremists increasingly used mines linked together or complemented mines with 20 kg containers of mining or home-made explosives. The explosive content of an IED that killed seven peacekeepers and split in half a MINUSMA mine-protected vehicle in Bandigara Region in December 2021 reportedly contained an estimated 40 kg of explosives (see also box 7).<sup>35</sup>

Since 2018, extremists also increasingly use shrapnel such as empty cartridge cases in suicide-vehicle borne IEDs to increase the reach and density, and thereby lethality, of objects that project through the air. Extremists have also placed IEDs at sites that they knew MINUSMA would likely investigate, such as launching sites of rockets and mortar rounds at MINUSMA camps. A further example of extremist adaptation is the following: an attack on the MINUSMA checkpoint at Gao Airport in November 2016, assailants used white pick-ups on which they had painted the United Nations logo in the presumed attempt to approach the target as closely as possible before discovery.<sup>36</sup> Extremists employed the same tactic in an attack on MINUSMA in Timbuktu in April 2018, this time though also dressing combatants as United Nations blue helmets.<sup>37</sup>

In other words, while MINUSMA sought to adapt to the threat of extremist attacks (see Box 7), extremists also adapted and strengthened their techniques, tactics, and procedures. This was evident in the mentioned attack on the MINUSMA camp in Aguelhok, Kidal Region, in April 2021. Several hundred extremists that arrived in vehicles and on motorbikes began their hostilities after an initial firing of mortar rounds signalled the start of the attack. Separate groups of assailants then simultaneously assaulted the camp and its outposts from several directions with materiel including assault rifles, heavy machine guns, rocket propelled grenades, and a suicide-vehicle borne IED.<sup>38</sup> Assailants thus demonstrated military-type planning and tactics.

---

35 Case file 211208 IED, Bandiagara, JMAC cell on terrorism, MINUSMA. See also MacDougall, 2021.

36 Case file 161129 Complex attack, Gao, JMAC cell on terrorism, MINUSMA. See also Reuters, 2016.

37 Case file 180414 Complex attack, Timbuktu, JMAC cell on terrorism, MINUSMA. See also British Broadcasting Corporation, 2018.

38 Case file 210402 Complex attack, Aguelhok, JMAC cell on terrorism, MINUSMA.

## Box 7: Changes in IED attacks, 2014–2022

In 2014, there was an expectation that IED-related trends observed in conflicts in, for example Afghanistan or Iraq, would also occur in Mali. One such trend, an increase in explosive content of IEDs, did indeed occur in Mali. Notably though, IEDs in Mali have, overall, remained consistent in the distribution of the types of their construction. Whereas in Afghanistan and Iraq, IEDs became increasingly sophisticated in their construction over time,<sup>39</sup> no such trend has been observed in Mali.

To clarify, since 2014, both low-technology IEDs such as victim-operated devices and more sophisticated IED types, such as remote-controlled IEDs (RCIEDs), have been recorded. Arguably, there has been no significant change towards an important increase in the use of sophisticated IEDs. RCIEDs constituted around 8 per cent of exploited IED incidents in 2014. This figure doubled to more than 16 per cent in 2022.<sup>40</sup> But this is still less than one RCIED out of every five IED incidents for which the construction type could be identified.

In other words, there has not been the type of linear progression towards significantly greater use of sophisticated IEDs in Mali as may have been the case elsewhere. If nothing else, this demonstrates that lessons from one conflict theatre may not always be easily transferred to other theatres. As to why no such development has occurred in Mali, reasons may include local extremists not feeling the need to change their techniques regarding IED sophistication.<sup>41</sup>

## 4.3 Human and materiel costs

In the 626 extremist attacks against MINUSMA recorded in 2014–2022, MINUSMA suffered some 200 fatalities and several hundred injured. This is an average of 22 peacekeepers and associated personnel killed every year. Two thirds of the casualties were military peacekeepers. Other casualties included contractors such as truck drivers in convoys and security guards at camps. The most lethal types of attack were IED and complex attacks, both having caused 35 per cent of MINUSMA fatalities each. Indirect fire attacks caused the least amount of MINUSMA casualties (5 per cent of MINUSMA fatalities). Although civilian United Nations staff suffered injuries in attacks on camps, there were no recorded casualties among them.

