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Safety First

Towards responsible arms and ammunition management in DRC's Equateur and Nord-Oubangui Provinces

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SUMMARY

This *Knowledge Note* provides an insight into current realities, behaviour and practices in arms and ammunition storage sites in north-western DR Congo. Tailored recommendations for strengthening ammunition and weapons safety by improving physical security measures and renovating infrastructural facilities are a central focus of this report and the corresponding technical studies. In light of these technical findings, and on the basis of on-site observations as well as interviews with community members and armed forces personnel, this *Knowledge Note* emphasises the importance of factoring in the socio-economic and humanitarian context of the weapons and ammunition storage sites.

Through a range of case studies, an analysis of relevant legislative frameworks and how communication is channeled through relevant physical security and stockpile management (PSSM) authorities as well as an examination of the difficulty of translating existing PSSM knowledge into action, the study highlights some of the behavioural practices—and challenges—that underlie the development of an effective PSSM culture.

The objective of this *Knowledge Note* is to help order and prioritize some of these factors, identifying how the national government of the DRC can enhance its efforts to establish a more responsible culture of PSSM-related practices. By highlighting areas of work where targeted interventions would be most useful, the recommendations of this baseline study aim to help guide ongoing regional and national efforts to implement more responsible PSSM-related practices in a limited resource environment.

The safety mechanism visible on a Belgian manufactured 7.62mm Fabrique Nationale (FN) FAL with Armée Nationale Congolaise (ANC) markings from 1969.

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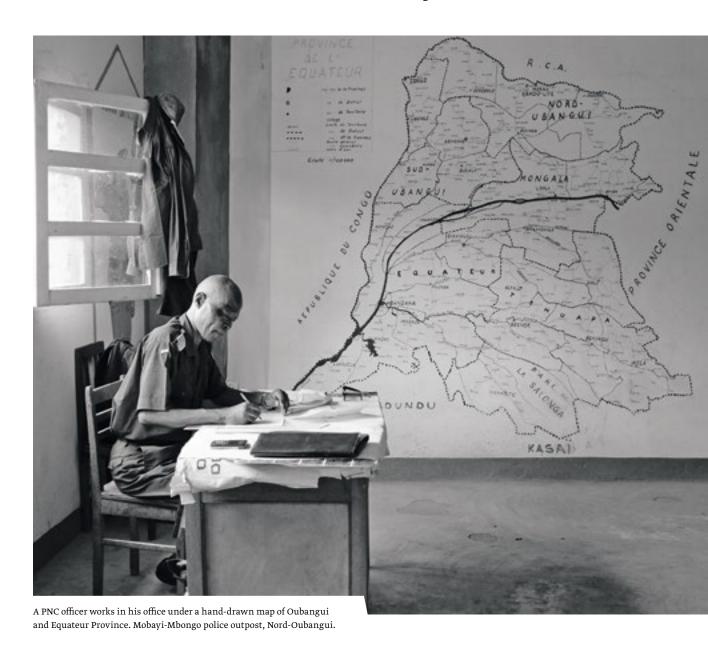
 $Technical \ and \ humanitarian \ assessment \ of \ arms \ and \ ammunition \ security, \ storage \ and \ management \ practices \ in \ the \ Nord-Oubangui \ and \ Equateur \ Provinces \ of \ the \ Democratic \ Republic \ of \ the \ Congo.$

Introduction

BICC commissioned a technical and humanitarian assessment of arms and ammunition security, storage and management practices in the Nord-Oubangui and Equateur Provinces of the Democratic Republic of the Congo from September to October 2015. The study was carried out by a technical advisor from BICC in partnership with a technical expert from the Mines Advisory Group (MAG), a researcher from the Group for Research and Information on Peace and Security (GRIP) and a delegation from the Commission Nationale de Contrôle des

Armes Légères et de Petit Calibre et de Réduction de la Violence Armée or the CNC-ALPC, the national authority tasked with co-ordinating all arms control-related activities in the DRC.

The study focused on assessing the technical aspects of physical security and stockpile management (PSSM) practices in the area while locating these practices in a wider socio-economic context, highlighting the potential humanitarian impacts on the surrounding communities of either an unintentional



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explosion at a munitions depot or the diversion of poorly secured small arms and light weapons (SALW) into illicit hands.

The areas selected for the assessment—Nord-Oubangui and Equateur Provinces—border the Central African Republic and Republic of the Congo and are close to the frontier with South Sudan and eastern areas of the DRC, which are all heavily affected by conflict. Focusing the study on a selected area of northern DRC therefore presented a valuable opportunity to conduct a limited analysis of how cross-border dynamics affect PSSM practices in the region while reiterating the need for a weapons control approach that increasingly focuses on transfrontier and regional aspects.

This regional approach also constitutes a central aspect of BICC's efforts on arms control and regulation that has been developed in cooperation with the German Federal Foreign Office's Division for Conventional Arms Control. In close collaboration with the African Union's Defence and Security Division, a Coordination Platform is being developed to integrate the regulation and control of illicit SALW into the regional security and development agenda. Recognizing the existence of multiple actors in the region and at the national level, more effective coordination through a unified platform could reduce the duplication of efforts and optimize the use of limited, valuable resources.

More effective coordination can have a significantly positive impact on controlling the illicit circulation and trafficking in SALW and ammunition as well as reducing the risks of an unintentional explosion by implementing more responsible storage and management practices of munitions. Similarly, there is also a critical need to link PSSM practices with related ground-level SALW control measures such as registration, marking and tracing of SALW, more accurate and reliable record-keeping initiatives that are compatible with other data collection mechanisms in the region and improved arms control legislation.

The authors reiterate the need for greater coordination amongst national actors responsible for designing and implementing SALW control efforts, including PSSM, in the country by working together in a transparent and cooperative manner. Keeping in mind the fact that effective arms control cannot take place in isolation, the authors also call for greater cooperation and knowledge-sharing amongst national authorities in the region under the framework of existing regional cooperation mechanisms.

To be truly effective, wider issues relevant to SALW control such as effective border control also need to be factored in to programme design and implementation. These include more effective regulation and control of illegal cross-border trafficking of high-value commodities other than firearms such as drugs and endangered species products as well as trafficking of human beings.

Often, similar patterns can be observed: Goods are transported across the same routes or vectors, similar supply and demand variables are at play, the same armed groups transporting illicit weapons across borders frequently profit from trade in other illegal commodities, profits from which have been shown to feed back into fuelling further conflict.¹ This serves to reiterate the fact that a more comprehensive understanding of the many relevant factors at play, including the motivations for illicit SALW possession, should feed in to a concrete, coordinated strategy towards addressing deeper causes of conflict and that strategy's integration into wider conflict prevention, resolution and peacebuilding efforts.

^{1\} The poaching of increasingly rare elephants at an alarming rate by armed groups using illicit weapons and ammunition is one such example of a rapidly growing conflict economy. The same armed groups or organized crime networks then sell this ivory across borders using similar transit points and mechanisms as trafficked weapons (see Acharya & Mühlen-Schulte, 2016). These profits are in turn used to purchase more weapons which contribute to or catalyze further insecurity in the region. Methods or approaches to control this phenomenon are also remarkably similar and cross-border cooperation is essential for these efforts to be successful. In fact, countries such as Gabon are advocating a PSSM approach to ivory stocks that includes securing storage areas and even efforts to mark tusks to prevent them from returning to illicit economies and fuelling further conflict.

In practice, PSSM is an inherently complex field involving a multiplicity of actors from the ministries, armed forces, international organizations and NGOs. As the issues at stake are highly sensitive, involving weapons stockpiles, ammunition depots and armouries that are central to a nation's security, identifying relevant procedures, designing policy and implementing activities are all inherently difficult. The willingness of states to co-operate and provide access to facilities in a transparent manner requires developing an atmosphere of trust between national partners and international agencies over a period of time. One starting point for building this trust is to focus on why responsible PSSM practices are mutually beneficial to the branches of the military operating storage sites and the citizens of a country. Identifying the most effective pathways and clearly defining the communication channels to move this process forward is necessary to achieve concrete outputs or goals.

Another potential area of agreement is to recognize the adverse effect of the proliferation of weapons and the diversion of arms from government-held depots on exacerbating conflict and crime in the country and the wider region. The possibility of an unintentional explosion at a munitions depot poses a threat to communities inhabiting the danger zone around several storage sites in the DRC and in the wider region. The memory of the fire in Ngashi (Equateur Province) in 2007 is etched on the collective consciousness of soldiers and civilians alike, as many of them are from this area and were involved in transporting arms and ammunition to the new facility in Bokala. Many senior officers and authorities in the DRC are also aware of the more serious explosion caused by a fire in the ammunitions depot of Regiment Blinde in the Mpila neighbourhood of Brazzaville, which killed over two hundred people in neighbouring Republic of the Congo on 4 March 2012. However, although the awareness of the danger of another large explosion often exists, it is difficult to translate these memories or knowledge into more responsible behaviour in practice. A key recommendation of this study is that, rather than wait for another inevitable large explosion or another large-scale diversion of firearms and ammunition, it is critical that PSSM measures be implemented in a

preventative manner and not as a knee-jerk reaction in the aftermath of another crisis or political instability.²

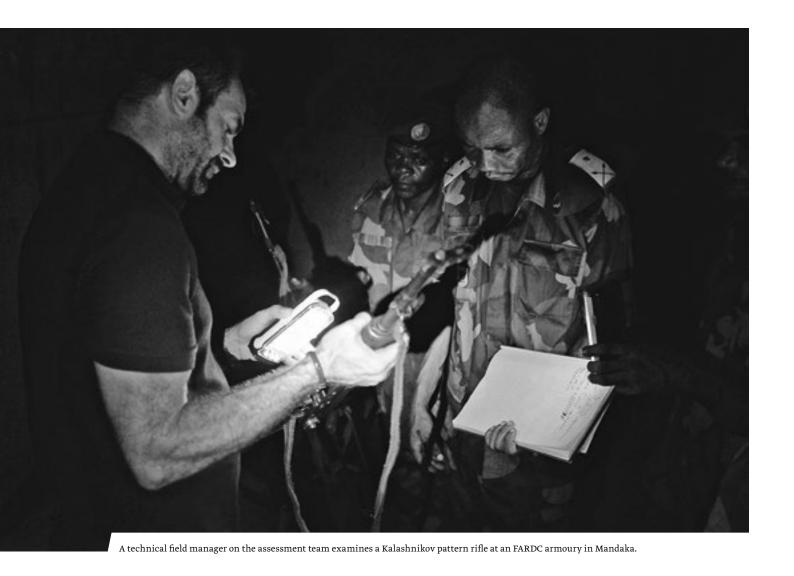
The objective of this *Knowledge Note* is to help order and prioritize some of these issues, identifying ways of how the national government of the DRC can initiate a more responsible culture of PSSMrelated practices. By highlighting areas of work where targeted interventions would be most useful, the recommendations of this study aim to help guide ongoing efforts to enhance existing capacity to implement measures to pave the way towards more responsible PSSM-related practices. These interventions involve targeted international assistance by qualified international organizations that possess the necessary technical expertise necessary to manage the full life cycle of weapons and munitions. In the same vein, interventions should be made by the relevant government authorities in the DRC to take the initiative and conduct several PSSM activities that require minimum or no capital investment. When necessary, authorities ought to make available the financial resources to destroy obsolete or unstable munitions or weapons and construct new infrastructure, including new armouries or dedicated, secure storage facilities.

Finally, by painting a scenario of PSSM practices in north-western DRC, this study aims to provide a wide range of readers with an insight into current realities, behaviour and practices in arms and ammunition storage sites. The basic pillars of PSSM viewed through a technical lens such as physical security measures, infrastructural facilities and tailored recommendations for ammunition or weapons safety and storage are a central focus of this *Knowledge Note* and the corresponding technical studies. Based on observations made at the sites and in light of these technical findings, this study examines broader issues related to the management of the full cycle of weapons and ammunition stockpiles and armouries, providing a more nuanced

^{2\} It is also worth noting that this was also a key conclusion of the High-Level Government and Experts meeting held at the African Union in October 2015 at which representatives of the Democratic Republic of the Congo were present.

comprehension of relevant legislative frameworks, organizational channels of communication as well as the specific socio-economic and humanitarian context of the field sites and of how local institutions interact with international humanitarian and other assistance providers.

In addition, it addresses certain issues that are not normally investigated as part of a standard PSSM assessment but that are very relevant. One factor are competing threat perceptions regarding dangerous munitions sites by at-risk communities who might prioritize access to clean drinking water or food over the less 'tangible' threat of an unintentional explosion. Other aspects include taking a longer historical view to look for clues to current practices and to better understand the relative ways of how memory and forgetting colour the history and future of PSSM in a country and region with a history of unintentional munitions explosions. It suggests recommendations for implementing 'training of trainer' programmes to create a conducive environment in which the observed difficulties when translating theoretical training into practice are addressed and, where possible, the role of crossborder dynamics including weapons trafficking and artisanal weapons production are also highlighted. The intention of this limited study conducted in a short time frame is to flag these important issues for stakeholders to be aware of. These issue areas could then serve as a guide to help the DRC authorities to design and implement a PSSM roadmap in the future, and move a step closer to creating an operational environment that is more conducive to a responsible, effective management of the full cycle of storage, management, disposal and security of arms and ammunition.



Context and method

This section introduces a working definition of PSSM, focusing on the need to reconcile international PSSM standards with local realities in limited-resource contexts. A brief historical background is provided to illustrate why there is such a high proliferation of SALW and munitions in the north-western Democratic Republic of the Congo, briefly highlighting the regional context for why Equateur and Nord-Oubangui Provinces were selected for this particular study. Next, it provides a detailed explanation of the methodology adopted for this assessment process as well as the process of incorporating feedback from the interviewees in order to validate the findings. Finally, this section ends with an overview of sites visited and interviews conducted.

Physical security and stockpile management in a wider security context

Physical security and stockpile management, or PSSM as it is abbreviated hereafter, refers to the protection and management of arms stockpiles. Arms and other means put at the disposal of defence and security actors in charge of protecting the state and population, are ideally maintained in a functioning state and are stored at locations from where these can be swiftly retrieved when needed. The facilities where the arms are stored should be secured to prevent pilfering of their contents by those that might use these arms against ordinary citizens or against the security and defence forces responsible for their protection. PSSM should also prevent the stored materials from becoming a safety hazard, such as when they contain explosives that might detonate in an uncontrolled way, inflicting severe damage and a high death and injury toll on surrounding communities.

The safety, security, and accountability of arms and ammunition stockpiles depends on available infrastructural facilities as well as the practices followed by the facility operators. Standards have been established for facilities and practices that are important benchmarks to assist in facilitating greater safety, security, and accountability. The real challenge lies in reconciling the objectives contained in the international standards with local circumstances where financial and human resources are often limited. A step in this direction is offered in this report, which considers the international standards while tailoring recommendations to the specific context of ammunition and weapon management practices observed within the Democratic Republic of the Congo (DRC).

Historical background: Two decades of conflict, humanitarian crisis and SALW counterproliferation assistance in context

Almost twenty years have passed since the outbreak of armed conflict that led to the fall of President Mobutu Sese Seko and the renaming of Zaire as the Democratic Republic of the Congo. Conflict has continued since, taking a huge toll on the country's population, infrastructure and institutions. Stability has been temporary, at best. Relapses into armed violence have been frequent in some parts of the vast territory. International humanitarian aid workers and their organizations have become a very present feature in this landscape.

As recently as 1998, troops from Rwanda, Uganda and Burundi occupied parts of the DRC's territory. A ceasefire agreement was signed in Lusaka in July 1999 by the Heads of State of the DRC and five other African nations that had deployed troops in that country. This was followed by the Global and Inclusive Agreement on Transition in the DRC signed in December 2002. This latter agreement committed the existing national army, the Forces Armées Congolaises (FAC), and a number of non-state armed groups in the DRC to integrate into one new national army, known as the Armed Forces of the Democratic Republic of Congo (FARDC, Force Armées de la

The safety mechanism visible on a Belgian manufactured 7.62mm Fabrique Nationale (FN) FAL with Armée nationale congolaise (ANC) markings from 1969.





A 7.62mm Heckler and Koch G3 pattern rifle originally brought to the DRC from Angola. The Spanish markings indicate it might have originally been used by Cuban troops.

RDC). The non-state armed groups incorporated into FARDC were the Rassemblement congolais pour la Démocratie (RCD), the Mouvement pour la Libération du Congo (MLC), the RCD/Mouvement de libération (RCD/ML) and RCD/National (RCD/N). Local community defence militias known as Maï Maï were also incorporated within FARDC. These new soldiers and officers were found to show little loyalty to the authority of their state and have been prone to desert and mount new rebellions (Berghezan, 2014).

As of July 2003, the United Nations Security Council put in place an arms embargo, seeking to prevent all transfers of arms into the territory of the DRC. From 2008 onwards, that embargo was scaled down so as to only prevent arms transfers to non-state groups operating in the DRC territory.

The arms that had been brought into the country and were used during the recurring conflicts remained a cause of concern to many actors in the area. Not all of the arms brought into the country were recovered through formal DDR programmes that were conducted in some areas of the vast country. Arms were also found left out on the streets and were brought under the control of the state. But

an undetermined number of arms (and munitions) are assumed to have been retained by demobilized former combatants. Campaigns to help convince local communities to hand over these arms and ammunition were run in several departments. These DDR and civilian disarmament campaigns however failed to reach every area of the country, such as the Province of Equateur, including the newly formed Nord-Oubangui Province.