---

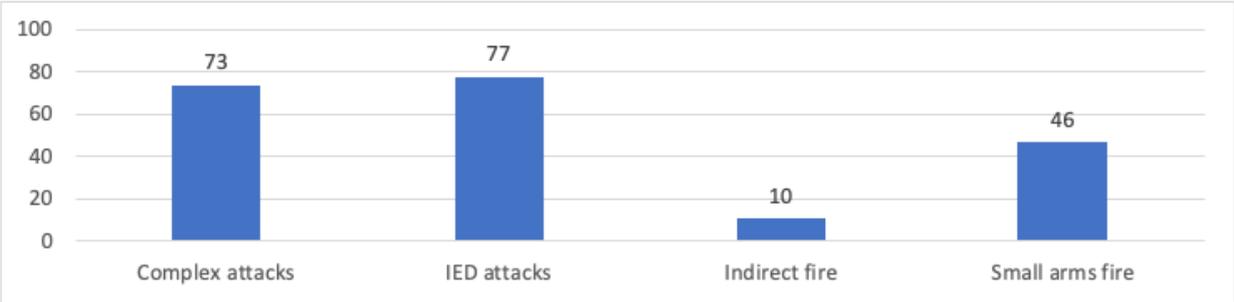
39 Interviews with military personnel with prior experience in Afghanistan and Iraq, Bamako, March to August 2022.

40 Data based on interviews with United Nations Mine Action Service personnel, Bamako, March to August 2022.

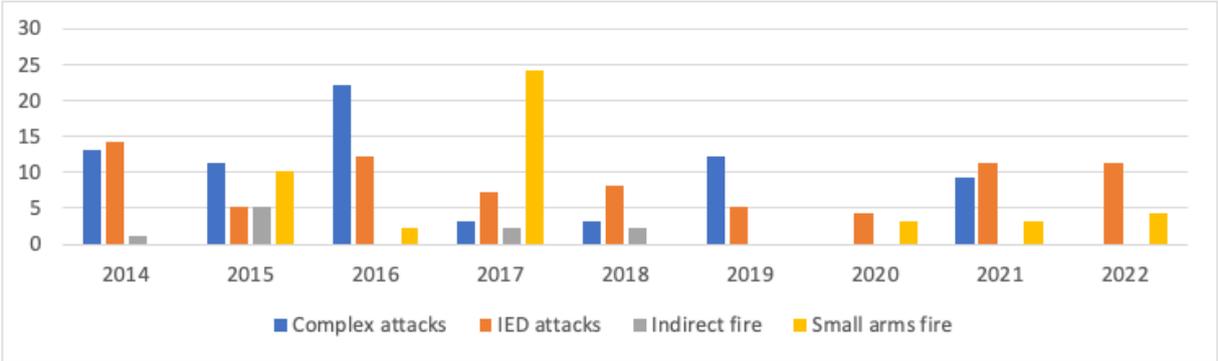
41 Ibid.

Figure 6 below shows the distribution of fatalities among United Nations peacekeepers and associated personnel per type of attack in Mali in 2014–2022. Again, to note, this relative distribution has remained fairly stable during the reporting period (see Figure 7 on annual number of MINUSMA fatalities per type of attack, 2014–2022). There are individual exceptions, such as in 2017 when MINUSMA suffered high numbers of casualties in several small arms fire attacks. Broadly though, IED and complex attacks consistently caused the most casualties. Also, to note, while there have been slight variations in the number of annual MINUSMA casualties, the numbers stayed within a close range of the annual average of 22 casualties.

**Figure 7. Distribution of MINUSMA fatalities per type of attack, 2014–2022**



**Figure 8. Annual number of MINUSMA fatalities per type of attack, 2014–2022**



Other than human costs, extremists also cause substantial material damage in their attacks. IED attacks frequently impact vehicles that are then no longer available for other tasks and continuously require repairs or replacements. This hampered MINUSMA’s freedom of movement and tied up resources that consequently could not be used elsewhere. Another concern was possible damage to MINUSMA’s aviation infrastructure, which was key to the supply of troops and staff in northern Mali. Indirect fire attacks are inherently imprecise in targeting and caused damage to airstrips, helipads, and helicopters in MINUSMA camps.

## 4.4 Mandate implementation

Extremist violence and the illicit arms that feed it sustain the instability and threats to civilians that MINUSMA was tasked to respond to in the first place. This is illustrated by developments in central Mali that, since 2019, was part of MINUSMA's mandated strategic geographic priorities.<sup>42</sup> The destabilization of central Mali started with the Massina Katibat and its first attacks in 2015. Ammunition recovered from the sites of these attacks in 2015 clearly indicated that combatants had received recent shipments of illicitly trafficked ammunition from their sponsors in northern Mali (as shown, the Massina Katibat can, since then, also rely on ammunition that it diverts locally through capture in attacks on Malian defence and security forces).<sup>43</sup> The expansion of extremism and the start of targeting of civilian communities also triggered the emergence of militias and self-defence groups. This multiplication of armed groups has yet further stimulated demand for illicit arms.

The hostile environment in which MINUSMA operated also drained resources for protection. As stated in the 2017 Cruz Report on security of peacekeepers, "some missions ... dedicate [up to] 90% of their operational capacity ... to escorting convoys and self-protection. This leaves missions without the capacity to concentrate forces and means to solve local problems, such as eliminating spoilers which would target the United Nations".<sup>44</sup> And indeed, MINUSMA's expenses for protection required a large part of the Mission's operating capacity. Attacks damaging roads and bridges as well as telecommunication infrastructure are commonplace in especially central Mali in the last years.<sup>45</sup> Even if such attacks were not targeting MINUSMA directly, they still hampered the Mission's movements and communication.



Source: MINUSMA/Harandane Dicko.

42 Security Council, 2019, p. 7, para. 28.(b).

43 Case file 160912 Ammunition profile, Massina Katibat, JMAC cell on terrorism, MINUSMA.

44 Dos Santos Cruz, 2017, p. 6f.

45 Assessment based on author's work in Mali, 2014–2022.



Source: MINUSMA/Harandane Dicko.

## 5. Mitigation and challenges

Faced with a consistent extremist threat, MINUSMA strived to adapt. This section reviews relevant measures by MINUSMA to enhance physical security of personnel and installations as well as in the interrelated areas of peacekeeping-intelligence, the fight against impunity, and monitoring arms flows. It argues that, despite progress, there remained challenges to better mitigation and countering extremist violence.

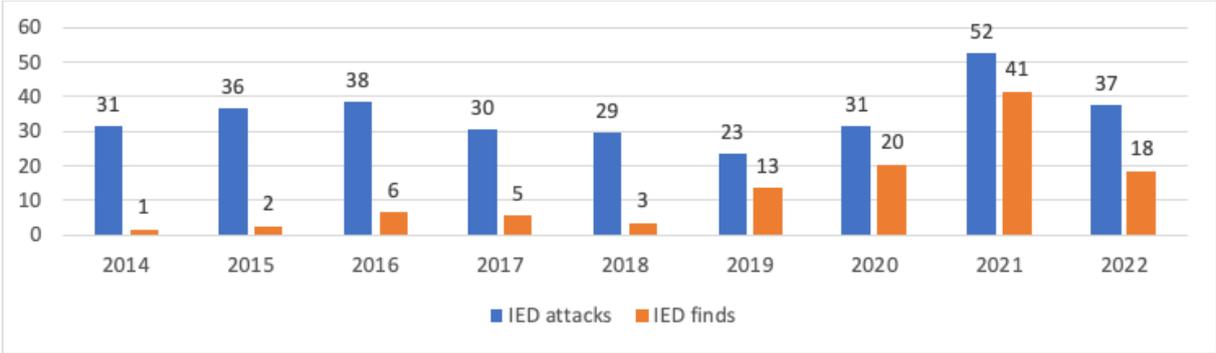
### 5.1 Examples of successful mitigation measures

#### 5.1.1 Securing personnel and installations against IED attacks

Various mission components, including the United Nations Mine Action Service, were engaged in continued advocacy and action to strengthen the protection of MINUSMA camps, convoys, and patrols. One element in this regard was troop pre-deployment training in IED awareness as well as in-house training for convoy commanders and drivers. Such training included, for example, IED recognition on roads by looking for, among other potential signs, disturbed earth and markers. MINUSMA Force included Explosive Ordnance Disposal (EOD) teams who also received mentoring while deployed. Force and EOD teams carried out search and detect operations on sites with potential IED presence and destroyed any IEDs that were found.

The relative effectiveness of these measures is illustrated by the steady increase in the number of IEDs found by MINUSMA prior to their detonation.<sup>46</sup> Figure 8 below shows the annual figures of IED attacks against MINUSMA compared with the number of IED finds by MINUSMA prior to their detonation in the period 2014–2022. The comparison suggests that, until 2018, the number of IEDs found prior to detonation was comparatively small. Since 2019, however, the number of finds, and thus the avoidance of potential casualties, increased and on average represented more than a third of IED incidents during the years 2019–2022.

**Figure 9. Annual numbers of IED attacks against, and IED finds by, MINUSMA, 2014–2022**



Training and human capacities were complemented with material investments such as mine-protected and armoured vehicles, jammers to block electronic signals of radio-controlled IEDs, as well as robots and metal detectors to aid in search operations. Other investments concerned camp security that, depending on location, included radars to detect and alert to incoming rockets or mortar rounds (projected IEDs / indirect fire attacks). The radars also calculated the positions from which the rockets or mortars were projected to allow quick reaction forces to, ideally, interrupt the attack or at least undertake later investigation.

Camp construction improvements included greater access restrictions to camp entries through obstacles and L-shaped turns as well as bunkers and, as feasible, over-head protection for offices and staff accommodation against projected IEDs and indirect fire attacks.

### 5.1.2 Information gathering and intelligence on attacks

MINUSMA had a critical need for timely and reliable information to react to developing situations and to anticipate future developments. MINUSMA gathered information through military observers, United Nations police patrols, and fact-finding missions as well as its substantive contacts at national, provincial, and local levels. Weapons Intelligence and EOD teams also investigated sites of attacks and collected and analysed evidence to better understand extremist tactics, techniques, and procedures and how to protect against them. Supplemental information was provided by imagery documented by long- and medium-range drones. Collected information was assessed and submitted to the mission leadership by analytical units in the military, the police, and civilian sections.