Site selection criteria

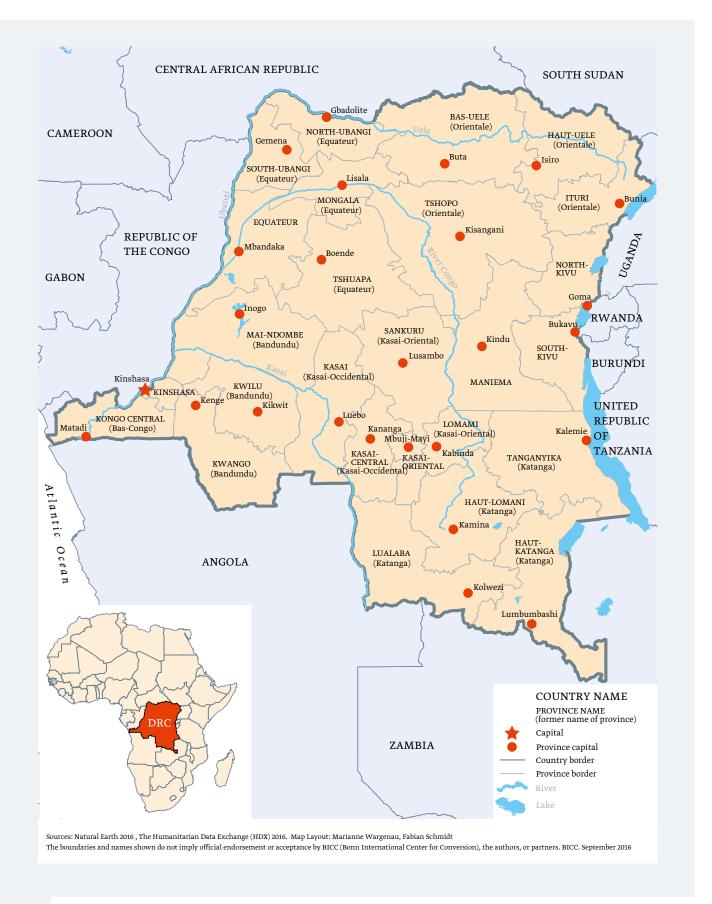
The two primary areas of focus of this study in north-western DRC are the wider Mbandaka area in Province Equateur and the areas in and around Gbadolite in the Province of Nord-Oubangui.³

These sections of north-western DRC have not been priority target areas for SALW-control interventions and the region has not benefited from DDR programmes conducted elsewhere in the country. In comparison to the east of the country, where a relatively large concentration of international actors remain due to continuing conflict, and SALW-related security perceptions were extensively probed no later than 2010 (Berghezan, 2011), the situation in north-western DRC has been less well documented. Limited information exists regarding the current state of arms control, including PSSM in Equateur and Nord-Oubangui Provinces. This is one reason why these two areas were selected as priority areas for this study. Another reason was that PSSM practices could be examined in a situation of relative "normalcy" and far greater calm as compared to the more crisis-prone eastern DRC.

Finally, the decision to select north-western DRC as the area of focus for this study was guided by the intention to locate this assessment as part of

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^{3\} The province of Nord-Oubangui was part of Equateur Province until mid-2015. Since then it is delineated as a separate administrative zone.



Map of the Democratic Republic of the Congo, © BICC



a broader, regional programme of work on arms control. The fact that Province Equateur shares a border with the Republic of the Congo, and the Province of Nord-Oubangui is separated from the Central African Republic (CAR) by the liquid frontier of the Oubangui River were therefore significant site selection criteria, offering the opportunity to examine PSSM practices in a cross-border context.

The cross-border context is relevant with regard to arms flows, arms embargoes in place in CAR and South Sudan and also with regard to cross-border flows of other legal and illegal commodities.

Adopting a regional approach is essential to enhance knowledge sharing amongst neighbouring countries and establish a model of trust. By using the DRC as a good example for why PSSM assessments are useful, this study could set a positive example for other countries in the region to realize the mutual benefits of conducting regular PSSM baseline assessments and follow suit in due course.

This is also why BICC, along with the German Federal Foreign Office, has been supporting regional mechanisms such as the Sub-regional Arms Control Mechanism (SARCOM) that connects the DRC with Sudan, Chad, Libya, CAR and South Sudan.4 Nord-Oubangui Province shares a liquid border with CAR—the easily traversable Oubangui River—and Equateur Province, which shares its western border with the Republic of the Congo across the wider and mightier Congo River. In the wider region, the neighbouring north-eastern province of the DRC, Orientale Province, shares a border with South Sudan and the eastern part of the DRC—areas with a long history of conflict. At the time of the study, fresh fighting had broken out in and around Bangui in CAR, and levels of violence were increasing in South Sudan⁵. The understanding that trans-frontier dynamics are likely to have an effect on trafficking in arms made it pertinent to try and assess PSSM practices in light of such dynamics.

^{4 \} South Sudan is currently an observer state within SARCOM.

^{5 \} For security sector reform in South Sudan, see Breitung, Paes, & van de Vondervoort, 2016.

Selecting this particular area also provided an opportunity to gather information on cross-border flows between the DRC and CAR as well as begin to probe the impact of arms embargoes on CAR (and South Sudan).

Finally, the study also paid attention to cross-border flows of illicit commodities other than illegal firearms whose trade could also fuel armed violence. One such area of investigation was the intersections between the trafficking of endangered animal parts by armed criminal groups using illicit weapons and ammunition. Improving our understanding of this practice was also one reason why armouries of the Eco-Gardes—a paramilitary branch supplied with weapons and trained by the FARDC—were also examined.

Methodology

Assessment process and approach to PSSM

The approach taken in this study is to provide a snapshot of PSSM practices and approaches in the selected region of the DRC to determine whether,

6 \ Products derived from endangered species including ivory, rhino horn and pangolin scales are being trafficked at an unprecedented rate by armed groups and organized criminal gangs fueling an illegal trade valued at US \$20 billion. Clear links have been established between the use of illicit weapons by armed actors to poach protected, high-value animals on the one hand and, on the other, use profits generated to purchase additional weapons and ammunition. See BICC policy brief 1/2016 of June 2016. Additional information is available at www.lastdaysivory.com or www.traffick.org (accessed 20 January 2016).

- 7\ The limited nature and scope of this study did not permit any far-reaching claims regarding either the conflict dynamics in CAR and South Sudan, the trafficking of endangered species or the crossborder trade in both regular and artisanally manufactured weapons and ammunition. The assessment team was aware of these dynamics and, where possible and permitted, paid attention to them but did not find adequate evidence to make any further assertions on these issues.
- 8 \ Despite several efforts to try and develop a basic handout or tool to facilitate communication through the hierarchy, the authors did not succeed in mapping out these channels. The development and dissemination of such a handout would bring greater clarity of roles and responsibilities and facilitate PSSM-related activities effectively and efficiently.

and if so how, safety, security and accountability can be improved. As such, this study considers the different components of stockpile management, that is accounting, surveillance and proof, security, planning, disposal and destruction, while prioritizing the needs deemed most urgent.

Rather than resorting to standards deemed "universal", which the DRC would have great difficulty to comply with, the authors adopted an approach tailored to limited available resources and a complex working environment. Given difficult operational conditions and limited human and material resources, it is not possible to directly implement global universal standards such as the International Small Arms Control Standards (ISACS). In fact, as the ISACS make explicitly clear, these international standards are only meant to provide guidelines on how best to deal with certain situations in ideal circumstances.

The ISACS were never meant to be applied as a fixed blueprint but rather to guide assessments and activities with the aim to provide useful information that allows practitioners to tailor activities that match the realities on the ground. Having recognized this, the assessment team and the Congolese authorities understood that the outcome of assessments, such as this PSSM study, should be used to inform policy and activities on the ground.

Additionally, this study aims to identify competent authorities deemed to be in a position to help bring about more enduring solutions in the longer term and map out proper channels to get information or requests pertaining to PSSM to these authorities. Such requests could include basic requests for clearance of obsolete or unstable munitions or weapons as well as a request to construct a whole new armoury or storage facility. In the future, armourers, logisticians and stockpile managers should all ideally have access to a basic template on how to request PSSM-related activities and be aware of the correct channels, starting with their immediate superior all the way to the responsible officer at the Logistics Base in Kinshasa.8



A member of the assessment team in discussions with FARDC troops at the Bokala munitions storage facility in Mbandaka after an assessment of their armoury as part of the on-site validation process.

The researchers blended several observation and interview techniques with other methods to collect data relevant to the evaluation and the appraisal of the context to which to tailor recommendations.

One means of collecting data pertaining to these practices consisted of formal semi-structured interviews. In addition to focusing on the risks posed by the weapons and munitions, interviewers also paid attention to the socio-economic dynamics and cultural context of the areas surrounding the storage facilities. These interviews tended to follow an associative process that was nevertheless consistent in addressing a core set of pre-defined questions.9 The interviews were followed by a fact-checking process where the types and numbers of weapons and ammunition recorded in official registers were crosschecked with the weapons and ammunition physically present in the armouries. Often, discrepancies in the registered details compared to the numbers and types of weapons recorded by the assessment team were found.

Fifty formal interviews were conducted with informants covering the entire range of ranks within the FARDC, from a general to several lieutenant colonels (unit commanders) to non-commissioned officers and enlisted men and women, as well as several members of the national police force (PNC). A considerable share of the interviews sought to establish narratives whereby the concerned actors explained perceived differences between the situation found in place (in terms of infrastructure,

- 9\ These questions mainly asked for the size of the division, the number of soldiers and guards at the site, the level of training available to the armourer and his capacity to manage the storage, maintenance and destruction or disposal of weapons and ammunitions at the site. After the interviews, a technical assessment of the facilities was also carried out in parallel to an examination of the socio-economic context of the surrounding areas and communities. The interview guide and further details of the process are available on request.
- 10 \ Over 50 respondents participated in (semi-) structured interviews, on-site evaluations and/or validation feedback sessions in Kinshasa, Mbandaka, Bokala, Gbadolite and Mobayi. The information from these sources is presented in this study in a way that is not attributable to particular individuals, and further details are available on request.

facilities and practices) as compared to what they knew should be the case. The researchers also spoke with officers and service people informally, as and when possible, as well as with civilians living and/or working in the immediate surroundings of the stockpile facilities. Most of the informants were open and willing to discuss all aspects of their work.

Interviews were conducted in French. Informal interviews with civilians at Bokala camp, conducted in Lingala with a member of the CNC-ALPC delegation acting as an interpreter, were an exception. The researchers wrote down the interviews and all other data in notebooks and summarized and digitalized major findings of the day's interviews at the end of each day.

They observed stockpile facilities and practices to establish in what aspect and to what extent practices found in armouries differ from international standards such as the ISACS and/or protocols that the authorities in the DRC have agreed to comply with, such as the Nairobi Protocol on the Problem of Illicit Small Arms and Light Weapons in the Great Lakes Region and the Horn of Africa. By an order of the chief of staff of the army, the evaluation team was authorized to enter the armouries and ammunition depots and to count and record the number and type of weapons and ammunition stored in the facilities. As photography was permitted, a large body of visual material documenting these arms and ammunition was also collected. All photographs and visual material were catalogued and labelled at the end of each day.



A member of the assessment team examining a FARDC register of weapons meant to record withdrawals and returns from the armoury housed in President Mobutu's former home in Gbadolite.

From a technical perspective, the purpose of these visits was to assess the level of risk and to identify the needs to improve the management of arms and ammunition stockpiles. The technical assessment of the risks posed by the weapons or munitions stored in the facility focused on the potential socio-economic, infrastructural and humanitarian impact of an unintentional explosion or diversion of weapons and ammunition. While conducting the technical risk analysis, the researchers paid specific attention to the following factors:

- \ The physical condition of the weapons or ammunition depot itself in terms of safety and security;
- \ Practices related to the storage and safety of weapons and ammunition;
- \ The physical condition of the weapons and ammunition as well as their number and type;
- \ The level of training and skills of the armourers or storekeepers responsible for the weapons or munitions storage facility, including their technical knowledge and the standards used to manage inventories and stockpiles;
- \ The impact of an unplanned explosion given the significant amount of high explosive contained in stockpiles of large calibre munitions and the presence of civilian communities within the blast radius.

At each site, the researchers collected PSSM-relevant technical data from armouries and wrote it down in notebooks at the armouries. They then logged this data into Ammunition Stockpile Risk Assessment (ASRA) software designed by MAG to enable technical evaluations of the risks posed by munitions depots.

They measured the surface area of weapons and ammunition storage sites with an electronic measuring device that could be also be used to calculate the dimensions of the walls and distances between the floor and ceiling. They recorded distances

between buildings and inhabited areas necessary for blast impact calculations and used tools available as part of the UN Saferguard software package (in the framework of the International Ammunition Training Guidelines) for further calculations. Specific tools used to calculate blast impact radii and impacts on surrounding communities included the Kingery-Bulmash Blast Parameter Calculator, Quantity-Distance mapping tools and Explosion Danger Area Calculator.¹¹

Prior to travelling to northern Congo, the authors analyzed primary source materials (legal instruments, policy papers and reports). This preliminary stage in the research process helped place in context the socio-economic, humanitarian and institutional context for PSSM practices in the DRC, and identify the actors most relevant to these practices. These findings are summarized in the section on Context and method (p. 11 ff.).

Despite all efforts to prepare the visits to the stockpile facilities before the research team left for the field, a substantial part of administrative and related formalities still had to be addressed upon arrival. As custom demanded, a large number of meetings needed to be held with local authorities in accordance with local protocol. These encounters offered an opportunity for the team to present the aim of the visit, identify specific research questions, and formally demand authorization and assistance from higher ranked officials responsible for the stockpile facilities to be visited.

^{11 \} Further details on methodology, software or specific tools used for this study are available in the MAG Technical Reports on Armouries (Evaluation Technique des rises des stocks d'armes et de munitions au Mandaka et Gbadolite, RDC, 2015) and the Bokala Ammunition Depot case study (Evaluation Technique du depot du munitions au camp de Bokala, 2015) that accompany this publication.

Validation process

Preliminary meetings gradually developed into an integral element in the research process cycle, in the sense that those giving authorization and arranging for practical assistance at the sites were keen to hear the team's preliminary findings as presented in validation meetings during and immediately after the site visits in northern DRC.12 A separate series of meetings was also organized with local interested stakeholders other than the military or security actors. These allowed incorporating concerns from local civil society and international humanitarian organizations active on the ground.¹³ Immediately after returning from northern DRC, the series of validation meetings was completed with formal gatherings in Kinshasa at and on behalf of the National SALW Commission, the CNC-ALPC on 12 October 2015, and with international community representatives on 13 October 2015.14

Having included a large range of different actors into the process, the different types of meetings allowed for multiple evaluation-validation cycles providing the team with a wealth of input of their reactions, comments and other feedback that have been taken on board in the drafting of this *Knowledge Note*.



The assessment team in discussions with representatives from the FARDC, PNC, Eco-Gardes and the local CNC-ALPC antenna as part of the final local-level validation of findings in Mandaka before the validation process in Kinshasa. \ Photo by Captain Budri Adobe FARDC / BICC

Overview of sites visited and interviews conducted

A team composed by BICC, MAG and GRIP staff conducted a PSSM assessment in Equateur and Nord-Oubangui Provinces in September and October 2015. The PSSM assessment was facilitated by the CNC-ALPC (both staff from its seat in Kinshasa and members of the CNC-ALPC "antenna" in Mbandaka). A preliminary identification of the number and the specifics of the stockpiles to be visited in Equateur and Nord-Oubangui Provinces proved impossible on the basis of the information available to the team: this identification process, the negotiation of access to the facilities and the organization of the actual visits could only be accomplished in situ. Site visits were conducted in collaboration with local FARDC and PNC personnel assigned to the specific locales and stockpiles visited.

^{12 \} Such 'local' debriefing sessions took place on 23 September 2015 at Bokala camp, and on 24 September at the état-major des forces navales (Marines Headquarters) in the heart of Mbandaka. Many of those participating in these sessions were also among the twenty-four participants of the restitution and validation meeting organized at the Mbandaka CNC-antenna on 8 October 2015.

^{13 \} These stakeholder meetings took place on 6 October 2015 at the Maison de la Femme in Mbandaka, and on 30 September 2015 at the UNHCR headquarters in Gbadolite respectively.

^{14 \} A validation meeting for 13 invited representatives of international organizations, military attachés and advisors from (potential) donor countries.

The research team visited 20 sites where arms and/ or ammunitions are stored. Some of these stockpiles were assigned to PNC, and most belonged to FARDC, yet all were found significantly similar in content. These were typically a mixture of several different types of military-grade weapons—mostly assault rifles—and assorted ammunitions, accompanied by a small stock of larger calibre munitions (mortars and rockets). FARDC and PNC stockpile facilities and PSSM practices in this respect were found sufficiently similar to be amenable to a single evaluation report.

The technical report prepared by MAG's technical field manager assesses 17 of the visited sites. Of the remaining three sites, one was of such a temporary nature that the small collection of arms allotted to PNC was literally passed from the hands of one guard to the next in front of the Gbadolite police headquarters. The other two armouries, the 11eme Groupement Naval in Mbandaka and the PNC armouries in Mobayi-Mbongo in the Nord-Oubangui Province located on the border with Central African Republic will be presented later in this study as separate case studies.

Several RPG7 munitions found without the safety band and in unstable condition, sometimes stored alongside highly explosive phosphorous charges (third from right).



Although munitions, including larger calibre munitions, were found at almost all sites, only one site in the Mbandaka area was found to be designated as the "munitions depot" where different forces, including the PNC, store back-up munitions at Bokala camp. As a significant amount of explosive material was found at this site, it became subject of a separate technical analysis. The site is also reported on at length as a case study in the section on PSSM in Practice of this study (p. 28 ff.).

The team conducted interviews at these sites and in their immediate surroundings. Information was also gleaned from meetings with a wide range of officers in charge of the personnel guarding these stocks. Some meetings took place at the commanding officers' offices rather than at the sites for practical as well as security reasons as many of the facilities were not ventilated, poorly lit and the presence of munitions that the MAG technical field manager deemed unstable made it unsafe to stay longer in their proximity than necessary. The assessment team recorded several RPG7 munitions found without the safety band. As static electricity from the human body is capable of triggering the piezo-electric fuse employed on these RPG7 warheads, certain precautions are employed while dealing with such munitions. These include simple measures such as assuming a 'prone/ praying position' for at least fifteen seconds with palms touching the earth to discharge most static electricity from the body before attempting to touch, examine or move such munitions. This is a useful example that illustrates one of the recurring problems in the DRC: Little or no knowledge of how to handle, inspect or store specific munitions due to inadequately trained personnel can prove to be a dangerous combination. Specific training is therefore a prerequisite for putting in place a responsible and safe PSSM culture.



High-level representatives from Sudan, Central African Republic, Chad, the DRC and Libya (l. to r.) sign a joint communique on priority activities under the aegis of the Sub-Regional Arms Control Mechanism in Khartoum, Sudan in November 2014.

Legal framework and policy

This section provides an overview of the DRC's national framework on arms control as well as an overview of four sub-regional mechanisms applicable to the DRC. Background to the establishment of the national authority on arms control, the CNC-ALPC, as well as the current Congolese National Action Plan is provided, specifically addressing PSSM-relevant sections. Finally, mechanisms intended to coordinate action on PSSM and small arms control such as the PSSM Working Group are evaluated, highlighting the need to translate theoretical knowledge, training and SOPs on PSSM into effective action.