<sup>46</sup> Data based on the JMAC database on terrorist and terrorist-related incidents, MINUSMA.

MINUSMA's intelligence cycle was supported by the mission's peacekeeping-intelligence unit that was part of the Joint Mission Analysis Centre. It was tasked to ensure that reporting from across pillars and sections of MINUSMA were consistently filtered and assessed against Priority and Secondary Information Requests that underpinned MINUSMA's intelligence collection cycle. Arguably though, the various units consistently struggled to have access to useful information in the first place. Promising fields to strengthen the United Nations approach to peacekeeping-intelligence, such as illicit arms monitoring (see below), however, were poorly exploited.

### 5.1.3 Fighting impunity

The collection and assessment of recovered evidence from sites of attacks against MINUSMA helped inform MINUSMA's situational awareness. They also formed part of MINUSMA's assistance to Malian authorities in the fight against impunity for attacks against peacekeepers. The United Nations police (UNPOL) operated a forensic laboratory at headquarter level in Bamako that complemented the basic field exploitation capacities of Weapons Intelligence Teams. For example, fingerprints that UNPOL lifted from IED components in its laboratory identified two individuals already searched for under an international arrest warrant issued by Algeria.<sup>47</sup>

MINUSMA-collected evidence was transferred to Malian law enforcement authorities to assist in prosecutions and trials. In June 2020, MINUSMA adopted an internal standard operating procedure on the collection and management of evidence. The procedures streamlined the recovery and transfer of evidence from the field to headquarters to Malian authorities.<sup>48</sup>

### 5.1.4 Monitoring illicit arms proliferation

MINUSMA's databases on illicit arms, ammunition, and explosives as well as their use and distribution were other tools to assist in situational awareness. They also informed analyses that the Mission submitted to support investigations by Malian authorities. The databases provided evidence-based intelligence that helped identify the groups conducting attacks, the spread of these groups, and their network connections. The databases also alerted the Mission to the arrival of new materiel in theatre and informed threat assessments related to materiel capacities of extremists. An example is the mentioned 32 mm anti-tank grenade used in Kidal in August 2021 that, due to the long-term maintenance of the relevant database, could reliably be identified as a new and powerful item in extremist possession in Mali.

Peacekeeping missions may be especially well suited to the data collection required for monitoring illicit arms flows. This is because such missions often operate across large geographical areas and, when directly attacked in areas without government presence, are on-site for the recovery of evidence (such as spent cartridge cases fired by assailants) when safe and secure to do so. As mentioned, such data/evidence recovery forms an important part of monitoring for possible changes in armament and threats by assailants as well as identification of network links and structures among assailants. This contributes to situational awareness on the part of peacekeeping missions. Monitoring illicit arms flows can also contribute to tracing operations to identify the sources and pathways of illicit arms, ammunition, and explosives (see below).

---

<sup>47</sup> Interview by the author with UNPOL, Bamako, Mali, 14 August 2016.

<sup>48</sup> MINUSMA, 2020.

## 5.2 Challenges to mitigation

Challenges to effective mitigation against threats while operating in a hostile environment hampered the ability of MINUSMA to fulfil its mandate. Some of these were related to limits in MINUSMA's mandate. To illustrate, MINUSMA had the mandate to protect itself as well as civilians "under threat of physical violence".<sup>49</sup> But there was nothing in its mandate suggesting that MINUSMA was to actively seek out and militarily engage presumed extremists. Similarly, MINUSMA put emphasis on training peacekeepers in recognition and destruction of IEDs prior to causing potential harm (which in military terms corresponds to "Train the Force" and "Defeat the Device"). But there was nothing expressly encouraging MINUSMA to "Attack the IED Network", that is, to disrupt the supply and distribution chains of IEDs prior to the IEDs being placed in the ground.<sup>50</sup>

Another mandate-related challenge to mitigation was the absence of any explicit role for MINUSMA in monitoring and tracing illicit arms flows. To clarify, Al Qaeda- and Islamic State-linked groups in Mali are under a United Nations Security Council arms embargo.<sup>51</sup> But there was no 'on-the-ground' United Nations Panel of Experts to investigate violations of this embargo in Mali.<sup>52</sup> Notably, the MINUSMA mandate resolution of 2022 makes an explicit reference to United Nations Security Council Resolution 2616 of December 2021 (see also box 8).<sup>53</sup> Perhaps surprisingly though, the MINUSMA mandate resolution of 2022 did not specify that MINUSMA should engage in any of the monitoring measures that are stipulated in resolution 2616 (2021).

In other words, there was nothing expressly encouraging MINUSMA to monitor illicit arms flows. At the same time though, there was also nothing suggesting that MINUSMA could not do this, if for no other reason than to contribute to its own situational awareness. The unique position of MINUSMA in relation to embargo monitoring is further explained in box 9.

---

49 Security Council, 2022, paragraph 26(c)(i).

50 In military counter-IED doctrine, "Prepare the Force", "Defeat the Device", and "Attack the IED network" are the three (inseparable) pillars of counter-IED action that should be implemented in conjunction with each other to effectively mitigate against IED threats; interviews with military C-IED analysts, Bamako, March to August 2022.

51 See footnote 5.

52 The existing Panel on Mali, first established by Security Council resolution 2374 (Security Council, 2017), is concerned with the national peace process. It does not have an arms embargo monitoring mandate. The Monitoring Group concerning Al Qaeda and ISIL (see footnote 5) is politically appointed. It also does not work on suspected violations of the arms embargo on Al Qaeda and Islamic State in Mali.

53 Security Council, 2021.

## Box 8: United Nations Security Council resolution 2616 (2021)

United Nations Security Council resolution 2616 of 2021 addresses the potential role of United Nations peacekeeping operations in supporting national authorities in countries under Security Council arms embargoes. Specifically, the resolution stipulates that the Security Council may, when renewing the mandate of peacekeeping operations and when appropriate, consider, on a case-by-case basis, whether and how United Nations peacekeeping operations “could support relevant national authorities in combating the illicit transfer and diversion of arms in violation of the arms embargoes”.<sup>54</sup> The resolution also encourages peacekeeping operations to “assist in reinforcing capacities of host nation authorities, at their request, in data collection and training to counter the illicit transfer of arms and related materiel of all types, where appropriate and consistent with their mandates”.<sup>55</sup>

As evidenced by the language in the resolution, there is awareness of the potential role of peacekeeping operations in combatting illicit arms flows in the areas in which these operations are present. As argued in this brief though, there seems only limited understanding of what concrete actions peacekeeping operations may take to make their best-possible contributions to countering illicit arms flows in violations of Security Council embargoes.



Source: Photo by author, 2014.

54 Ibid., para. 1.

55 Ibid., para. 2.

## Box 9: Arms embargo monitoring by other UN missions

MINUSMA was unique in the sense that it operated in a country with a Security Council arms embargo on certain actors (Al Qaeda and Islamic State-linked groups) but did not have an independent United Nations Panel of Experts with which the Mission could cooperate in monitoring illicit arms flows.<sup>56</sup> This was a regrettable loophole that limited MINUSMA's capacities to contribute to monitoring illicit arms flows. The point is illustrated by experiences in other relevant United Nations peacekeeping operations.

That is, in countries where there are both United Nations peacekeeping missions and independent, United Nations Panels of Experts, the mission will typically provide administrative support and, depending on context, also substantive support to the Panels. For example, the United Nations Mission in Côte d'Ivoire had an embargo monitoring unit embedded within its JMAC. Among other activities, the unit collected relevant data and screened thousands of arms and hundreds of thousands of ammunition rounds during inspections and disarmament events.<sup>57</sup>

Information on arms and ammunition with production dates after the embargo on Côte d'Ivoire (2004) was flagged as materiel of potential interest for embargo verification by the United Nations Panel of Experts. The arrangement was mutually beneficial: the United Nations Panel was alerted to and could investigate cases of potential interest it would have missed otherwise. The United Nations mission, in turn, was removed from actual investigations and potential political fallout resulting from investigations into arms supplies by foreign States and other actors.<sup>58</sup> A similar mechanism for cooperation between the United Nations peacekeeping mission and Panel of Experts exists in the Democratic Republic of the Congo in the form of the mission's Arms Embargo Cell.

There were yet further challenges to effective mitigation against threats while operating in a hostile environment. They included, but were not limited to, “extremist adaption of tactics and techniques” and “limits of peacekeeping-intelligence”.

---

56 See footnote 52.

57 See, for example, Anders, 2018, p. 6f.

58 Assessment based on author's work at the embargo monitoring cell of the UN mission in Côte d'Ivoire, 2011–2013.

## 5.2.1 Extremist adaption of tactics and techniques

Extremists reacted and altered their tactics in response to security measures that MINUSMA implemented. An example, the 2017 Cruz report raises the importance of physical security for camps and their forward protection against attacks.<sup>59</sup> Depending on their location, MINUSMA camps established such military outposts at several kilometres distance. But the outposts then often became targets of extremist attacks themselves (as was the case in, for example, Aguelhok, in April 2021). Another example were efforts to stabilize certain areas through increased MINUSMA presence. In February 2021, MINUSMA established a temporary operating base in Kerena, Douentza Region, to help secure the area against enduring extremist violence and intimidation of civilian populations. Extremists attacked the base within a week of its establishment, causing injuries to 27 peacekeepers.<sup>60</sup>

In turn, the improvement of extremist tactics forced MINUSMA to further enhance its physical security measures. Improving camp protection as well as procuring, maintaining, and, as necessary, replacing vehicles, radio jammers, robots, drones, radars etc. required immense funding. It also required continued MINUSMA advocacy to encourage troop-contributing States to provide troops with vehicles with adequate physical security, high-tech items such as drones, as well as technical personnel for the operation of, for example, the drones.