Legislation

According to the government of the DRC, the production of arms (including 'artisanal production'), the possession, transfer and stockpiling of arms and ammunitions on its territory is not adequately regulated. The applicable legal framework is set by Ordinance-Law 85-035 of 3 September 1985 on the regime for weapons and ammunition, and Ordinance-Law 85-212 of 3 September 1985 on measures for implementing that law. These instruments have been described as "deficient and not suited to the context of the conflict" that the DRC went through, and as "not adapted to international and regional standards or to the contemporary context in the DRC" (Moreau, 2011, p. 32).

Efforts have been underway since 2004 to update and strengthen the legal framework on arms control in the DRC. In 2010, these efforts led the National Assembly to adopt a "Draft law on the prevention, control and reduction of small arms and light weapons and munitions in the DRC", and to send it to the Senate for debate. By 2013, the Senate had approved a draft arms control law, which however differs from the draft previously approved by the National Assembly. At the time of the assessment, in the autumn of 2015, the discrepancies between the two drafts had not been resolved and no consolidated version was in the pipeline for approval.

These legislative efforts are also prompted by the 2004 Nairobi Protocol for the Prevention, Control and Reduction of Small Arms and Light Weapons in the Great Lakes Region and the Horn of Africa. The DRC signed and in 2005 ratified the Nairobi Protocol that is a sub-regional instrument to implement the UN Programme of Action on SALW (PoA). The Protocol contains provisions on safe disposal and covers several related aspects of PSSM.

A second—and in fact older—sub-regional instrument on SALW control that includes the DRC is the Protocol on the Control of Firearms, Ammunition and other Related Materials that the Heads of State of the Southern African Development Community (SADC) adopted in 2001 immediately after the UN PoA came into being. As the DRC is a member of the SADC, the country's legislative framework would have come under scrutiny in light of efforts to implement that Protocol, such as to try and harmonize its member states' SALW-related legislation. In the meantime, Standard Operating Procedures (SOP) have been proposed and adopted on the SADC Protocol that entailed capacity-building for record-keeping and the disposal of state-owned firearms.

A third sub-regional instrument relevant to the DRC is the so-called Kinshasa Convention, the Central African Convention for the Control of Small Arms and Light Weapons, their Ammunition, Parts and Components that can be used for their Manufacture, Repair or Assembly It was negotiated by the United Nations Standing Advisory Committee on Security Questions in Central Africa (UNSAC) and was adopted on 30 April 2010 at a meeting held in Kinshasa. This instrument is not as yet in force, as it still needs to be ratified by two-thirds of its signatory states, including the DRC.15 By its signature of the instrument, the DRC is nevertheless understood to be committed to the provisions of the Kinshasa Convention, such as on PSSM, registration and the safe disposal of SALW.16

^{15 \} In its 2010 report to the PoA-ISS, the DRC stated that it had already ratified the Kinshasa Convention. A few months later, that same information was copied in the NAP. However, five years on, there was no evidence of the DRC having ratified the instrument. The assertion that the ratification was deposited was later denied by staff involved in the CNC, that is the Commission that initially reported the ratification. Further reporting to the PoA-ISS Secretariat is anticipated to rectify that previous reporting.

^{16 \} Respectively by Articles 16 and 15 of the Kinshasa Convention.

A fourth arrangement for UN PoA implementation that affects the DRC is the Sub-regional Arms Control Mechanism (SARCOM). SARCOM was founded in May 2012 in Khartoum, Sudan. Representatives from the DRC along with the Central African Republic, Chad, Libya and Sudan committed to the Khartoum Declaration on the control of SALW on the western borders of Sudan. They were later joined by South Sudan as an observer state. This Declaration highlighted priority needs of member states attempting to lay the groundwork for a comprehensive arms control approach in the region, which included arms registration and marking of civilian, illicitly owned SALW, more responsible PSSM practice and strengthening community security and arms control (CSAC) initiatives. The interim secretariat of SARCOM currently operates from Khartoum, Sudan.

DRC National Commission and Action Plan

In line with the prerequisites of the 2001 UN PoA and the sub-regional instruments to further implementation of the UN PoA, the *Arrêt Interministeriel* n° 020/2008 of 30 May 2008 foresaw a National Commission for the Control of Small Arms and Light Weapons and Armed Violence Reduction (CNC-ALPC).

This National SALW Commission was created to serve as a platform to coordinate all activities undertaken as part of the DRC's efforts to combat the illicit proliferation of small arms. It is placed under the auspices of the Ministry of the Interior and Security and is assisted by the Ministry of Foreign Affairs as well as the Ministry of Defence. It consists of an inter-ministerial assembly that is responsible for setting priorities and steering the country's fight against SALW proliferation. To this end, the Commission has drawn up a National Action Plan (NAP) that defines the DRC's policy for tackling its SALW problem. A survey funded by UNDP to take stock of civilian arms held in a handful provinces in eastern DRC,17 reportedly fed into the design of the NAP. There is little evidence that this survey was complemented by a more encompassing, truly national survey or needs assessment of all the nation's SALW-control related challenges, to inform the DRC's plan for the development of national policy and activities for the 2012-2016 period (NAP 2012-2016). The drafting process of this NAP was supported in various ways by the Regional Centre on Small Arms (RECSA), and it has reportedly also taken on board perceptions, opinions and expert advice of a wide range of national and international actors, including (some) members of the DRC's legislative power, the Minister of the Interior and Security, and the Minister of Defence, members of civil society, and UNDP. The latter, moreover, funded a feasibility study on the creation of regional antennas for the CNC-ALPC.

The NAP is not sanctioned by way of a specific law, but is seen as an authoritative expression of the governmental initiative to develop a national policy to contain the proliferation of SALW in the DRC. The CNC-ALPC published and printed a considerable number of copies of this plan. Copies of the publication are freely available in the DRC.

^{17 \} The study was made in 2009-2010 by a consortium of BICC and GRIP. An English language summary was published as Berghezan & Zeebroek, 2011.



The current National Action Plan of the DRC to control and manage small arms and light weapons first published in July 2011 is set to expire in 2016.

PSSM in the National Action Plan 2012–2016

The NAP 2012-2016 contains a section with the caption "Strengthening the security of the stockpiles". The activities programmed in this section seek to "strengthen the capacities for managing, marking and securing the stockpile of arms and ammunitions"; they also envisage that an "evaluation of the State's stockpile facilities" be conducted and that "facilities where the arms are stored that belong to the State's defence and security forces" be constructed and/or refurbished.¹8 The latter action is expected to result in the construction of two stockpile facilities. A firm assertion that the "FARDC, PNC and members of the CNC-ALPC are capacitated in this field" is filled out in the box on the expected outcome of the capacity-building action.¹9

The NAP indicates that implementation of these PSSM-related activities is contingent on the availability of "political will" as well as success in raising funds to cover the budgeted costs, 20 to the tune of a total of US \$1,200,000: US \$250,000 for the organization of ten training sessions (two training sessions a year, over the entire five-year term); US \$200,000 to conduct a national evaluation of stockpile facilities,21 and US \$750,000 for rehabilitation /construction of stockpile facilities. A an additional budget line, earmarked for transporting obsolete arms to a site for destruction, which some consider a core PSSM activity can also be found under this heading. Although considerable, these costs are comparatively modest compared to over US \$2 million that the NAP seeks to allot to (travel to) events to commemorate key dates in the creation of the international arms control regimes, and to over US \$14 million the NAP proposed the international community invest in broadly described activities for education and awareness-raising activities in the broad field of arms control and violence reduction, including capacity-building of the Congolese civil society and professionalization of its news media.

The actors the NAP tasks with specified PSSM activities are the Presidency, the FARDC Chief of Staff, the Ministries of Defence and that of the Interior and Security as well as the CNC-ALPC, UNDP, the Regional Centre on Small Arms (RECSA), which is the secretariat to the Nairobi Protocol, and the humanitarian NGO, MAG. For the national evaluation on stockpile facilities and rehabilitation of these facilities, the NAP additionally refers to the General Inspector of the PNC and to the Chiefs of Staff of both the police and the armed forces.

^{18 \} These actions are labelled in the NAP as « Renforcement des capacités sur la gestion, le marquage et la sécurisation des stocks d'armes et munitions », « Conduire une évaluation nationale sur les infrastructures étatiques de stockage d'armes » and « Construction/ Rehabilitation de magasins de stockage d'armes pour les armes des forces de défenses et de l'ordre public », respectively.

^{19 \ «}Les forces de défense, de l'ordre et les membres de la CNC-ALPC sont formées».

^{20 \} Section on stockpile management budgeted on NAP p. 67.

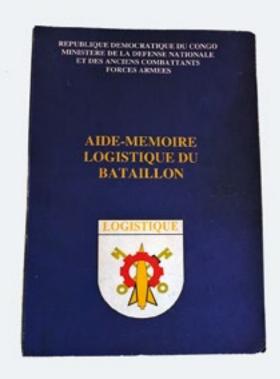
^{21 \} The envisaged 'évaluation nationale sur les infrastructures étatiques de stockage des armes' is apparently not to cover munitions stockpiling, nor practices and approaches in and around such facilities. As such, its scope clearly differs from the present evaluation report.

PSSM working group, training and SOPs

Prior to the drafting of the NAP, a DRC PSSM working group was formed and conducted regular meetings. Although the NAP lists several members of that group in the section it devotes to PSSM activities, this PSSM working group is not explicitly mentioned/referred to. Nor does the PSSM section in the NAP refer to the European Union's Security Sector Reform programme in the DRC (EUSEC-RD Congo), deployed to inter alia conduct PSSM-related activities. Since it began work in the DRC in 2005, EUSEC has built at least ten stockpile facilities and contributed quite significantly to the strengthening of the DRC's security actors' PSSM capacity. From 2011 until 2014, EUSEC additionally chaired the PSSM working group. As EUSEC scaled down its operations in 2015, the chair of the PSSM working group was transferred to the FARDC and co-chaired by the US embassy. Little evidence is available to suggest the CNC-ALPC has participated in meetings of the working group since that time. A reliable source informed the assessment team that the CNC-ALPC had not received invitations to attend PSSM working group meetings since its chair was transferred to the FARDC.

PSSM Standard Operating Procedures (SOPs) for the DRC have been proscribed in documents such as *Procedure et technique classe V Aide-mémoire logistique du Bataillon* (217 p., 2011) *and Aide-mémoire logistique du Bataillon* (97 p., 2014) that FARDC and EUSEC RD Congo jointly published. These documents themselves were found to be stored under lock and key in the desks of certain armourers in pristine condition.

This leads to two observations: First, important PSSM activities occur in the DRC relatively independently of a National Commission created to coordinate all SALW-control related policy and activity in the country, including PSSM. This reiterates the need for more effective coordination amongst national authorities responsible for small arms control including PSSM and the need to operate with greater transparency and cooperation towards jointly developing a culture of responsible and safe PSSM practices.



While aide-memoires and textbooks containing valuable PSSM knowledge exist, such as this PSSM manual published by EUSEC, transferring the knowledge contained in these books to practice and action still needs to be achieved.

Second, even though the aide-memoires and textbooks containing valuable PSSM knowledge exist, the knowledge contained in these books to practice and action still needs to be implemented, which will take time and commitment. To systematically minimize the gap between theory and action and to incorporate the knowledge acquired in trainings and in handbooks into arms and ammunition management is therefore crucial to building a culture of responsible PSSM practice. Effective coordination at the senior military levels and high-level political support to ensure the right training opportunities are made available to the right people will help create a conducive environment to facilitating this behavioural change. Making sure that the relevant, responsible actors who conduct PSSM on a daily basis, such as the armourers, logisticians and stockpile managers, take advantage of training opportunities and make a conscious effort to implement this valuable knowledge on the ground is a first step in this direction. More than any external action, this requires a conscious shift in attitudes on the ground and a willingness to drastically change current practices towards a more systematic and prudent approach. This is only possible if the relevant authorities take the initiative to cultivate a culture of responsible PSSM and arms control.

As of the autumn of 2015, PSSM activities in the DRC were placed under the highest presidential authority. This presidential decision was already seen to have an impact on procedures such as the authorization of destruction of weapons found obsolete, and more changes may be on their way that would call for clarification and possible rethinking of the current position and remit of the CNC-ALPC in PSSM activities, irrespective of the NAP.



To thoroughly assess an armoury, weapons were cleaned, categorized and counted before verifying their numbers with the data recorded in the registers. FARDC armoury, Mbandaka.



The assessment team examines a collection of RPG7 warheads, many of which are stored directly on the floor next to flammable phosphorous and not equipped with a security mechanism. Bokala munition depot, October 2015.

Findings and analysis of PSSM practices and approaches in north-western DRC

This section deals with findings related to the management of weapons, ammunition and equipment. Similarities, recurring patterns and specific findings are recorded paying particular attention to procedures, processes and communication channels. Specialized PSSM training opportunities are highlighted as a necessary precondition for developing a safe PSSM culture. Practices around accountability of withdrawal and return of weapons and ammunition are observed and complementary activities on weapons marking and record-keeping are noted. Finally, observations on safety and security of stockpiles including regular inspections, the risk of diversion/ theft, cross-border trade and destruction of surplus or unstable weapons and munitions are also identified.

Management of weapons, ammunition and equipment

Visits to all identified SALW stockpiles in the wider Mbandaka and Gbadolite areas, allotted to various forces of the armed forces of the DRC (FARDC),²¹ to the national police (PNC), and to paramilitary forces such as the Eco-Gardes that patrol the Mbandaka botanical garden, revealed their contents to be similar.

Identifying patterns in arms and ammunition sites

PNC posts typically hold a limited number of military-grade assault rifles supplied from (local) FARDC stockpiles, the clear majority of which are Kalashnikov variants chambered for 5.56mm rounds as well as an assorted number of M16/AR-15's and FN FAL rifles. Often these weapons are damaged or in far from optimal condition. A common claim encountered by the evaluation team during visits to the PNC was that they were not provided with specialized police equipment and they had to make do with military style weapons that carried lethal firepower. But, after visiting a number of PNC armouries the evaluation team recorded the presence of crowdcontrol riot gear, body armour and protective shields and helmets as well as pump-action shot guns capable of firing rubber bullets as well as smoke and flash grenades. This specialized equipment, which appeared to be in mint condition, has yet to be distributed to the frontier positions.

The team observed that the PNC appeared to be experiencing a shortage of ammunition, even in frontier positions located along the border with the Central African Republic (CAR) as described in the visual case study on the Mobayi-Mobangi PNC armouries (see section on PSSM in Practice, p. 44 ff.). The problem appears to have more to do with effective distribution of material , particularly to remote outposts, as well as the management of existing resources than merely a lack of specialized equipment or a drought of ammunition as explained in the next section on procedures.

The Eco-Gardes are a paramilitary force that receives basic training from the FARDC in order to provide security at wildlife protection sites and help curb the illicit trade in wildlife and natural resources such as timber. The Eco-Gardes are supplied with a limited number of Kalashnikov-style weapons from the FARDC stockpiles.

The PNC and the Eco-Gardes made it clear that they are dependent on the better equipped FARDC soldiers in the event of an escalation of the security situation.





New, unused Chinese manufactured 12-gauge shotguns were recorded in PNC armouries stored in their original plastic wrapping (r.) in front of several boxes of unused and undistributed 5.56mm ammunition and RPG7 warheads (l.).

In comparison, FARDC positions are much better equipped and hold a much wider range of weapons including artillery and heavier weapons. In terms of small arms, most sites visited contain a mix of a majority of Kalashnikov variants including the AK47 and Type 56 variants, AK76, AK-M as well as a limited number of Uzi 9mm machine pistols, FN-FAL and Galil rifles or heavier calibre machine guns such as the MG40 and a number of RPG-7 warheads. The team was also informed that the FN FAL rifles currently in stock are stored mostly for ceremonial use as they are chambered for the 7.62 x 50mm NATO cartridge which is only available in limited stocks making them unavailable for regular service.



A number of Belgian manufactured Fabrique Nationale FN FAL rifles chambered for 7.62mm ammunition, large quantities of which are usually no longer stockpiled in DRC.

The FARDC has incorporated arms that they reportedly found discarded on the streets after prior conflicts. Several of these weapons were then made available to the PNC.

The emphasis of this study is on evaluating PSSM practices rather than on the quality of available facilities and the specific nature of their contents, ²³ without downplaying the degree to which the latter determine such practices. The similarity and links between the different forces' stockpiles are suffi-

ciently significant to allow for identification of basic patterns found at most visited sites:

- \ Stocks of both arms and ammunition, including mortars and other larger calibre munitions, were present in most visited sites. 24 Munitions were not guaranteed to be sorted by calibre or by lots, year of manufacture or batches.
- \ Weapons and live ammunition were often stored together rather than separately or in locked containers within a larger secure storage space, which creates a dangerous environment as the weapons are 'active'. This practice also carries significantly higher risk as weapons and compatible ammunition would be available to anyone who has access to this site.²⁵
- \ In several FARDC and PNC facilities, magazines were found containing live ammunition, often lying next to or on top of rifles. In quite a few locations, magazines containing live ammunition were found loaded into the stored rifles.²⁶ These unsafe storage and handling practices pose a danger for staff working in the armouries as they are at risk of a loaded weapon accidentally discharging during routine cleaning or handling.²⁷ Further, from a technical or functional perspective, these unsafe practices also have a negative effect on the lifespan of the magazine: When magazines are stored loaded with ammunition this stresses the master spring of the magazine, which in turn makes the magazine itself less reliable.

^{23 \} The quality of available facilities and (quantitive) specifics of what these contain are detailed in the Technical Reports accompanying this study.

^{24 \} Quantitative specifics are found in the Technical Reports.

^{25 \} Storing weapons and ammunition separately is another example of a low-cost measure that would vastly decrease the risk of diversion

^{26 \} This is particularly disconcerting as safe weapons handling practices are far from the norm in the DRC and in the wider region. The team observed an over-reliance on the safety mechanism—which may or may not be engaged—rather than observing basic safety protocols such as pointing the weapon in a safe direction.

^{27\} This example clearly illustrates why responsible PSSM practices benefit the soldiers who are engaging with dangerous material on a daily basis and whose lives depend on this sensitive equipment and munitions functioning reliably and accurately.