## 5.2.2 Limits of peacekeeping-intelligence

Another critical point raised by the 2017 Cruz report is the need for tactical intelligence. But there were problems with this. As stated by Cruz, “missions do not lack high-tech resources to collect intelligence. They lack the basics, especially human intelligence, networks of informants, situational awareness, and capacity to communicate with the population”.<sup>61</sup> It is human intelligence and networks of informants, though, that are the hardest to come by. In Mali, extremists kidnapped or killed more than 250 alleged informants of the armed forces in the period 2014 to 2022.<sup>62</sup> Extremist violence and lack of capacity to protect actual informants greatly limited the willingness of individuals to provide what possible information they may have had.

As emphasized in this brief, collection and/or documentation and analysis of evidence from sites of attacks could play a crucial role in enhancing situational awareness and the fight against impunity for attacks against peacekeepers and civilians. But the collection of evidence after attacks can be hampered by difficult access and resource constraints in a system of competing operational priorities. The need for evidence collection may also not always be fully appreciated by personnel. The effect is that many incident sites are never (fully) exploited. Even if when evidence was recovered and transferred to Malian authorities, this did not necessarily result in the identification, arrest, and prosecution of presumed perpetrators.<sup>63</sup>

---

59 Dos Santos Cruz, 2017, p. 6.

60 Case file 210210 Complex attack, Douentza, JMAC cell on terrorism, MINUSMA. See also United Nations News, 2021a.

61 Dos Santos Cruz, 2017, p. 6.

62 Data based on the JMAC database on terrorist and terrorist-related incidents, MINUSMA.

63 Assessment based on author’s work in Mali, 2014–2022.



Source: AFC/Sebastien Rieussec, 2016.

## 6. Lessons learned and recommendations

### 6.1 Lessons learned

MINUSMA paid a heavy price for operating in a hostile environment in which it was the target of armed attacks by violent extremist groups. Moreover, extremist violence, sustained by illicit arms and ammunition that extremists continue to acquire, severely hampered MINUSMA's ability to implement its mandate. After a decade of operations, MINUSMA learned various lessons, often the hard way, of which some may also be of relevance to other United Nations peacekeeping missions in hostile environments. Among these lessons are the need to adapt to local circumstances within the constraint of given mandates, the importance of IED threat mitigation, the difficulties of implementing peacekeeping-intelligence, and the potential contribution to situational awareness of monitoring illicit arms flows.

#### 6.1.1 Need to adapt

MINUSMA had to continuously strengthen its defensive capacities to counter the increasing sophistication in extremist attacks on its camps and convoys. This included an increasing 'militarization' of MINUSMA's defences towards levels of protection of camps and convoys in the early 2020's that were arguably more familiar to military operations of North Atlantic Treaty Organization operations

in Afghanistan or Iraq than to United Nations peacekeeping. This incurred substantial costs for the purchase and operation of high-tech measures such as radars and continued advocacy towards troop-contributing States to supply, if possible, mine-protected vehicles or uncrewed aerial vehicles.

At the same time, MINUSMA did not have a mandate to militarily engage presumed extremists other than in prevention of imminent harm to civilians or in self-defence.<sup>64</sup> MINUSMA thus faced the dual challenge of needing to adapt to local circumstances and developing extremist tactics, while having a restricted mandate to confront extremists militarily.

### 6.1.2 IED threat mitigation

The biggest threat to the security of MINUSMA peacekeepers was IEDs. In line with the previous lesson, this threat was partially mitigated against with relevant protective measures and tools such as electronic jammers. MINUSMA's case also highlights the need for training peacekeeping forces in IED detection and neutralization. As pointed out above though, "Preparing the Force" and "Defeating the Device", which undoubtedly helped save the lives of numerous peacekeepers, do not address the IED-networks behind the placing of the IEDs in the first place.

MINUSMA's mandate did not offer an easy solution to this problem. Moreover, opinions were divided on whether MINUSMA, a UN peacekeeping mission, should have had a "military counterterrorism" mandate. But at least there were several available mitigation measures. These are presented in the recommendations below.

### 6.1.3 Challenges to peacekeeping-intelligence

As indicated, there was a strong emphasis among especially Western troop-contributing states on technically sophisticated tools for gaining information and intelligence to inform MINUSMA operations and protect its camps and convoys. These tools played an important role in the situational awareness of MINUSMA. But, as already pointed out in the Cruz report, the arguably most important element in all this may be human intelligence and sources from among local stakeholders, who can provide credible and accurate information on extremist movements and intentions. Unfortunately, it is such human intelligence that was the hardest to come by considering persistent extremist threats to anyone who provides information on them.