- \ Different types of incompatible munitions were found stored together creating hazardous situations, often without even being separated in wooden crates. RPG7 shoulder launched rocket projectiles were routinely found in piles on the floor next to phosphorous or other munitions or fuses that were deliberately designed to be highly flammable. This is discussed in greater detail as part of the case studies on Bokala (see p. 44 ff.).
- \ The assessment team recorded several instances where weapons and/or ammunition were also found to be routinely stored alongside other materials including specialized equipment for law enforcement purposes such as riot gear or other mechanical spare parts for vehicles including spare tires and fuel which could prove to be a fire hazard.
- \ It was also the norm rather than the exception to find weapons and ammunition stored along-side food items such as bags of rice, jerrycans containing cooking oil or other provisions. The common denominator of all items contained in such storage facilities is a perceived value that merits them to be placed in a space that can be locked. The conjunction of all these materials in one unventilated storage room, along with flammable material, such as wood or paper, is unsafe.
- \ The fact that sensitive munitions and weapons were stored with food items creates its own set of complexities. Besides the fire hazard, this could also lead to the uncontrollable prevalence of rodents which can eat through wooden ammunition cases and paletts used to support piles of these cases, in effect rendering entire storage sites unsafe. This is another example where simple measures, such as basic cleanliness, can vastly improve the security and life expectancy of weapons and munitions at absolutely no cost. This does not depend on external intervention from Kinshasa or further afield; in fact it is totally dependent on the initiative of the officers responsible for the upkeep of the armouries or munitions depots.



Weapons and ammunition are often stored together with vehicle parts, food or flammable items in contravention of standard operating procedures.

Nather than keeping such dangerous ammunition in their SALW storage facilities, the different forces in the Mbandaka area could transfer these to the space assigned to each of them at Camp Bokala, which has taken up this role since 2007 when a fire destroyed the munitions depot at Camp Ngashi (see case study below). While the case study in this report draws attentions to specific problems that exist at Bokala, the advantage of having a dedicated weapons and munitions site is worth taking into account.

Identifying procedures, processes and communication channels

Supplies to stockpiles throughout the DRC's territory are governed by legal instruments that define what entities can hold which categories of arms and how items can be imported, transported and otherwise supplied to specific locations on that territory. Within the regulatory framework currently in place, the "maison militaire du chef d'état" plays a central role. It identifies the Congolese security forces needs in terms of arms and related equipment. Created by Article 11 of Décret n° 019/2003, of 2 March 2003, this office is staffed exclusively with FARDC officers, and works directly under the President of the republic. It also assures the link between the Presidency and the Ministry of Defence, as well as the état-major of the FARDC and all concerned forces and services. Based

on the directives of the supreme command of the FARDC, its role is to manage the procurement and the purchase of new armament, before this can be distributed to troops within the territory. Only the President and the Minister of Defence can authorize transfers of military grade arms and ammunitions into, through and from the DRC's territory.

In practice, this mechanism and logistical supply chain does not always guarantee effective stockpile management. Visits to sites in Equateur and Nord-Oubangui Provinces brought little clarity about why and how certain items came to be contained in FARDC and PNC stockpile facilities and why others are scarce or absent. The presence of rockets and mortars found in many of the visited sites is particularly difficult to explain in terms of 'needs' or 'routine use' by the forces in whose armouries these



were found. The most common explanation received by the team was that they had been 'left there temporarily' by a soldier or had been 'found' at the site as remnants of prior conflict in the area, when they were brought into the area and used by armed structures that demobilized after the war.

As opposed to SALW, landmines and related explosive remnants of war were disposed of in some areas of Equateur Province, with the assistance of specialized organizations such as UNMAS and MAG. Procedures were put in place to channel requests for the removal of these explosive materials; these procedures are also applicable to the removal and controlled disposal of obsolete weapons from government stocks. The assessment team however found that those in charge of managing stockpiles that contain such materials do not know these procedures, which results in the continued presence of obsolete or unusable weapons.

The management of arms and ammunition distribution is another example that would benefit from clearer channels of communication. Munitions scarcity at the Mobayi-Mbongo police station coincided with the presence of a relatively large amount of ammunition at PNC facilities in Mbandaka, the capital of Equateur Province. Difficulties in transporting stocks from Mandaka to Gbadolite and further towards the frontier with CAR appear to coincide with an apparent ignorance of procedures and channels resulting in the inefficient distribution of ammunition stocks even to sensitive frontier positions.²⁸ The evaluation team documented instances where policemen operating along the border with CAR only had three rounds of ammunition in their weapons in stark contrast to policemen in Kinshasa who had a full thirty-round magazine and, in many cases, even a spare, fully loaded magazine in reserve.

Finally, as explained in the previous section, the weapons themselves in service with the police are in far from optimal condition, and even these are limited in number. In the wider Gbadolite area, the number of such arms is limited—reportedly one rifle for every ten policemen, and even less pistols.²⁹

PSSM training opportunities: Specialized training for specialist roles

Despite the fact that materials documenting PSSM standard operating procedures are fairly readily available and that for decades, various actors, including the FARDC, have and continue to organize specialized PSSM trainings in many locations in the DRC, MAG's technical assessment reveals that personnel in charge of the visited stockpiles have at best insufficient PSSM-specific training, and in many cases no specific training at all. At the same time, at many sites, personnel other than those in charge of the armouries appeared to have more adequate training—especially officers higher up in the forces' hierarchy (PNC and FARDC). The evaluation team encountered several superior officers who were able to recite rules and procedures upon request, yet found no evidence they had helped ensure such procedures were known and implemented by the men under their responsibility, nor that these men (and women) were sent out to



Specialized trainings to build capacity on PSSM are offered by several organizations. Here, African 'instructor trainees' receive PSSM training at the IPSTC in Nairobi, Kenya, in April 2015. The course is facilitated by BICC, RECSA, MSAG and the Verification Centre of the German military.

^{28 \} The Mobayi-Mobangui PNC station chief asked the BICC/MAG/ GRIP team to transmit to "Kinshasa" his request that munitions be supplied.

^{29 \} Information obtained at the PNC état major in Gbadolite on 29 September 2015.

adequate training programmes. Further, the role of an armourer is not sought after as the person in charge of the armoury takes on the unenviable responsibility of managing a facility already fraught with risks and problems.

FARDC organizes trainings out of their own means or in cooperation with external assistance provided by organizations such as EUSEC-DRC and in bilateral cooperation programmes with the governments of France, Belgium and the United States of America amongst others. It is in this context that FARDC and EUSEC co-published the manuals *Procedure et Technique Classe V Aide-mémoire Logistique du Bataillon* (217 p., 2011) and *Aide-mémoire Logistique du Bataillon* (97 p., 2014). Other external actors organized PSSM-related training programmes relatively independently, as exemplified by the United States' organization of a "train the trainers" programme. Organizations such as MAG are another source of PSSM training available to the DRC.

The National Commission should also be responsible for identifying training opportunities and liaising with regional organizations such as RECSA and the International Peace Support Training Centre based in Nairobi that conduct PSSM training of trainers courses with support from BICC and the German Federal Foreign Office, the African Union, the German military and the Multinational Small Arms and Ammunition Group.

In consequence, one of the challenges the evaluation team identified is that trainings needs to better target those personnel directly responsible for the management of weapons and munitions facilities. These trainings should therefore prioritize armourers, stockpile managers and logisticians rather than allow the training opportunities to be captured by superior officers. Second, once trained, greater efforts need to be made that qualified personnel remain in charge of the armouries and munitions facilities rather than being transferred to other roles.³¹ These trained personnel should also play a key role in training additional staff in order to build PSSM capacity at the national level. Finally, staff from all branches of the armed forces should be provided with training opportunities, avoiding the monopolisation of opportunities by any specific branch.

^{30 \} No open source impact assessment of the 10 years EUSEC-DRC programme was available at the time of the mission.

^{31\} At one site, containing a rather large stockpile ascribed to the naval forces in Mbandaka, the person in charge of the armoury reported having trained in the United States. Although most arms in that particular stockpile were found to be kept in good condition, they were not stored safely. This is detailed in the visual case study below (p. 44 ff.).

Accountability

Stock reports: ammunitions and arms

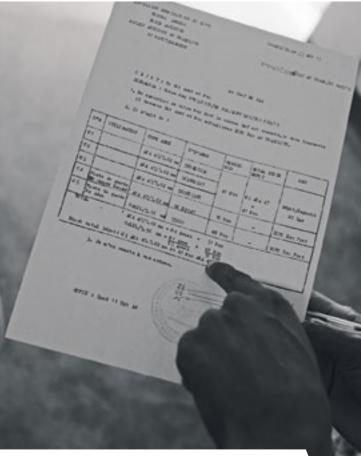
Most, but not all, visited sites had some sort of inventory that listed types and volumes of arms and ammunitions assumed in stock. Its quality (that is, completeness and veracity) however differed from site to site. In the case of one particularly modest stockpile, an envelope containing an updated copy of the inventory was cautiously retrieved from a secure box. The envelope was ready to be sent to Kinshasa, as the person in charge indicated she must do every six months. No evidence of similar diligence was found at other storage facilities, where the MAG technical field manager's comparison of the listed inventory with the actual holdings tended to reveal discrepancies. Arms were also more often than not seen to be mislabelled on the inventory. In several cases, more arms were found in stock than were listed in the inventory.

It is worth noting that despite its flaws, the fact that this system exists is already an improvement compared to practices prevalent in storage sites in different countries in the region where, often, there is no recording system at all.



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The main armourer at the Air Force auxiliary post in Gbadolite received specialized training in Kinshasa. She maintains the small stockpile of weapons and transmits the inventory to her superiors in Kinshasa on a regular basis

Withdrawal and return

Most of the visited sites had in place some system for following the arms and ammunitions through the hands of personnel—whether it is a booklet to note down the 'in-and-out' of weapons, locally known as a "cahier de perception", or loose-sheeted forms that personnel fill out upon withdrawal of a piece of armament.³² Often, however, the cahier de perception was not found in the armoury but had to be procured by the personnel in charge from a different location. The fact that there was a booklet did not guarantee that it was filled out as prescribed by procedures both FARDC and PNC are to follow.

In the particular case of the newly installed Gbadolite PNC état major, the assessment team observed that the person ending his duty directly passed on the very modest stock of arms to the person replacing him or her—the changing of the guard. This procedure took place on the street in front of a former housing block where the PNC EM is currently seated. The arms never made it to a storage cabinet or room in that building.³³ The names of the personnel on duty were noted, with reference to date and time. It appeared that no specifics concerning the arm and number of bullets given to those on duty were registered in this book.³⁴

^{32 \} The system was found in one Mbandaka PNC armoury. Several different versions were recorded of how the system was supposed to work. According to some, the form documenting an "out" was signed and then kept by the person as proof having returned the arm. In another version, the forms were stored at the armoury. A highly incomplete folder of forms was found in the armoury.

^{33 \} Observation by one person of the assessment team and two representatives of CNC-Kinshasa, after visit to the Gbadolite PNC EM on 29 September 2015.

^{34 \} A comment from the evaluation team about the absence of such information in the book was met with the PNC's superiors' promises that columns would shortly be added to the register, allowing the arms and ammunitions to be registered alongside the names.

Marking efforts and the prospect of digitalized record-keeping

The majority of arms that the team encountered at the visited sites, as well as most arms held by personnel on duty were marked in some way or another, making it possible (if not always easy) for the team to often identify at the least the type and manufacturing country of the arm. Markings from manufacturing were indeed the only way to identify the arms, as the DRC is yet to begin the marking of government-held stockpiles in Equateur Province and in many other parts of the country. None of the respondents felt they were in a position to predict when the country's arms markings endeavour, that they assumed is underway in and around Kinshasa and possibly Bunia, is likely to reach Equateur and Nord-Oubangui Provinces.³⁵

According to the CNC-ALPC and various specialized external observers active in capacity-building in this field, there is no centralized register that contains reference to all arms on the DRC's territory. Some forces at best keep a record that refers to the manufacturer's markings on the arms kept at particular sites. No evidence of a digitalization of such partial records was found, and there seems to be no intention to digitalize existing records in the near future.

Weapons marking pilot project, Kinshasa

Immediately after the end of this assessment, the issue of PSSM had moved into the higher political strata where it was being addressed at the Presidential level. The assessment team has been made aware that a pilot project on marking weapons used by regular forces is underway from 1 January to 31 March 2016 with financial support from the Embassy of the United Kingdom. The pilot project focuses on Kinshasa Province and intends to mark weapons from almost all branches of the security and defence forces including FARDC, PNC and the National Intelligence Agency (ANR). The pilot project aims to establish lessons learned and best practices that feed into a framework that can be used by the government of the DRC to develop a multi-year weapons-marking strategy and extend weapons marking across the whole country.

This appears to be a very positive development that has resulted in improved cooperation between the two main actors in PSSM in the DRC—the CNC-ALPC and FARDC. The Commission is clearly the lead on this very useful project that, if conducted successfully, will complement previous work done by the FARDC and the PSSM Working Group and is a clear step towards strengthening a culture of responsible, safer PSSM and arms control practice in the DRC.





Markings on the fire selector of a Chinese-manufactured AK47 Type 56 variant (l.) and Arabic markings on the receiver of an Egyptian-manufactured AK47 pattern rifle (r.). An effective SALW marking, registration and record-keeping goes a long way in securing stockpiles and preventing diversion, laying the ground work for a broader tracing or tracking programme.

^{35 \} The DRC has received several marking machines in the course of various international cooperation arrangements (including RECSA), but at the time of this study, the actual markings endeavour was restricted to SALW collected from civilians in one province.

Safety

Basic safety practices, regulations and protocols

Many of the visited sites were in gross violation of regulations and protocols intended to ensure the safe storage of arms and ammunition. Rockets and mortars, found to be old and presumed unstable and thus obsolete, were routinely found stored in the same space as functional smaller calibre ammu-

and the difficult access to the site, the capacity to respond adequately and efficiently in the event of an emergency is extremely limited.

In Mbandaka, weapons and munitions storage sites were dependent on alternative sources of electricity as was the rest of the city. Armouries visited in Nord-Oubangui Province were often solely equipped





 $Safety\ indications, such as\ fire\ hazard\ markers, were\ rarely\ present\ in\ armouries\ or\ munitions\ depots\ (l.).\ Pile\ of\ obsolete\ weapons\ (r.).$

nition and SALW. In some locations, boxes were stacked in high piles and not placed on pallets to allow for even a minimum amount of ventilation. The situation was found quite alarming in the Bokala camp facilities, which contained a large amount of explosive material—as is recorded in the extended case study (see p. 44 ff. in this *Knowledge Note*). The road to the camp is in an extremely poor condition, rendering transport of ammunitions extremely dangerous, and making it almost impossible for ambulances or fire trucks to reach the site of the camp in case of an accident.

Bokala camp, as other visited facilities, further lacks basic, no-cost measures such as written safety advice to minimize the risk of fire, emergency contact numbers, sand buckets to extinguish fires and notes identifying protocol in case of fire or other accidents. Given the limited emergency response facilities

with electricity provided by an on-site generator. In some armouries, the team could only examine their contents with the help of a torch.

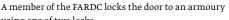
The absence of basic facilities, such as a regular electricity supply that are taken for granted in armouries in developed countries once again illustrates the need for tailored responses to realities on the ground.

Culture of inspections

There is evidence that the relevant department of the FARDC carries out inspections in Bokala camp. This evidence, and indeed the existence of a brief inspection report, however does not seem to trigger action to help ensure that a highly unsafe situation is promptly remediated, as the case study below (p. 44 ff.) indicates.

Securing stocks

Security measures were found deficient in practically all sites visited. Behind a door, (at best) closed with a single unsophisticated lock, arms and compatible ammunition were often stored side by side, and in some cases magazines were even loaded into the weapons. The team did not encounter any low-cost measures such as a purpose built weapons rack or a basic lock and chain system for safeguarding arms individually. In only one small armoury that was allotted to the état major of the air force stationed at Mbandaka airport, windows and ceilings to the storage facility were relatively well secured. In many other sites, large holes in the ceiling and open windows would make the stockpiles vulnerable to theft.





Theft from service armouries

Reports on actual theft from service armouries were however rare, and verbal accounts of incidents proved contested. At Bokala camp near Mbandaka, rumours abounded that arms were routinely taken out of the main armoury located in the main ammunitions storage building, containing the rifles used



An improvised weapons rack used by the PNC in Mandaka, Province Equateur. A low-cost chain and lock system would help secure these weapons at minimum cost.

by the guards to protect the camp. These were allegedly used during the night for criminal purposes and returned in the morning before anyone could notice they were missing. Even if the sub-optimal quality of PSSM practices at the camp would put little in the way of those wishing to take a gun for the night, the rumour remains unsubstantiated. Replies to the question whether rifles and/or ammunitions had ever gone missing from that particular armoury at Bokala camp varied from "yes, often", "sometimes", "in a few exceptional cases" and "never" – depending on the interlocutor and the setting in which that question was asked. ³⁶ To pursue these allegations is beyond the scope of this study.

^{36 \} The latter two replies were heard at the validation briefing with camp personnel on 23 September 2015. The former two replies were given in interviews with individual interlocutors, both military and civilians living near the camp.

The lack of clarity and evidence of theft from this and other armouries in the region is further complicated by the lack of reliable stock reports and recording of withdrawals and returns of arms and ammunitions, as mentioned in the subsection on accountability. In the absence of reliable documentation of arms and ammunitions that went missing from service armouries, such theft can only be documented by reports on violent acts committed with arms presumed stolen from service armouries.³⁷

Cross-border trade

While the team stayed in the Gbadolite area, it actively looked into evidence of the trade of SALW and ammunition from one side of the border to the other or vice versa. Although rumours about such traffic abounded, little such evidence was found in the DRC.³⁸ Traffic from the DRC to its northern neighbour has been more extensively documented in the Central African Republic.³⁹ An inde-



A wide range of commodities are transported and traded across the narrow Oubangui River that separates DRC (r.) from CAR (l.). A pirogue is about to land on the Congolese bank of the Oubangui River, near the market at Mobayi Mbongo.

^{37\} Such reports turned out to be very limited, confined to one news report about the theft of at least four arms from a FARDC armoury in Gbadolite in mid-2014. As the presumed culprit could not be arrested and remains in hiding (more than a year after the theft), no further information was forthcoming about the motives of the theft and its possible connection with the "market for arms" across the border, in war-torn Central African Republic. The team's repeated requests for a paper-trail documenting that prosecution, or even newspaper articles, remained unanswered.

^{38 \} The evidence was limited to one report on an industrially produced AK-type arm found in the possession of a presumed Seleka-affiliated fighter from the Central African Republic, arrested on the DRC side of the border (FARDC, Gbadolite, October 2015).

 $^{39\ \}backslash$ According to an independent expert source consulted in September 2015 on cross-border trafficking between the DRC and CAR.

pendent expert source, consulted on this matter in September 2015, reported that the presence of arms from the DRC has indeed been documented since July 2014. These arms were found in heterogeneous (mixed) batches, typically containing an assortment of assault rifles of the FAL, Galil and SAR-808 types; as well as Uzi machine guns. The sources indicated the arms were linked to Congolese stockpiles on the basis of markings found on some of the arms identifying the "Etat Congolais" or in some cases "Zaïrois" as their owner. In other cases, the producers of arms bearing specific serial numbers could confirm these arms were at one time, and fully legally, transferred to the DRC (or Zaïre, as it was called in earlier times). But even if these arms can be linked to the DRC on the basis of their considerable age, the 'typical' heterogeneity of the batches in which these were found, and the fact that the security detail of President Ange-Féix Patassé at one time contained armed troops from the DRC linked to Bemba, there is no basis on which to determine how, nor even when, these arms were transferred from the DRC to the frontier with the Central African Republic that they must at one time have crossed. The expert continued that they had no grounds to say the presence of these arms in the Central African Republic is the product of casual ant-trading or whether they were brought in by way of a well-organized scheme. What they do know for sure is that a certain number of the arms present in the Central African Republic since July 2014 are compatible with the arms recorded at earlier times in the DRC (same model, manufacturers markings and similar serial numbers). Regardless whether they were first present in the Central African Republic and later in the DRC or whether this went the other way around, we do recognize this as evidence of trans-frontier trafficking, though not necessarily of recent trafficking. Several sources in the Central African Republic consulted in the past

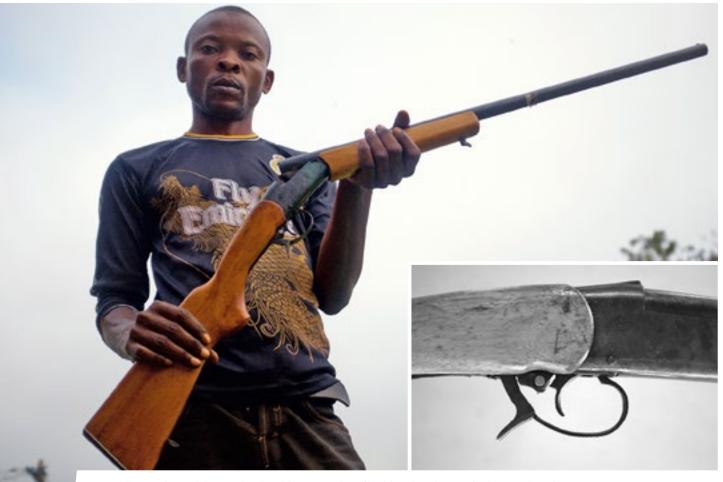
months (summer 2015) within the armed forces, the gendarmerie, the police, customs, MINUSCA and diplomatic missions all have reason to believe that arms continue to be trafficked across the Oubangui River.

One source in particular provided information that suggested the UPC (Peuhl branch of the former Séleka coalition) was in the process of re-arming from sources on the other [DRC] side of the Oubangui River.

More evidence seems to suggest that artisanally produced hunting rifles are being traded within and/ or trafficked out of the DRC. Studies conducted by the CNC-ALPC in 2014 and by other organizations⁴⁰ on the production and commercialization of hunting rifles produced by local blacksmiths covering other areas of the DRC indicated a significant amount in and near Yakoma, in Nord-Oubangui Province. In that location, even Kalashnikov-style machine guns were reported to be produced. 41 Anecdotal evidence claims that producers of these artisanal weapons had overcome the difficulty of crafting receiver mechanisms that were capable of loading and firing ammunition on a self-loading, repeating basis. While there might be some weight to rumours that artisanal producers were taking advantage of the large amount of available spare parts from assault rifles to construct such weapons, the evaluation team has not seen such a weapon and therefore cannot provide more information on this issue.

^{40 \} A GRIP study specifically dealing with artisanal weapons also provides useful background on this issue (Berghezan, 2015).

^{41 \} As the evaluation team did not encounter such weapons, it remains difficult to determine whether such arms are built from scratch or assembled from recycled pieces. This observation is also not meant to qualify what is mainly anecdotal evidence about the existence of these weapons. A CNC-ALPC study on artisanal weapons which was being written at the time of writing should provide more material although the team was unable to obtain a draft at the time of publication of this *Knowledge Note*.



Artisanally manufactured shotgun chambered for 00 cartridges offered for sale to the team for the equivalent of US \$300. The shotgun was fitted with a mechanical safety device to block the trigger mechanism (right).

A study conducted by the CNC-ALPC at the end of 2014 found that hunting rifles were being offered for sale at prices as low as US \$30 in the immediate proximity of their presumed site of production. In Gbadolite, still relatively close to Yakoma, these same rifles would sell for US \$100. In Mbandaka, local blacksmiths offered their wares to members of the team for US \$300 per piece. Ammunition (calibre 00) was in all instances reported to sell at 1000 Congolese francs per round—roughly one US dollar.

In both places, clients for such guns were reported to also come from "across the river", meaning the Republic of the Congo near Mbandaka and the Central African Republic in Nord-Oubangui Province. Here, it seems that such exchanges could be made at the weekly market at Mobayi-Mbongo.

Obsolete and unusable weapons and ammunition

In an unstable state, surplus, obsolete and incompatible arms and munitions are often found in abundance side by side, and more often than not there are no clear mechanisms for their destruction or safe disposal. This was also the case when the team visited various sites in the DRC. While the personnel in charge and/or their hierarchical superior were aware of the security risks caused by these stockpiles, none of them was seen taking concrete steps to dispose of them. Limited knowledge of proper procedures and channels to formally request the removal and destruction of the materials exists.

Similarly, the evaluation team noted that large piles of obsolete and unusable weapons were mixed in with serviceable weapons, with no guarantee that their presence was recorded accurately in the registers of the armourers. The presence of these weapons increases the risk of diversion, as still functional parts and material can be used illegitimately in artisanal weapons production. Therefore, obsolete, unusable or "hors service" weapons should also be destroyed or disposed of systematically at the earliest possible opportunity.



Miscellaneous parts of AR-15, Galil and Kalashnikov pattern rifles are stored in a rice bag at a police outpost in Mbandaka.

Identifying and establishing mechanisms for the destruction or safe disposal of surplus and obsolete arms and ammunition should indeed be a clear priority for the Congolese authorities. Communication channels ought to be made clear to personnel responsible for the maintenance of these stockpiles and their superiors, even if this means that they are provided with a template where necessary. This should indeed be a clear priority for the Congolese authorities. Failure to do so increases the risk of an unintentional explosion and puts the lives of military personnel and surrounding civilian communities in great danger.



Family members of the soldiers working in the nearby munitions storage sites in Bokala prepare manioc leaves to cook dinner. Women are aware of the danger of an unintentional explosion but more immediate concerns about primary health care and access to clean water are prioritized.



PSSM in practice

This section focuses on how PSSM works in practice through three case studies including a large weapons and munitions storage site in Bokala camp in Mbandaka, a Congolese Naval Forces armoury operating next to a health clinic in Mbandaka and a Congolese police position on the frontier with the Central African Republic in Nord-Oubangui Province. The first case study provides a comprehensive insight into the methodology used by the team, locating the technical findings in a socio-economic context and providing an analysis of observed practices. Specific practices observed in the latter two case studies are illustrated through a visual narrative to provide an insight into the reality of the complex task of the management of weapons and ammunition. Infrastructural and practice-based findings are identified and recommendations are made.

Case study on Bokala camp, Mbandaka



Introduction

Bokala military camp⁴² is situated about four kilometres south of Mbandaka and can only be reached via a dirt road. The grounds of the camp used to be a plantation, until 1977 when its owner went bankrupt and the Congolese state seized the grounds. A group of ten brick-and-mortar blocks that had been constructed to house plantation workers were then occupied by soldiers and their families. A handful of larger buildings were converted into offices and a guard post. An open shed protects about ten pieces of heavy artillery.

Since 2007, two of the buildings in the camp's housing zone have been used to store various types of explosive material. These are shown on the picture as Magasin 1 and Magasin 2. The presence of these materials, the team was told, is a consequence of a fire that destroyed Camp Ngashi in 2007—a military camp in the centre of Mbandaka where a proper purpose-built munitions storage had been

in use since 1957. That storage was beyond rehabilitation after the fire, and as the camp was by then surrounded by a densely populated urban area, no plans were being made to build a new storage facility on the same site. Explosive materials that had remained relatively unscathed in the fire and were deemed stable were removed from the debris of the site, and as a temporary measure they were transferred to Bokala, a military camp further removed from the urban centre.

^{42 \} The case study is based on extensive field trip visits to Bokala camp on Tuesday 22 and Wednesday 23 September 2015. The last visit was concluded with a validation meeting with the base's highest officers responsible for, inter alia, logistics and the maintenance of the improvised storage. Comments made at that validation session were taken up in this narrative account.

The conversion of two of Bokala's housing blocks to improvised munitions storage, in turn, is explained by the lack of facilities where dangerous material such as larger calibre munitions, rockets and other explosives materials can be stored safely. Promises were made to promptly construct a proper secure storage facility for longer-term storage of material that had survived the fire at Camp Ngashi and serve as a munitions depot for the armed forces in the wider area, including the navy and the national police.



A member of the assessment team evaluates a munitions storage site containing 120mm high explosive artillery shells at Bokala while an FARDC logistician looks on. The fuses for the shells are stored separately in line with international PSSM standards.

The dangerous situation at Bokala camp was pointed out in internal (army) inspections and external evaluations alike—including an assessment by MAG in 2011 that was intended to put donor organizations and FARDC in the position to identify interventions. 43 Short-term interventions were proposed to make the situation in the storage less dangerous, and costs were calculated for the construction of a secure storage facility elsewhere on the campgrounds. That MAG assessment, in turn, is referred to in an internal FARDC inspection of later date that proposes an intermediate solution (four containers to be placed near the shooting range, about one kilometre further from where the munitions are currently stored), while advocating for the construction of a purpose-built secure storage facility as a longer-term solution.

Fact-finding at Bokala camp, September to October 2015: Methodology

The head of the état-major général des armées authorized the team to visit Bokala camp in the presence of FARDC logistics persons. These visits took place on 22 and 23 September, and on 5 October 2015, 44 accompanied by personnel from CNC-ALPC Kinshasa headquarters, as well as from the Mbandaka antenna. The MAG technical field manager along with BICC's technical advisor and the evaluation team were authorized to enter the munitions depot, to measure, take pictures of the location and to identify and count the different types of munitions stored there. They also conducted about twenty interviews with various respondents working and/or living at Bokala camp, which helped to draw up the socio-economic profile of the camp and its surroundings, probe the awareness of the risks of life and work in the proximity of munitions and larger calibre explosives, and evaluate practices in place to contain such risks.

^{43\ &}quot;cette étude devrait permettre aux organismes donateurs et aux FARDC d'identifier des interventions", quoted from Mine Action Group, 2011.

^{44 \} These visits also allowed the team to evaluate two different armouries located at Bokala camp. The findings of that evaluation are incorporated in the general appraisal of PSSM practices in the Equateur and Nord-Ubangui Provinces.

A first validation meeting about the initial findings was held at the camp's état-major office at the end of the 23 September visit, giving the base's highest officers responsible for logistics and the maintenance of the improvised storage the opportunity to provide feedback. The analysis of the findings was further validated in a meeting on provincial level held at the Mbandaka CNC-ALPC antenna building on 8 October, as well as in national validation meetings held in Kinshasa on 12 and 13 October, for the CNC-ALPC and for representatives of the international community, respectively. Comments made during each of these validation meetings fed into the following account of what was found to be the case at and around Bokala camp.

Findings

Infrastructure and perimeter: Bokala camp fails to qualify as a munitions depot—the term that translates from "poudrière"; by which the locals describe the facility. The thin-walled brick-and-mortar buildings have simple aluminium plate roofs. The camp has no secure outer perimeter. It can be reached over a bad dirt road that leads to a guard house, where armed soldiers routinely stop and question approaching vehicles while pedestrians and (motor) bikers using this road to get to huts that surround the camp and to reach Bolenge, a nearby village, are usually allowed to pass. It is likely that the terrible condition of the road leading to the storage sites in Bokala has contributed to making the munitions transferred from Ngashi to Bokala even more unstable.

The stock of munitions and explosive materials are in fact divided over two of ten building blocks that make up the camp's main housing area. Each of these blocks is 49 x 10 metres. A large number of children who live there play around the buildings, up to the doorsteps of the block where munitions and other dangerous goods are stored.

One building, indicated as *Magasin 2* on the Google Earth map, houses both people and munitions. It is 140 meters removed from the main munition storage in the block labelled on the map as *Magasin 1*, which is surrounded by barbed wire. In addition to munitions and explosives, this building contains a small armoury where about 25 assault rifles are stored on an improvised rack. The arms are not individually secured, and the rack is placed near an open window.



A member of the assessment team discussing storage practices with FARDC armourers. Despite being neatly labelled and well maintained, the 25 AK pattern rifles are stored next to an open window. \Photo by Captain Budri Adobe FARDC / BICC

The main munitions storage building contains six compartments. Three of these compartments are 7.80m long, 6.55m wide and 3m high; the other three compartments are equally long and high, but are slightly wider at 7.43m. The outer walls of the building, as well as the walls separating the compartments, are about 200mm thick. Water seeps in through cracks in the walls. The flooring is of reinforced concrete. Aluminium plates that serve as the roof have not been fitted with anti-intrusion grids. Ventilation is extremely poor in each of the compartments, and temperatures reportedly reach up to 40 °C. Each of the compartments is closed by a simple wooden door (not-reinforced) that is secured with a small lock. The keys to the locks on these doors are kept by the persons in charge of this facility, that is members of the 13th région militaire

and the naval force, even when off duty and outside of the secure facility. This contradicts the established best practice of storing the key in a lockable container under guard away from the arms or munition storage area. This avoids a possible situation where access to the key—and therefore access to the munitions and weapons in an emergency by legitimate soldiers—is impossible as the bearer of the key is away. Should the bearer of the key have an accident or be robbed when off-duty, there would be an increased risk of weapons being stolen or diverted from the camp.

From a safety perspective, two issues are worth noting: For one, none of the installations are equipped with a lightning rod. This is particularly problematic as Equateur Province is notorious for fierce thunderstorms, a major source of fire incidents. There is not a single fire extinguisher nor sand bucket available, even though these items are not costly. Security warnings or signs listing emergency phone numbers to call in case of an accident are also absent. Given the limited response capacity of the emergency services in Bokala, this is a particular issue of concern as response time would increase even further. There is one fire engine normally parked at Mbandaka airport—at least a forty minute drive away from the perimeter of the base—and the terrible conditions of the road would make access for the bulky truck even more difficult.

A second high risk is the rather large number of people who have access to the site. In one recorded instance, they actually lived in a building where munitions were stored. They also routinely pass by the main storage building that contains explosives and other dangerous material. Their ungoverned use of cell phones and radios creates a situation where the generated electromagnetic field could potentially trigger an explosion. The same holds true for unregulated smoking.

Storage conditions and contents: In two of the compartments of the storage building, different calibres of munitions were found to be sorted and boxed. Boxes were positioned on wooden supports or pallets to allow for some ventilation between the boxes. These precautions in these particular compartments may well be the outcome of recommendations by MAG (or perhaps actions) during its 2011 visit of the camp. Unfortunately, the situation already seems to be deteriorating.

Storage conditions in the other compartments are far more problematic. There is no evidence that actions were taken according to the recommendations given by MAG (and possibly others). Small and larger calibre munitions are not organized by year of production, batch number or lot number but are mixed: Some in bulk, others in boxes that are stacked high on top of one another and others still in rice sacks. The accumulated weight of the contents, the humidity and extreme temperature conditions in the storage sites as well as the presence of termites or rodents that eat away at the wooden boxes or pallets create far from ideal storage conditions. The evaluation team recorded instances where the wooden boxes were close to splitting open at the seams, the bottom edges having been chewed through, and in one instance boxes filled with 23mm rockets had slid off the stack and the only reason they had not collapsed on the floor was because they happened to fall against a wall that temporarily held up this precarious structure. Sub-optimal storage conditions combined with heat, humidity and unclean facilities provide ideal conditions for insects such as termites to thrive resulting in safety hazards.

Finally, the observation team also noted the presence of white powder on the floor of certain armouries, which was verified to be highly inflammable explosive resin leaking from the stored munitions. High exposure to heat and humidity combined with poorly ventilated facilities can decrease the shelf life of ammunition. In some cases, this accelerated erosion can also result in chemical leakages such as in the case of explosive powder and resin documented on the floor of a storage site in Bokala munitions facility.





Highly flammable explosive resin on the floor of a storage site in Bokala munitions facility (l.). Wooden ammunition boxes chewed and weakened by termites (r.).

The compartments were calculated to contain 50 tons of explosive material, of which five tons were deemed active high explosive material. But not all munitions found in the storage were those that had survived the fire at Ngashi camp in 2007. The presence of smaller calibre munitions produced after 2007 indicates that they must have arrived from places other than the Ngashi debris. This also suggests that the obvious inadequacy and makeshift nature of the Bokala storage camp has not prevented those responsible for deciding where to ship and store which type of munitions from using it as a replacement of the munitions depot that used to be at Ngashi camp. Bokala has become the de facto location where all branches of the armed forces and the PNC bring the bulk of their munitions for storage.45

Smaller calibre munitions, presumed post-2007 acquisitions, were found alongside munitions that contain explosives, including RPG-7 rockets, 122mm and 82mm mortars as well as assorted fuses and primers. These were not stored as they should have been, that is protected against dust, in closed boxes marked by a classification code. Some of the larger calibre devices appeared to be in bad shape, and would have needed to be safely disposed of or destroyed. It is likely that they became even more unstable due to the temperature shock these materials had suffered in the 2007 fire at Ngashi camp, and the fact that these were transported from there in less than ideal conditions

^{45 \} Small volumes of small calibre munitions for 'immediate use' tend to be kept in their respective armouries, elsewhere in town, as is explained in this study.



5.56mm small arms ammunition manufactured after 2007 documented in Bokala.

A recent incident proving this point was reported when an explosive device self-propelled through the wall of the storage, and began a flight towards the city, creating havoc underway. The device failed to explode before it came to a halt after approximately four kilometres of flight. No plausible explanation was given as to how this could have happened, other than by 'the grace of God'.