There was also an evident benefit for MINUSMA in collaborating with Malian defence and security forces in gathering and sharing information on potentially hostile actors. But mistrust by some Malian actors towards MINUSMA,<sup>65</sup> and accusations of Western (and MINUSMA) efforts to undermine Malian authorities, established an effective barrier to greater collaboration.

---

64 Security Council, 2022, para. 20 and para. 26 (c)(i).

65 See, for example, Topona, 2023.

## 6.1.4 Contribution of monitoring illicit arms flows

This brief has sought to demonstrate that monitoring illicit arms flows can make a strong, low-tech contribution to enhancing situational awareness of United Nations peacekeeping missions. The collection and analysis of material evidence following attacks on peacekeepers, investigations into the provenance of recovered material, and sharing of information with local law enforcement can also contribute to fighting impunity. The brief thus provided a practical example of measures that UN missions can take in follow-up to Security Council resolution 2616 of 22 December 2021, which calls for a greater role for missions in contributing to combating illicit arms flows.<sup>66</sup>

In the author's experience though, there was limited awareness of the potential benefits of monitoring illicit arms flows both within MINUSMA and the United Nations Department of Peace Operations in New York. There were also concerns that such monitoring could contribute to misperceptions about MINUSMA's role in Mali. The Security Council thus never explicitly mandated MINUSMA to monitor arms flows, nor did United Nations headquarters provide any specific guidance to MINUSMA on monitoring illicit arms flows.<sup>67</sup>

As this brief has shown, documenting and analysing evidence from sites of attacks against peacekeepers can help to identify whether new materiel and threats are entering the conflict theatre. But MINUSMA leadership consistently rejected internal proposals that the mission, in the absence of an investigative sanctions panel, conduct tracing operations itself. This would have involved information requests submitted through UN channels to the countries of presumed manufacture of materiel of interest (thereby using the same channels as UN sanctions panels). In the author's opinion, this left an important tool not being fully utilized for supporting the effectiveness of MINUSMA and saving lives. The third recommendation proposes a way forward for addressing this challenge.

---

66 Security Council, 2021.

67 Interviews with MINUSMA management staff, Bamako, March to April 2022.

## 6.2 Recommendations

There are numerous recommendations to be drawn from MINUSMA's experience for reducing or mitigating the risk posed by illicit arms for United Nations peacekeeping operations. A key consideration for the recommendations presented below is the need for more realistic expectations of what a peacekeeping operation with a 'non-military' mandate may achieve in a hostile environment in terms of its capacity to protect itself and, as relevant, civilian populations. This brief presents three recommendations for enhancing the effectiveness of United Nations efforts to save lives:

1. Due consideration should be given to provide UN peacekeeping operations in relevant hostile environments with the necessary resources to reduce and mitigate the risks posed by IEDs, in particular for training personnel in IED recognition and neutralization.
2. This Brief represents one approach for increasing awareness within the system of United Nations peacekeeping operations and the Security Council on the relatively low-cost options that can be employed for non-military action to counter violent extremism. UNIDIR should explore other approaches for increasing awareness and supporting efforts to make greater use of conventional arms control tools for United Nations missions' efforts to prevent armed conflict and counter violent extremism.
3. The monitoring of illicit arms and ammunition flows, in particular the systematic documentation and analysis of seized and recovered materiel, can contribute to law enforcement investigations, demonstrating that those involved in the illicit arms trade cannot act with impunity when the lives of peacekeepers and civilians are at stake. To be effective, this will require that at least one or two staff in a United Nations peacekeeping operation have the necessary technical knowledge for the identification, documentation, and analysis of arms and ammunition, as well as familiarity with procedures for international tracing of conventional arms and ammunition, utilizing international instruments and processes as appropriate.

# Bibliography

Anders, Holger. 2018. Monitoring illicit arms flows: the role of UN peacekeeping operations. Geneva, Switzerland: Small Arms Survey, Geneva, June 2018.

<https://smallarmssurvey.org/resource/monitoring-illicit-arms-flows-role-un-peacekeeping-operations>

---. 2015. 'Expanding arsenals: insurgent arms in northern Mali' in Small Arms Survey 2015: Weapons and the World. Geneva, Switzerland: Small Arms Survey, 14 June 2015, (pp. 156–185). <https://www.smallarmssurvey.org/sites/default/files/resources/Small-Arms-Survey-2015-Chapter-06-EN.pdf>

Beale, Jonathan. 2021. Mali: The world's 'most dangerous peacekeeping mission'. London, United Kingdom: British Broadcasting Company, 1 May. <https://www.bbc.com/news/av/world-africa-56949408>

British Broadcasting Company. 2018. Mali militants attack bases disguised as UN peacekeepers. London, United Kingdom: British Broadcasting Company, 15 April. <https://www.bbc.com/news/world-africa-43772363>