PSSM practices: As indicated in the section above, the conditions in which the munitions and explosives devices are kept are far below adequate, and increase the risk of theft, but also of fire and explosions. The absence of markings on munitions boxes and registers in most storage sites as well as the presence of all sorts of objects and materials, such as wooden sticks, cardboard and plastic sheets that should not be there as they increase the risk of fire adds to the general state of disorder. Adding further to the fire hazard was the fact that the buildings were unclean, with garbage and piles of paper in the vicinity of and in the storage sites themselves. Cell phone use in the vicinity of the armouries was also unregulated.

Personnel in charge of the storage(s) are not easily identified by photo identification cards, and appear unsure of correct procedures, which is understandable as many of them have 'inherited' this situation rather than having created it. Some of them are said to have had "some sort of training", but it is apparent that it was inadequate. Their superiors seem better informed as to how things should be done (one keeps a manual on storage practices locked away in his office drawer) but there does not seem to be any pressure on them to provide guidance towards building a culture of a more responsible management of the stockpiles. But there are examples that this may change: Some officers in charge of Bokala camp logistics reported having been admonished for negligence in the course of a July 2015 internal army inspection.

It will however take more than good intentions and reprimanding a few officers to change practices in reality. For example, despite a noted willingness to have obsolete large calibre munitions removed safely because the recognized the obvious danger they present, precious little action has reportedly been taken. Neither armourers nor their superiors appear to know the correct procedures and channels through which to approach those who can authorise the safe and secure removal or disposal by the Centre Congolais de la Lutte Antimines (CCLAM), for instance.

Socio-economic context of Bokala camp: As shown above, Bokala camp is more than a military establishment. The buildings house far more than just soldiers. Most live there with their families. At least 200 such families are currently believed to live at the base. According to observations on site and conservative estimates, the average Congolese household consists of at least five members, which means that well over 1,000 people live at Bokala camp proper with less than one-quarter of them enrolled as actual soldiers. Apart from living quarters that contain all these people, the camp grounds also house the offices of the état-major, various small businesses that sell produce grown at the camp grounds or products brought in from Mbandaka, a school that educates about 150 children, as well as a health care centre.

This health care centre was rehabilitated in the recent past with EU funding. A team of six (military) nurses look after what they themselves estimate to be around 4,000 patients,46 from the base and from nearby villages. Most of their workload consists of midwifery, assisting at births as well as providing health care and first aid to patients suffering from malaria and diarrhoea. They refer those needing more specialized services to the new military hospital at Ngashi camp or the hospital at Mbandaka. The Bokala health centre thus processes many more than the 250 soldiers who live and/or work at the camp⁴⁷ and include at least another 1,000 people categorized as "their families". In sum, only one-quarter of the patients appear to have a link to the military and the base.48

The school for children aged six to twelve years was established on request of the military families living at Bokala camp, and its six improvised classrooms are in (or next to) a building shared with the armed guards at the entrance to the camp. The management of the school also seeks to educate other children living nearby. 49 Even if the Congolese state payed the basic salary of the teachers and the director, a larger number of (paying) pupils would generate more funds and would allow the school to break even more comfortably than is the case at present. The school, as the health centre located nearby, has recently found an increasing population to recruit from: Ever more people are building huts in the grounds around the camp and along the road connecting the camp to Mbandaka town. In a way, a new village is encroaching on the area around the camp.



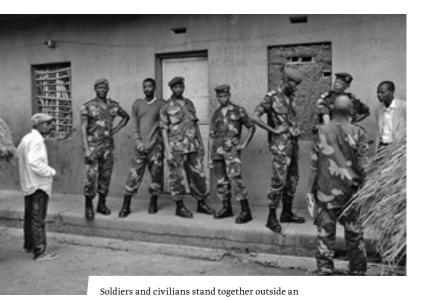
^{48 \} Many patients seek medical care in this health centre even though they are not connected to the military because it is close to where they live and they expect to receive the service for free. In principle only patients from the military get the service free of charge, but many others hope to somehow slip into that category. The hospital reportedly charges 3,000 francs (around US \$35) to 'outsiders for the delivery of a child.



Children sitting against the wall of an adapted storage area containing artillery shells and rockets, close to their residential quarters.

Those who live at Bokala camp proper are one quarter soldiers and three quarters civilians. Other residents of the housing blocks are active soldiers' wives and their children, as well as widows and orphans of soldiers who once lived there (their history may go back all the way to 1977). A sizeable proportion of the residents are youngsters who live at the camp with their 'military' parents. Camp rules nevertheless set 18 years as the maximum age, after which all non-military children should be 'evicted' from any military camp. Contradictory accounts are heard as to whether and to what extent that rule is respected. In one account, the rule is complied with, but children or younger brothers of active soldiers are allowed to spend holidays at the camp, and such holidays appear to be prolonged as is not unexpected. The presence or circulation in and around the camp of numerous civilian-looking young and older males was also explained as passers-by on the route to the village Bolenge. That route has no guards at the other end of the camp—such scrutiny is deemed unnecessary as the road is in such a bad state that it is impossible to drive a car there. The MAG technical field manager observed that positioning guards along the perimeter of the camp rather than clustering guards only around the depots would create a more secure environment.

^{49 \} Interview with the director and several of the teachers employed by the school, 23 September 2015.



ammunitions storage facility in Bokala

Analysis

Given the conditions in which munitions and other explosive materials are currently stored at Bokala camp, the risk of an unplanned explosion is deemed high. The UN SaferGuard software can project what may happen at the camp:

In a scenario where the two buildings containing munitions and explosives blow up simultaneously, all of the Bokala population risk being lethally, or at the least very seriously, affected (lung damage, eardrum rupture, etc). Fragments of explosives and debris would be projected far beyond the current camp, into the housing area that fairly recently sprung up around the camp ground, and even into the area of Mbandaka closest to the camp. An estimated ten thousand people, military and civilian, would be affected, as would the infrastructure at and around the camp, including the school, health centre, structures harbouring heavy artillery, the modest SALW stockpile and their munitions, as well as the larger calibre munitions that would very likely trigger the explosion.

Relief to the affected population would also be very hard to administer, as the road to the camp is in such bad condition that it is virtually inaccessible by ambulances and the fire truck that is positioned at the airport. The limited medical care available in the area combined with the absence of any fire protection services including simple means such as fire extinguishers or sand buckets makes the situation even more precarious.

The danger in Bokala is clear to most—though not all—residents of the camp.⁵⁰ The wider Mbandaka area has reportedly already been the scene of three unplanned explosions in the recent past, and the DRC has seen several more such incidents



50 \ A number of 'camp wife' respondents, interviewed with Lingala-French translation assistance by a CNC-ALPC employee, claimed they had no idea that their children lived in such danger.

throughout the past decades.⁵¹ Many other cities in the DRC and neighbouring countries have also recently experienced major incidents of a magnitude that risks occurring at Bokala camp. One would assume that the (military) authorities could draw from lessons learned from such similar incidents and act accordingly.

The danger of the situation has effectively been pointed out in internal (army) inspections and external evaluations alike—including an assessment by MAG in 2011 referred to in an internal FARDC inspection of July 2015 that calls for urgent measures.

Officers in charge of Bokala camp logistics admitted being admonished for their negligence in the course of the internal army inspection in 2015 and explained their reasons why they did not take action:

- \ There were insufficient means put at their disposal (apparently, including by international donors and partners, no matter whether the issues to deal with touch at the heart of the state monopoly on violence);
- \ There were no orders or authorization from higher up in the hierarchy;
- \ International organizations, specifically MAG, have failed to live up to "promises" that were understood to have been made when MAG studied Bokala munitions depot and delivered its report in 2011. One interlocutor even called the making of the study "a distraction" that only resulted in prolonged inaction.

These arguments are not unique to the Bokala situation. The fact that MAG or another "foreign entity" conducted a technical survey with the intent to give advice on how to design and construct a safer storage facility raised inflated expectations that were based

This is a reminder of why it is important to clarify roles and responsibilities and to manage expectations effectively on projects. MAG does not have the means nor can it be expected to construct armouries that were never promised. Similarly, the Congolese have not met expectations due to internal logistical or procedural issues. It is therefore crucial to identify the correct channels of communication to remedy these issues and to ensure greater clarity on who is responsible for what actions in future undertakings. Finally, it is also worth noting that the Congolese government is ultimately responsible for the safety and security of its own citizens—a responsibility that cannot be transferred to any international humanitarian body.

The current state of Bokala military camp takes up a prominent position in a sequence of hazardous situations: From a fire caused by the unsafe storage of explosives in Ngashi camp, the storage of those materials that survived that incident in Bokala camp, where they might at any time cause an even bigger catastrophe to the time (at the least eight years) that has elapsed since Bokala was turned into such a dangerous place. During that time period, a series of alerts and efforts to take action to somewhat secure the Bokala munitions and explosives stocks have failed to change the situation at Bokala camp for reasons that need to be investigated further. What is clear is that the situation would have improved if the recommendations provided by MAG in 2011 had been followed and if a greater effort had been made to manage the storage buildings in line with the recommendations made in the EUSEC/ FARDC aide-mémoire.

on a misreading of who is indeed responsible for what action. Once these expectations were not met, the international aid community was blamed for having "failed" them. These expectations may be traced back to specific historical experiences that may have contributed to a certain dependency on international assistance and aid.

^{51 \} The Small Arms Survey records nine such incidents in the DRC section of its database covering 1979 to 2015. These incidents reportedly resulted in 131 fatalities and 307 injured people. Several respondents were aware of unplanned explosions occurring in neighbouring Republic of the Congo, where as recent as 2012, the very large explosion in Brazzaville is remembered to have taken a heavy toll on human life.

Visual Narrative: Frontier PNC Position, Mobayi-Mbongo, Nord-Oubangui Province

Name of Armoury: Police Nationale Congolaise

Etat Majeur, Commandant (EM. Comdt)

Commissariat

Mobayi-Mbongo Police

Date: 1 October 2015

Location: Mobayi-Mbongo, Nord-Oubangui Province, DRC



Description of location

The Office of the Commissariat of Police Mobayi-Mbongo is located about an hour's drive north-east of Gbadolite on the border with the Central African Republic (CAR). The office is housed in a low, singlestory building with eight main rooms of different sizes. Several windows and aeration vents are built into the plaster-covered brick walls. The building is positioned in a wide compound with a thatched outdoor guard post. The compound is about four hundred metres from the River Oubangui that serves as a narrow, liquid frontier between the DRC and CAR. The main PNC compound is also located about three hundred metres away from a large outdoor market where produce and commodities from the DRC and CAR are sold on a daily basis.



Organigram of the PNC in the district of Nord-Oubangui The smaller outposts of Mbongo, Businga, Bosobolo and Yakoma also fall under the supervision of the main commissariat located in Mobayi-Mobongo.

The PNC also maintains a smaller armoury closer to the market and next to one of the more popular access points for crossing the river between the two countries. The pathway leading from the transit point across the river, past the office of the état majeur cie (EM Cie) and the main office of the commissariat of police, Mobayi-Mbongo is busy with a constant flow of people, mainly women carrying produce and commodities to be purchased or to be sold at the main market. The office of the Congolese director-general of migration (DGM) monitors the official transit point, but it is important to note that the river can also be traversed at several other points.

While details of the technical assessment of 17 other armouries assessed can be found in the MAG Technical Evaluation accompanying this study, this site was deliberately excluded. This was because a relatively small number of weapons were housed in this site. However, due to its location immediately



The market at Mobayi-Mbongo lies just across the Central African Republic and serves as a commercial hub. Mainly women carry produce including fish, fruits and vegetables and fabric while the men mostly provide bicycle taxis and operate pirogues that ferry people across the river.



The unrepaired, corrugated tin roof offers little or no protection to the weapons or ammunition against either theft or the elements.

on the frontier with CAR, its proximity to the River Oubangui and the presence of a large market in the vicinity, this site has been selected as the focus of one of two visual narratives in this study.

Specific characteristics of buildings and infrastructure: The walls of the main building and the smaller armoury located close by are made of brick, covered with plaster and are unpainted.

Both buildings are single-storey structures with several ventilation points and windows or gaps in the wall. These gaps are large enough for an assault rifle to be passed through. Both buildings have a corrugated tin roof with no additional protection; in the secondary armoury a very large gap was recorded above the area where weapons are stored.

Both buildings are fitted with non-reinforced doors, secured with single locks. Even if the doors were locked, it would still be possible to enter the building through the windows or the ceiling.

No secure box in a secure location is used to store keys. Keys are instead stored on the person of the commanding officer.

Context

Conversations with some community members, including family members of the PNC personnel working at the post revealed an awareness of the kind of material stored in the armoury. There is a strong conviction from those interviewed that these weapons are there to be used by the police forces for the protection of the surrounding communities. Conversations with some women in the market and others carrying produce back from the market confirmed they were aware of the fact that there was a police station located in the buildings but, as expected, they had little idea of the contents of the storage site. On the basis of limited discussions with both family members of the PNC and other passers by, there seemed to be an awareness of the unstable political situation across the border in CAR which is also not unexpected. There is a substantial flow of refugees from CAR into the DRC due to the insecurity and conflict, several of whom are informally given shelter by extended family members or by Congolese households. During the process of this assessment, fresh violence had broken out in Bangui which some of the people interviewed were also aware of. It is also worth noting that international agencies such as UNHCR were also involved in evacuating staff using boats across the river and the Direction Générale du Migration (DGM) official interviewed on site was also aware of the situation.



In addition to a few traders, the family members of a few policemen were also interviewed. They were aware of the political unrest in CAR and expressed concern about their husbands' role on a frontier position with limited resources in the event of a security incident.

If the political situation deteriorated and there were a fresh outbreak of violence, particularly if this violence were to spread across the river from CAR into the DRC, the police admitted that with the few weapons in the armoury, their poor condition and the limited amount of compatible ammunition available, they would not be able to preserve security in the area.

Through discussions with the PNC in Gbadolite and Mbandaka, the team was told that the PNC in other positions, conscious of their low stocks of armoury and the far from ideal condition of their weapons, was prepared to call in the FARDC for reinforcements in case of an outbreak of conflict. However, in discussions with police officers in Mobayi-Mbongo, they seemed less convinced that the FARDC would be able to come to their aid if required. PNC personnel also asked the team to inform Kinshasa



A member of the PNC holds up a damaged M-16A1 rifle that is currently in active service in Mobayi-Mbongo.

of the shortage of ammunition and to request that this situation be rectified. Based on ammunition and weapons stockpiles observed at different PNC armouries in Gbadolite and Mbandaka it appears that the unavailability of compatible ammunition might have more to do with an inefficient distribution process rather than a shortage. Several boxes of compatible 5.56mm small arms ammunition were recorded at PNC positions in Mbandaka that supports this theory.



Industrially produced AK-type arm found in the possession of a presumed Seleka-affiliated fighter from the Central African Republic, arrested on the DRC side of the border (photo taken off a FARDC soldier's mobile phone, Gbadolite, October 2015)

Cross-border trafficking of weapons and artisanal weapons

While the team was in Nord-Oubangui Province, they paid particular attention to any evidence that SALW and ammunition were being traded across the border. The assessment team witnessed some unsubstantiated claims made that large amounts of arms and ammunition were being transported across this river between the countries. At a FARDC outpost in Gbadolite, the team were shown photographs of one supposed Seleka rebel who had been apprehended while crossing the river holding a Kalashnikov variant assault rifle.

At the validation meeting held at UNHCR in Gbadolite, several people, including local Congolese staff from various international agencies including those responsible for security management claimed that trade in small arms was common across the border between CAR and the DRC.

Similarly additional claims that artisanal weapons were being manufactured across the river in CAR, and that craftsmen had even mastered the technology of manufacturing repeating, as opposed to single-action, rifles were heard. Claims were also made that ammunition for artisanal weapons—00 or 01 cartridges filled with ball bearings—were available in the Mobayi-Mbongo market and that they were being sold by the kilo.

The assessment team recorded two artisanal rifles (type Baikal⁵²) kept out of sight behind a plank in the smaller PNC armoury in Mobayi-Mbongo. Upon questioning, the officer in charge revealed that these had apparently been seized from local hunters. Seven assorted rifles including Kalashnikov variants, a US American manufactured M-16A1 and an Israeli manufactured Galil rifle were also stored in the same area and were in a poor or unusable state.

^{52 \} The CNC-ALPC conducted a study that examined the production of artisanal weapons as one area of investigation along with the marking of regular weapons in January 2015. Despite several requests by the team to be provided with this report report, they were not given it at the time of publication of this study. Another publication on artisanal weapons in the (other departments of the) DRC (Berghezan, 2015) also outlines several key issues.





A US-manufactured Colt M16A1 series 5.56mm rifle, three functional and one unusable Kalashnikov AK-47 rifles stored on the floor of the office of the PNC commander in Mobayi Mbongo. To the right of the rifles, concealed behind a plank, are two Baikal style artisanal shotguns chambered for .00 cartridges.

Analysis

The evaluation team did not find any verifiable evidence of this cross-border trade or the manufacture of artisanal weapons beyond anecdotal accounts, and it strongly recommended that such claims be substantiated on the basis of concrete evidence only. Rumours regarding the trade and the manufacture of artisanal weapons have the potential to catalyze unrest or increase insecurity among the communities in the area. Extreme caution is therefore recommended about how information regarding these issues is transmitted by the authorities.

The team recorded the presence of several obsolete and unusable weapons and assorted parts, including receivers and advised that these weapons should be destroyed or securely disposed of as soon as possible to prevent the risk of diversion.

Summary of key findings

Infrastructure

- \ None of the buildings inspected were adapted to the storage of arms and ammunition.
- \ A system to provide adequate ventilation were also absent.
- \ All openings, be they windows, doors or the ceiling were not adequately secured with a grill, which risks that weapons and ammunition are passed in or out of the store—greatly increasing the danger of diversion and decreasing the potential for accountability. Ideally, a small opening in a grilled, reinforced door should be used to pass the weapons in and out of the storage site.
- \ Basic measures such as using proper locks, a double-lock system or securing the weapons with a lock and a chain were not being used.

- \ The key was not stored in a lockable box under guard at the site but rather carried on the person of the officer in charge. This practice is extremely widespread in the DRC and the wider region and is very problematic: If the officer were to be robbed or be injured away from the armoury none of the other officers can access the armoury in times of need.
- \ A reliable electric system, or a generator was absent.

Practice-based findings and recommendations:

\ Large amounts of obsolete and out of service weapons as well as essential parts including receivers, bolts and barrels were mixed with weapons in active service.

Recommendation: Separate out of service from active service weapons. Destroy or dispose of out of service weapons and their parts to prevent them from being re-used.

\ Equipment used for crowd control such as smoke or shock hand-throwing grenades were found mixed with other munitions or stored in the commandant's letterbox along with a pair of handcuffs.

Recommendation: Weapons, ammunition and specialized policing equipment should be stored separately.

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48mm smoke and shock hand-throwing grenades stored in the commandant's letterbox along with a pair of handcuffs.

- A bullet capture device to enable firing of the weapons in a safe direction to complete weapons safety protocols was absent.
 - **Recommendation:** A bullet capture device should be procured or manufactured locally.
- \ The register of weapons in functional condition contained in the storage site was well maintained.

Recommendation: Keep the register up-to-date

- \ The presence of large amounts of out-of-service weapons and essential parts including receivers, bolts and barrels was poorly documented and their presence increases the risk of diversion, as there is a possibility that these parts might be scavenged and used in artisanal weapons manufacturing processes.
 - **Recommendation:** Obsolete and out of service weapons and parts should be documented to prevent diversion. They should then be destroyed as soon as possible.
- \ Other, partially flammable, materials were stored together with weapons and ammunition in the same storage site.
 - **Recommendation:** The storage site should be cleaned, and all other objects and flammable material such as paper, wood and cooking oil should be removed from the site.
- \ There were no safety signs including emergency response numbers, explosive categories or basic signage prohibiting smoking or restricting the use of transistor radios or cell phones.
 - **Recommendation:** These low-cost measures should be taken as soon as possible.
- \ The presence of personnel not qualified to work in the storage site was also documented.

 Recommendation: Forbid or at least limit

the access of non-qualified personnel to the armoury.

\ Armourers were often not adequately trained. **Recommendation:** Adequate training should be provided to those working directly in the armouries.

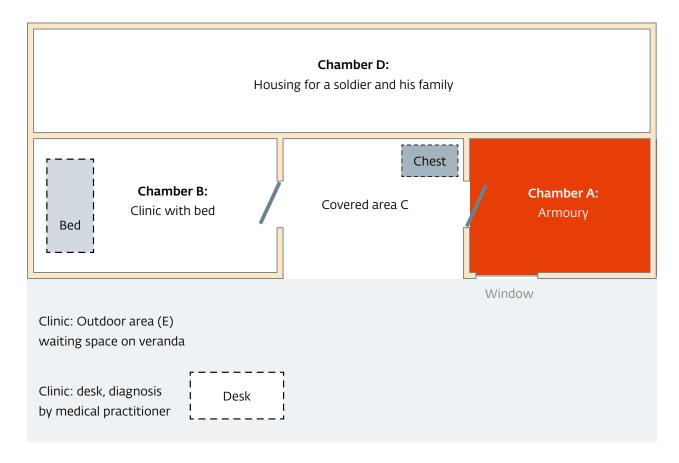
Visual Narrative: Health Clinic & Armoury, Mbandaka

Name of Armoury: 11th Group, DRC Naval Forces

Date: 24 September 2015

Location: Mbandaka, Province Equateur, DRC

Figure 1: Building setup



Location

The armoury of the 11th naval forces group in Mbandaka is situated in a large field in an old, single story rectangular construction that has three main chambers. Two smaller chambers share a wall with a third larger chamber with an outdoor covered veranda and covered sitting space under the same roof but outside of the main building as demonstrated in Figure 1.

General description

The first and smallest of these chambers (Chamber A, Figure 1) is being used to house the armoury of the naval forces. This small chamber also contains munitions including live small arms ammunition. Some of these magazines containing live ammunition were found loaded into rifles without being labelled or stored separately. Two walls contained seven wooden shelves designed to hold assault rifles in a prone position. The areas on the floor on the third wall was used to prop up several larger or longer rifles including a Thompson Model 1928A1 submachine gun and a number of FN-FAL 7.62mm

rifles. Several unusable weapons and weapon parts including frames and receivers as well as trigger assemblies and unusable magazines were piled on the floor and the lower shelf on one main wall.

The second chamber (Chamber B, Figure 1) shares a wall with a veranda that are together being used as a health clinic. Patients are received at a desk outside the main building, under the same roof as the main building. Waiting patients are seated on a rough wooden bench around the desk where a medical practitioner conducts the diagnosis and prescribes treatment and medication. Most of the patients are women with young children and at least two of the medical practitioners the evaluation team spoke with stated they focused on paediatric care.

That chamber contains a single clinical bed and no other furniture except cardboard boxes containing papers and medical supplies. When the evaluation team visited the site, a seven-year old girl was being treated for dehydration by the medical practitioner. She was lying on the bed along with her mother where the medical practitioner proceeded to administer a saline drip. The evaluation team observed that an MIT50 calibre Browning-style heavy machine gun was stored below the bed. The explanation for



A care-giver provides patients with medicine as other mothers with children wait their turn. The diagnosis and waiting area is directly in front of the weapons storage area of the 11th Naval Group in Mbandaka.



A MIT50 calibre Browning-style heavy machine gun stored below the bed where a young girl is being treated for dehydration.

this from the armourer was that there was simply no more space available in the dedicated room to store the arms and ammunition and the MIT50 had been placed under the bed because 'the space was available'.

There is also a large chest outside of the room and by the wall where the armoury is located. This chest contains medical supplies including prescription drugs, saline drips, syringes and first aid material. Standing on this chest provides easy access to a large open space or 'window' between the arms and munition storage area and the open, outside corridor. This window is large enough to easily pass more than one assault rifle with a magazine attached through this space.

There is no grill or lockable window or door frame in any part of this structure where the windows are 'unbricked' areas of wall that are left open or covered by a cloth curtain.

The fourth and largest chamber (Chamber D) houses one soldier and his seven family members, including four young children. This fourth chamber is only divided from the other three by a partial brick wall and a thick cloth curtain.

Personnel, training and access

The armourer was present and was willing to speak to the evaluation team on request of his superior officer. He accompanied the team through the whole visit and co-operated fully as the team emptied out the weapons from the chamber, counted them, recorded the type, variants, calibre, year of manufacture and country of origin and tallied this with the official ledger/register before returning them to the armoury.



The functional weapons in the armoury, such as this AK47 mounted with an under-barrel 40mm grenade launcher, were serviced and oiled on a regular basis.



The armourer had received specialized training in the United States, which was an exception to many of the other weapons and munitions storage site visited. The weapons were maintained in excellent condition and had been regularly serviced. Some specialized equipment including specific tools and brushes to oil and clean the weapons had been placed in a basin along with a tin of oil. The records in the register were also fairly well maintained although some discrepancies were discovered during the visit. The presence of several out-of-service or unusable weapons and surplus magazines was, however, not recorded in the register. Obsolete weapons including a Thompson Model 1928A1 .45 calibre submachine gun from the Second World War were also found in the storage site.

Summary of key findings and recommendations

- \ The armoury is located in the same building as a medical centre—an arrangement that is in direct contravention of PSSM standards and SOPs. The fact that a 50 calibre machine gun was stored directly underneath the bed in the medical centre clearly illustrates the extent to which this principle has been ignored.
- \ This building is not adapted to the storage of such sensitive arms and ammunition.
- \ A system to provide adequate ventilation was absent.
- \ Evidence of water seepage was also discovered which will corrode both arms and ammunition if left unchecked.
- \ All openings, be they windows, doors or the ceiling were not adequately secured with a grill, which risks that weapons and ammunition are passed in or out of the store—greatly increasing the danger of diversion and decreasing the potential for accountability. Ideally, a small opening in a grilled, reinforced door should be used to pass the weapons in and out of the storage site.
- \ Basic measures such as using proper locks or putting in place a double-lock system or securing the weapons with a lock and a chain were not taken. A reliable electric system or a generator is absent. The team had to visit the site in the day time and due to the dark and cramped space inside the armoury still used flashlights to examine the weapons. These weapons were then moved out to the open



were not documented, increasing the risk of diversion.

area in order to categorize them and tally them with the numbers and types of weapons entered in the register maintained by the armourer.

Based on this exercise, further observations and recommendations were made:

- Obsolete and out of service weapons were mixed with weapons in active service.
 Recommendation: Remove and/or destroy obsolete and out of service weapons.
- \ Live ammunition was found in the weapons storage area, including loaded into magazines, some of which were found loaded into the rifles as well.
 - **Recommendation:** Weapons and ammunition should be stored separately.
- \ Several weapons were found with the 'safety off', that is, the lever to operate the safety device was not placed in the safe position.

 Recommendation: Weapons should always be stored with the safety mechanism engaged.
- \ Other, partially flammable, materials such as cardboard boxes, oil to service the weapons and provisions were stored together with weapons and ammunition.
 - **Recommendation:** The storage site should be cleaned, and all other objects and flammable material such as paper, wood and cooking oil should be removed from the site.
- \ There were no safety signs including emergency response numbers, explosive categories or basic signage prohibiting smoking or restricting the use of transistor radios or cell phones.

Recommendation: These low-cost measures should be taken as soon as possible.

- \ There was no bullet capture device to complete weapons safety protocol.
- Recommendation: A bullet capture device that allows the owner of the weapon to fire the weapon in a safe direction to complete weapons safety protocols and ensure that no ammunition was accidentally lodged in the chamber of the weapon despite removing the magazine should be procured or manufactured locally. The register of weapons contained in the storage site was well maintained.
- **Recommendation:** Keep the register up-to-date
- \ The presence of personnel not qualified to work in the storage site was also documented. **Recommendation:** Forbid or at least limit the access of non-qualified personnel to the armoury.

In this particular case, to safeguard such a large number of weapons stored in such a confined space one of the following three options must be taken into consideration:

- \ Construct a new, dedicated storage site at the same location and move the medical centre to a different location;
- \ Make use of a secure, purpose built container to store the weapons and ammunition. The container should contain separate lockable compartments to store the ammunition as well as a lockable rack system to securely store the weapons;
- \ Move the arms and ammunition to a facility designed to safely and securely house this sensitive material at the earliest possible opportunity.



Police records, coffee cups and 64mm cyanocarbon 'tear gas' grenades share shelf-space in a police outpost near the Central African Republic border in Nord-Oubangui Province.

Analysis

This section first analyses PSSM-relevant policy initiatives including the establishment of the National SALW Commission (CNC-ALPC), the 2012–2016 National Action Plan on SALW control and the extent of cooperation among key PSSM authorities as well as the clarity of communication procedures through the PSSM hierarchy. Next, key issues relevant to transforming theoretical or normative standards into concrete results are discussed. In this context, increasing the level of available PSSM expertise through targeted trainings is reiterated. Finally, emphasis is placed on paying greater attention to context-specific cultural factors such as how 'memory and forgetting' play a role in why addressing PSSM-related dangers may not always be prioritised in the DRC, despite the obvious risks.

PSSM policy and action

Actors in the DRC have a long track record of engaging in international policy efforts to bring the proliferation of SALW under control: The DRC signed the UN PoA and no less than four sub-regional arrangements to further the implementation of the Programme. These arrangements include clear activities and a strategic direction on PSSM management. They also opened the door to many international cooperation and assistance schemes for PSSM work in the DRC. The Congolese government has put in place the structures to coordinate and boost such activity, the most prominent being the National SALW Commission (CNC-ALPC), which is responsible for co-ordinating all arms control-related activities in the DRC. To this end, the CNC-ALPC has drafted a National Action Plan (NAP) that envisages specific activities on PSSM.

This study's section on "Legal framework, policy and SOPs" (p. 22 ff.) has provided grounds to doubt whether the DRC's key policy instruments, such as the 2012-2016 National Action Plan adequately reflect the priority to make PSSM safer and more secure. Although the policy documents revealed that the CNC-ALPC envisaged certain PSSM activities in the 2012-2016 NAP, the allotted budget shows the low priority attributed to these activities: Relatively modestly budgeted PSSM activities contrast with more generously budgeted 'soft' activities such as commemorating the days that certain conventions were signed, as well as professionalizing the media in general and empowering civil society to raise awareness on unspecified SALW issues.

Similarly, in the National Action Plan, the CNC-ALPC is tasked with the leading role in improving PSSM practices in the country. In implementation, however, the CNC-ALPC's PSSM work was seen to proceed in relative isolation from what was being done in this field by the FARDC and international actors who, for instance, operate a joint PSSM working group that the CNC-ALPC has not attended since 2014.

This observation speaks to the fact that, as with many other countries in the region and further afield, tensions often develop between civilian commissions tasked with coordinating arms control activities and their military partners responsible for implementing these activities. In the DRC, the CNC-ALPC is responsible for co-ordinating all action on controlling small arms and light weapons and related activities including PSSM while the FARDC is the military implementing partner that engages in 'hard' activities. As mandated by the NAP, and according to its own mandate, the CNC-ALPC continues to play the role of the interlocutor through which it believes all international actors should channel their SALW control activities in the DRC-including on PSSM—in the interest of developing a more effectively coordinated approach to arms control that avoids replication of relevant activities.53 Yet, from observations of practice and reliable accounts, the CNC-ALPC appeared to be playing a much more marginal role than if it were to realize its potential as a fully-empowered national commission.

These parallel structures in place and the resulting lack of clarity about who is responsible for PSSM matters in the DRC has direct consequences for the management of the country's armouries. Not only does the lack of clear hierarchy permit truly alarming situations such as at Bokala camp, it also makes it less likely that those in charge will manage to safely dispose or destroy the obsolete and dangerous larger calibre munitions present in several armouries. The continued presence of these munitions in the armouries will most likely protract unsafe PSSM cultures.

The information available in the autumn of 2015 made it impossible to anticipate the role that the CNC-ALPC will play in future PSSM activities under the newly (re)asserted presidential command over such matters. However, political developments since the beginning of 2016 appear to have clarified the roles of the institutions involved in PSSM, including that of the CNC-ALPC. It appears to be playing a more prominent role, such as playing the lead role in coordinating a weapons marking programme in Kinshasa, launched in January 2016. While PSSM and weapons control programmes have been prioritized to a greater extent, it would also be crucial to observe how the Presidential elections scheduled for 2016 proceed before the longer-term implications of these developments can be fully understood.

Training, knowledge and action discrepancies

The assessment of PSSM facilities and infrastructure in the previous sections as well as in the separate technical report by MAG identifies several factors that hinder responsible PSSM practices from taking root. For example, the practices found in place appeared "tolerant" of the fact that boxes are simply stored on the ground as no pallets are available to safely store munitions boxes. The presence of rodents and termites that ate through the wooden boxes in several locations was also not addressed. Heads of police stations and FARDC facilities tended to recognize that these practices and many other deficiencies have an impact on the safety, security and accountability in and around stockpiles. Yet that recognition did not lead to basic interventions, such as simply cleaning up the facilities, ordering the removal of food or flammable objects from the storages, procuring wooden pallets from local sources, purchasing locks and cables to secure weapons on easy-to-build storage racks or installing basic metal grills on ceilings and in front of windows. Few efforts were shown to be made to communicate these security needs further up the hierarchical chain to reach authorities who could then take action to address these problems.

The BICC-MAG technical report accompanying this *Knowledge Note* also points out that personnel in charge of the visited sites at the operational level had received insufficient specialized training to do their job safely. Relevant training and the insights gained through it were sometimes found available on the site, but this was often with higher ranked officials rather than those physically working with the stockpiles on a daily basis.

There appears to be a mismatch between trainings available and the use of available training opportunities, at the least in the case of FARDC officers. PNC respondents reported that PNC personnel were less likely to be allotted a training place generally believed to be reserved for FARDC, and were unaware of capacity-building programmes specifically designed for police management. While it is clear that policemen serving in the regional antennae would not normally be aware of such opportunities, it is the duty of their superiors in Kinshasa to ensure that staff attend available trainings. Such trainings are provided by the Southern African Regional Police Chiefs Cooperation Organization while others are provided by organizations such as BICC and MAG in close cooperation with the Verification Centre of the German Armed Forces, the International Peace Support Training Centre and the Regional Centre for Small Arms (RECSA) in Nairobi, Kenya. Recommendations on how to address the lack of training are further discussed in the next section.

Deficient facilities and the unavailability of training for those who need it most, is characteristic to a situation seen to recur in almost all of the visited sites. There is a discrepancy on the one hand between what some actors afield know or are aware 'should be the case' in and around their stockpiles as prescribed in their own aide-mémoires as a normative standard, and practices and approaches found in reality on the other. Amongst the more striking examples of this disconnect between what should be and what actually is the case, is the brief inventory of prior efforts (undertaken by many, including MAG and FARDC état major) to bring urgent attention to the safety situation at Bokala and call for immediate remediation by the relevant authorities, thus far in vain. The situation illustrates a remarkable mixture of clear memories (the accident at the facility where the explosives were stored until 2007, as well as the far more recent explosion of a munitions storage facility in neighbouring Republic of the Congo), and an apparent ability 'to forget'-or at least suppressthe awareness that a similar accident can wipe out thousands at and around Bokala camp at any time. A number of reasons were given to explain why no action has been taken—including a selective understanding of what international actors can intend to achieve when they undertake a study. At the local level, and as perceived by those most in harm's way, these explanations appeared to render the state inaction "legitimate", and all but stop such discrepancies from occurring. Yet essential, specialized training and knowledge is lacking as well as clarity about how to move forward and precisely who and which channels to mobilize to do so. The distinct lack of capacity to achieve this, results in a *de facto* tolerance or apathy that protracts a highly unsafe situation.

Finally, some local community members perceived urgent everyday realities such as the lack of access to clean drinking water, provision of adequate food for dependents and access to basic medical care as more tangible threats than a potential explosion in a munitions depot. Taking into account local cultural realities and differing understandings of risk will therefore be essential to design and deliver effective, tailored PSSM programming in the DRC.

Training alone, however, cannot transform this theoretical knowledge into action on the ground. Even 'training of trainer' programmes have been run before in the DRC with limited results. The gap between theory and practice must be bridged so that this theoretical knowledge can have a tangible impact on safe, responsible PSSM and related arms control practices on the ground. For a culture of responsible PSSM practice to develop and take root in the DRC, national ownership and tailored programming will need to be implemented in a coordinated, transparent and co-operative manner.

In the next section, the reader can find a set of recommendations of how the authorities can establish and nurture a responsible PSSM culture.



Safety mechanism on a US-American-manufactured Colt M16A1 5.56mm calibre assault rifle set to full auto-mode.