Conflict Armament Research. 2016. Investigating cross-border weapon transfers in the Sahel. London, United Kingdom: Conflict Armament Research, November. [https://www.conflictarm.com/download-file/?report\\_id=2433&file\\_id=2434](https://www.conflictarm.com/download-file/?report_id=2433&file_id=2434)

Deutsche Welle. 2021. 12 German soldiers injured in Mali attack. Berlin, Germany: Deutsche Welle, 26 June. <https://www.dw.com/en/12-german-soldiers-injured-in-mali-bomb-attack/a-58023964>

Dos Santos Cruz, Carlo Alberto. 2017. Improving Security of United Nations Peacekeepers: We need to change the way we are doing business (Independent Report). New York, United States of America: United Nations, 19 December. <https://peacekeeping.un.org/en/improving-security-of-united-nations-peacekeepers-independent-report>

Kane, Dily. 2019. Mali: Attaque à la voiture piégée contre le camp de Koulikoro et le poste de contrôle. Koulikoro, Mali: Koulikoroinfo, 24 February. <https://www.koulikoro.info/mali-attaque-a-la-voiture-piegee-contre-le-camp-de-koulikoro-et-le-poste-de-contrôle>

MacDougall, Clair. 2021. Terrorists' IED Attacks Make the UN Mission in Mali Even Deadlier in 2021. New York, United States of America: PassBlue, 23 December. <https://www.passblue.com/2021/12/23/terrorists-ied-attacks-make-the-un-mission-in-mali-even-deadlier-in-2021>

MINUSMA. 2020. Standard Operating Procedure on Collection, Analysis Management and Transfer of Evidence and/or Information by MINUSMA. MINUSMA Reference 2020.08. Bamako, Mali: MINUSMA, 15 June.

Reuters. 2016. Militants strike north Mali airports with suicide truck, rockets. London, United Kingdom: Reuters 30 November. <https://www.reuters.com/article/us-mali-security-idUSKBN13P208>

Security Council. 2022. Resolution 2640 (2022) (UN Document S/RES/2640 (2022)). New York, United States of America: United Nations, 29 June. <http://unscr.com/en/resolutions/doc/2640>

---. 2021. Resolution 2616 (2021) (UN document S/Res/2616 (2021)). New York, United States of America: United Nations, 22 December. <http://unscr.com/en/resolutions/doc/2616>

---. 2019. Resolution 2480 (2019) (UN document S/Res/2480 (2019)). New York, United States of America: United Nations, 28 June. <http://unscr.com/en/resolutions/doc/2480>

---. 2017. Resolution 2374 (2017) (UN document S/Res/2374 (2017)). New York, United States of America: United Nations, 5 September. <http://unscr.com/en/resolutions/doc/2374>

---. 2013. Resolution 2100 (2013) (UN document S/Res/2100 (2013)). New York, United States of America: United Nations, 25 April. <http://unscr.com/en/resolutions/doc/2100>

---. 2000. Resolution 1333 (2000) (UN document S/Res/1333 (2000)). New York, United States of America: United Nations, 19 December. <http://unscr.com/en/resolutions/doc/1333>

Sieff, Kevin. 2017. The world most dangerous UN mission. Washington D.C., United States of America: The Washington Post, 17 February. <<https://www.washingtonpost.com/sf/world/2017/02/17/the-worlds-deadliest-u-n-peace-keeping-mission/>>

Studio Tamani. 2019. Mali: attaque à la voiture piégée contre le camp de Koulikoro. Bamako, Mali: Studio Tamani, 24 February. <<https://www.mandeinfos.com/2019/02/24/mali-attaque-a-la-voiture-piegee-contre-le-camp-de-koulikoro>>

Topona, Eric. 2023. Le Mali accuse la Minusma d'espionnage. Bonn, Germany: Deutsche Welle, 15 May. <<https://www.dw.com/fr/mali-moura-minusma/a-65627870>>

United Nations. 2015. Report of the High-Level Independent Panel on United Nations Peace Operations, Uniting our Strengths for Peace – Politics, Partnership and People (UN document A/70/95-S/2015/446). New York, United States of America: United Nations, 17 June. <<https://www.securitycouncilreport.org/un-documents/document/s2015446.php>>

United Nations News. 2021a. Mali: UN chief says 'complex attack' against blue helmets may constitute war crime. New York, United States of America: United Nations News, 13 February. <<https://news.un.org/en/story/2021/02/1084662>>

---. 2021b. Four peacekeepers killed in complex attack on UN base in Mali. New York, United States of America: United Nations News, 2 April. <<https://news.un.org/en/story/2021/04/1088982>>



@unidir



/unidir



/un\_disarmresearch



/unidirgeneva



/unidir



**UNIDIR**

Palais de Nations  
1211 Geneva, Switzerland

© UNIDIR, 2023

[WWW.UNIDIR.ORG](http://WWW.UNIDIR.ORG)