Recommendations for action

The analysis of PSSM practices in north-western DRC gives rise to a number of immediate and long-term, operational and institutional recommendations. More than any external action, this requires a conscious shift in attitudes and a willingness to drastically change current practices on the ground. This is only possible by moving beyond the blame game and systemizing practices and protocols that enhance safety. Over time, this will require a transformation of theoretical knowledge available in the form of PSSM SOPs and manuals into effective action. This next section highlights some concrete measures that will help lay the foundations for a culture of safe and responsible PSSM and arms control.

Immediate interventions

In the following, the authors recommend a number of action points that do not cost much and that would not require specific budgets but that will improve accountability and the security of stockpile holdings. The Congolese authorities should therefore take the initiative to implement these activities as soon as possible. These include:

Registers to record the movement of arms and ammunition

\ Distribute registers/ledgers to monitor the movement of arms and ammunition, including the number of rounds. Make available basic instructions on how to fill this form or, ideally, distribute a template of essential information to record; this would systematically help such good practices.

Chains, locks and weapons racks

- \ Make it more difficult to remove a weapon from the stockpile, thus reducing the danger of diversion or robbery.
- \ Use chains, locks or racks to improve the accountability of these weapons as it wil become more difficult to move these weapons in and out of the armoury without it being noticed. This would also help reduce the 'renting out' of military weapons at night for criminal purposes.
- \ Use good quality locks.

Access to armouries

- \ Ensure that access to the armoury and munitions depots is controlled. Only qualified personnel should be allowed to enter and, ideally, they should have a clearly visible, photographic ID on them.
- \ Increase the systemization of basic practices by making sure that the key to the armoury is kept in a locked box, away from the armoury or munitions depot but within the secure perimeter of the facility. To ensure rapid access to the weapons and ammunition whenever needed, the person responsible must not be allowed to take the key away from the facility or store this on his person or at his home.

Safety protocols and practices

- \ Ensure that a carbon dioxide fire extinguisher is available at the entrance to the facility. If this is not possible, assure that at least buckets to extinguish fires are filled with sand.
- \ Proper signs prohibiting smoking and listing the emergency contact numbers for the fire service will also reduce response times in an emergency.
- \ Ensure that fire classification signage is in place that denotes different classes of munitions and explosives. This will guide firefighters in case of an emergency.
- \ Train fire fighters in how to read these signs and, circumstances permitting, get them involved in a regular fire drill or simulation to assess the readiness of the staff in the event of an emergency.
- \ Ensure that only weapons and ammunition are stored in the designated site. Remove all other items, particularly those that pose a fire hazard, such as food stocks, cooking oil, automobile or machinery spares, tyres or brake fluid immediately and have the storage facilities thoroughly cleaned. This will also prevent insects and rodents from eating away wooden storage boxes.
- \ Have grass or vegetation around storage facilities trimmed or removed to prevent fires.

Wooden pallets

\ Ensure that wooden pallets are in use where weapons or ammunition boxes are stored in piles. This cost-effective method has been recommended by past assessments and ensures that sensitive arms and ammunition are properly ventilated. This increases their life span and makes them less prone to damage and corrosion.

Weapons safety protocols

- \ Make sure that weapons and ammunition are stored separately.
- \ Verify that magazines do not contain live ammunition and are not loaded in a weapon. Not only does this pose a safety hazard as the weapon is loaded but also reduces the life of the magazines as it wears down the main spring.
- \ Upon receipt make the holder clear the weapon to make sure that no rounds are accidentally left in the chamber. Make him/her fire the weapon towards a bullet capturing device or "piège à balles". Such a device is not expensive and can often be manufactured locally.

Perimeter security

\ Ensure that in addition to the facilities themselves, the perimeter of facilities is also guarded. This is instrumental in increasing overall security of the PSSM facilities. This can be achieved by reorganizing existing patrol routines rather than hiring new personnel.

Medium-term interventions

Medium- to longer-term PSSM interventions require more time and planning and include—but are not limited to—the modification of infrastructure or the building of new, purpose-built facilities adapted to the requirements of safe weapons and ammunition storage.

Carry out basic infrastructural modifications of storage facilities

- \ Use reinforced doors.
- \ Check standards or PSSM SOPs for minimum standards for the size of reinforced concrete walls.
- \ Encourage the installation of anti-intrusion grilles in front of windows and ceilings of buildings where arms are stored.

Construct dedicated storage facilities

- \ In certain conditions, it is not safe to continue to use facilities that are not designed for the storage of sensitive arms and ammunition. Depending on resources available and the urgency to house high quantities of explosive in a dedicated, safe environment it is crucial to construct dedicated facilities to serve this purpose.
- \ The report along with the technical report by MAG outlines several of these examples. As has been made clear in the MAG assessment, the rule of thumb is that facilities containing more than a hundred weapons demand the use of a modified shipping container or an alternative, purpose-built storage facility. At the very minimum, secure, lockable spaces for ammunition and weapons need to be ensured within the modified shipping container or in a dedicated armoury to avoid weapons and ammunition being stored together.

Conduct needs assessments and baseline PSSM assessments

- \ Identify needs of practitioners as well as affected communities through needs assessments and perception surveys to ensure that interventions are tailored to specific conditions.
- \ Avoid transferring a one-size fits all approach to different socio-economic, cultural or technical contexts.
- \ A PSSM baseline assessment serves to create a baseline that serves as a measurable indicator of progress, highlighting key areas of intervention and assisting with prioritising limited resources.
- \ Use evidence generated from these assessments to inform strategic documents such as the National Action Plan to ensure that these documents serves as a roadmap or action plan to coordinate, monitor and evaluate arms control initiatives including PSSM-related and other complementary activities being conducted within the country.

Clarify roles and responsibilities

Intermediate-term action is also recommended on the institutional front.

- \ Clarify the ownership and position of PSSM-work in the hierarchies and different forces in practical terms.
- \ Make sure that actors responsible for PSSM such as the CNC-ALPC, FARDC and CCLAM work together in a co-operative and transparent manner, making full use of co-ordinating mechanisms such as the PSSM Working Group to avoid repetition and fill any identified gaps.
- \ Make use of opportunities to coordinate with related or complementary work being conducted in other countries in the wider region provided by RECSA and other regional organizations.

Longer-term interventions

PSSM programmes are complex, and resources—financial and human—are limited. To improve established practices and behaviour takes time, and donors or international agencies should recognize this reality. They should prioritize longer-term funding for PSSM activities in the DRC over short-term projects and take care to avoid duplicating efforts at the national level. Specific, targeted projects ought to fill gaps where national PSSM expertise is lacking or weak. Ideally, these projects should in turn be part of a larger programme of assistance that is run in cooperation and coordination with relevant regional arms control initiatives to encourage cross-border cooperation and knowledge-sharing.

Towards a concrete SALW strategy: Making PSSM a priority in the upcoming National Action Plan

A more comprehensive understanding of the many relevant factors at play, including the motivations for illicit SALW possession, should feed in to a concrete, coordinated strategy towards addressing deeper causes of conflict and its integration into wider conflict prevention, resolution and peacebuilding efforts. Risks should be identified early rather than having to amend plans in retrospect.

The DRC's current National Action Plan (NAP) is one potential strategic framework to work with towards this end. The NAP's current five-year term is about to end in 2016. This presents a valuable opportunity to refocus priorities of the NAP for the next five years and potentially include language to help orient the activities of the National SALW Commission and other actors working on PSSM. A realistically budgeted section on PSSM as well as clearer articulation of roles and responsibilities to be undertaken by the Commission in PSSM could be possible outcomes of such an exercise.

Enhanced coordination at four levels

Unit level: Local cultural realities must be taken into account when designing and delivering PSSM programmes in the DRC. How risks are assessed and threats are perceived, how events are remembered and forgotten are only some of these realities which need to be better understood. This is why it is important to conduct PSSM baseline assessments and security needs assessments before a large-scale programme is designed so that in the end it can better respond to the needs of local communities. For a culture of responsible PSSM practice to develop and take root in the DRC, developing programming that is nationally owned is crucial.

National level: To make progress, strengthen cooperation and coordination amongst all actors responsible for PSSM including the national co-ordinating bodies such as the CNC-ALPC, CCLAM and the military actors responsible for ultimately implementing these activities, including FARDC, in particular the Regional Destruction Centre at the Central Logistics Base in Kinshasa. Use co-ordinating mechanisms such as the PSSM Working Group at the national level better. Identify competent authorities and map out proper channels to acquire information or draft and transmit PSSM-related requests to those authorities who can help bring about more enduring solutions in the longer term. These could include basic requests for clearance of obsolete or unstable munitions or weapons as well as a request to construct a whole new armoury or storage facility. Provide access to a basic template on how to request PSSMrelated activities to armourers, logisticians and stockpile managers. Make armourers and all others who deal with PSSM-related activities aware of the correct channels to forward this through, starting with their immediate superior all the way to the responsible officer at the Logistics Base in Kinshasa. The research team attempted to map out these channels and develop a basic handout or tool to facilitate communication through the hierarchy during the assessment period but the limited time period and scope of this study did not allow for that. The development and dissemination of such a handout would bring greater clarity of roles and responsibilities thus making the implementation of PSSM-related activities effective and efficient.

Regional level: When conducted effectively, physical security and stockpile management (PSSM) is one ground-level process that contributes to building the basic infrastructure for arms control in difficult conflict or fragile environments. National authorities need to coordinate PSSM activities with other such processes such as efforts to register and mark regular and illicit weapons as well as tracing and record-keeping initiatives that contribute to building this basic framework.

PSSM and arms control initiatives not only have to focus on the regulation of weapons but also be aware of the high volume of global traffic in illegal crossborder trade of high-value commodities other than firearms. Illegal trade in illicit substances, endangered species products as well as the trafficking of human beings is often facilitated by non-state groups armed with illicit weapons and ammunition and consequently intrinsically linked to efforts to regulate and control the illicit weapons trade.

At the regional level, national authorities ought to support training opportunities provided by RECSA and efforts to enhance cooperation and coordination on arms control by other regional organisations such as the African Union.

They should also enhance cross-border cooperation between countries in this field and encourage joint arms control initiatives with neighbouring countries. **Global level:** At the global level, ensure that the DRC's chances for funding are improved through more accurate reporting to existing international arms control instruments such as the PoA and by supporting projects and activities domestically that contribute to an evidence-based approach to arms control.

Support national arms control projects that have demonstrable, measurable results by conducting baseline assessments as well as regular monitoring and evaluation activities. This will make demands for specific, targeted assistance from international donors more successful.

Effective arms control cannot take place in isolation. Therefore, optimize the flow of information and expertise between the whole range of actors at the national, regional and global level to avoid duplication, and fill gaps in PSSM and related arms control interventions. Encourage joint border forces, crossborder cooperation and joint study visits by countries affected by SALW-related armed violence but tailor them to specific contexts.

Ensuring specialized training is a precondition to a responsible, safe PSSM culture

The technical report by MAG recommends adequate and specific training for each of the different forces whose sites were assessed and identified three general challenges:

\ The role of an armourer is often unenviable as they stand the risk of being blamed for an unintentional explosion or other things that could go wrong, having inherited challenges that exist as a result of systemic issues and negative practices in place long before they took over the position.

- \ The personnel assigned to PSSM are not adequately trained. This, however, is a precondition for a culture of safe PSSM practices. As is obvious from several examples outlined in the body of this study and the technical assessments, it is impossible to create a safe environment where sensitive weapons and ammunition are managed without the requisite training.
- \ Those who are in charge of the stockpiles and have received specific training are often moved after their training is completed to a different role without transmitting those skills to other candidates. This is discussed further in the next point with reference to the "training of trainers" programme.

Maximizing the use of training opportunities and strengthening a 'training of trainers' approach

Again, the international policy standards and the realities on the ground appear disconnected, which creates a greater need to coordinate and integrate national priorities into regional frameworks. To achieve an improvement in PSSM practices, training opportunities must target those who would benefit most—the armourers and stockpile managers or logistical staff working at the unit level in the armouries on a daily basis. This is why unit-level PSSM trainings should be a national and regional priority.

Institutions responsible for improving PSSM standards should make maximum use of available training opportunities. One such opportunity is provided by the Southern African Regional Police Chiefs Cooperation Organization (SARPCCO), which the DRC would have access to as a member of the SADC.

Others are provided by organizations such as BICC who are working in cooperation with agencies such as the Verification Centre of the German Armed Forces, the International Peace Support Training Centre and the Regional Centre for Small Arms (RECSA) in Nairobi, Kenya, to provide a system of tailored PSSM trainings. The objective is to move away from the dependency on Western training institutions by certifying a new batch of candidates nominated from African states as national PSSM instructors. The newly trained instructors would then transmit their knowledge to those responsible for managing arms and ammunition stockpiles in their own countries through a 'training of trainers' approach.

It is strongly recommended that the DRC take full advantage of these training opportunities as this would increase the level of national expertise to cultivate a responsible PSSM culture. As these trainings are done in close coordination with regional security organizations as well as neighbouring countries who also suffer from the lack of adequately trained personnel, joint trainings and systematic sharing of knowledge and lessons learned would have a positive impact on the wider region as well

Finally, it is worth noting that training of trainer programmes have been tried in the past to varying degrees of success. Trainings alone cannot serve as a panacea to resolve the deeply embedded problems around weapons proliferation and related attempts to improve their storage and security. Beyond training, a profound shift in attitudes and behaviour is necessary to transform this theoretical knowledge into action on the ground and to lay the ground work for the effective management of weapons and ammunition stockpiles. For this to happen, patience, time and resources for developing a programme of action tailored to the realities on the ground in the DRC and the wider region is required. To achieve this, national authorities must take greater responsibility and initiative to resolve these issues as best as possible, cultivating a more responsible culture around the physical security and stockpile management of weapons and ammunition in the DRC.



In Mobutu's abandoned former palace in Gbadolite, men play ludo on a handmade board divided into four quadrants each marked with M23, CNDP, FARDC and Mai-Mai.

Conclusion

To improve the physical security and stockpile management (PSSM) of arms and ammunition in the DRC, as in many other complex post-conflict contexts in the region, is a challenge. The objective of this assessment is not to point out flaws or merely blame the current authorities tasked with the unsatisfactory role of managing the storage and security of weapons and ammunition owned by the various branches of the Congolese Armed Forces and police forces. Nor is the aim of this study to blindly advocate the implementation of the international small arms control standards for PSSM in an environment where resources—financial, material and human—are limited, and where the necessary knowledge on how to conduct these tasks safely is either absent or locked away in an unused theoretical manual but far from integrated into practice.

This study analyzes key findings from a PSSM assessment conducted in Equateur and Nord-Oubangui Provinces of north-western DRC, highlights areas of intervention and makes basic recommendations for action to help relevant Congolese authorities address their PSSM-related challenges more effectively. In the longer term, this study aims to contribute to the process of establishing a more responsible culture around the storage, security and management of weapons and ammunition at the national level that may even have far-reaching implications for effective arms control in the wider region.

This study was made possible with the financial support of the German Federal Foreign Office and with the full cooperation of the Congolese authorities who recognized the mutual benefits of such a PSSM assessment in a remote area of their vast and resource-rich country that had not been extensively studied before despite being located at the crossroads of several interlinked regional security dynamics. The assessment team is grateful for the hospitality and for the high level of access provided to sensitive military facilities by the Congolese authorities, facilitated by the CNC-ALPC. One the one hand, the team observed several positive and negative practices with regard to the management of weapons and ammunition while on the other, it constantly encountered a willingness to improve demonstrated by several concerned individuals despite limited facilities and resources.

The problems at hand, however, cannot be addressed by the individuals alone but rather need to be viewed through a much longer historical lens, taking their relevant socio-economic and cultural context into account. It would be a mistake to merely address the technical flaws and shortcomings observed in a limited period of time and expect to apply the results and recommendations to the rest of the country, much less the wider region. Certain key lessons have been learned and specific findings might have relevance for countries in the region facing similarly difficult armed violence-related problems with similarly limited resources.

The regulation of most illicit commodities that generate their own demand and are available relatively easily requires a regional, cross-border approach to be effective, and illicit weapons and ammunition are no exception. What has become clear is that the wide range of challenges facing PSSM in the north-western part of the DRC is systemic and deeply rooted in practices that have been followed, passed down and concretized over decades. But rather than merely treating the symptoms, the Congolese authorities need to apply a tailored, holistic and comprehensive approach that takes local realities and human concerns into consideration.

Consequently, the Congolese authorities will need time and patience when gradually addressing the issues and putting in place the conditions that may hopefully lead to a positive change in terms of current practices and behaviour.

Paying closer attention to factors that are often overlooked but might provide the most valuable insights into why things remain this way for decades and refuse to change is not a luxury but crucial to developing enduring programmes that have a realistic chance of achieving their goals. Understanding how decision-making processes work, how memories are built and forgotten, why perceptions of risk and assessments of threats differ geographically and depend on whether communities have access to bare necessities such as clean drinking water will help practitioners design and deliver PSSM programmes that have a tangible impact.

To avoid duplication and optimize the use of limited resources it is necessary to promote cooperation within the various branches of the military and national authorities as well as enhance the coordination of PSSM and other complementary arms control activities with specialized international actors and donors. Teaching staff tasked with key roles and responsibilities within a PSSM framework such as the armourers, logisticians and stockpile managers at the unit level as well as their immediate superior officers the skills necessary to safely manage the storage, maintenance, destruction, disposal and security of arms and ammunition across their full life cycle should be taken seriously. Basic and low-cost short and medium term activities that directly improve the security of existing weapons and ammunition stockpiles need to be implemented without further delay at the initiative of the camp commanders and Congolese authorities themselves. One priority should be to dispose of and to destroy unstable munitions and unusable or out of service weapons. National authorities such as CCLAM with the support of capable organizations such as MAG have the authority to do so upon request of the relevant authorities following due legal process. Longer term interventions including those that demand organizations such as MAG to provide specialized services or that rely on the support of international donors need to be communicated through proper channels efficiently and on time. Agencies providing assistance need to be supported and their activities coordinated effectively to ensure that goals are met and expectations are managed.

Finally, relevant PSSM baseline studies or security needs assessments are an essential first step to identify the interest of communities affected by the cross-border dynamics—whether by the illicit diversion of weapons for criminal use or whether they are at risk from the impact of an unintentional munitions explosion. Their interests must remain firmly at the centre of this decision-making process.

ACRONYMS AND ABBREVIATIONS

ANR	DRC Intelligence Agency	ANR
BICC	Bonn International Center for Conversion	BICC
CAR	Central African Republic	CAR
CCLAM	Centre Congolais de la Lutte Antimines	CCLAM
CNC-ALPC	National Commission for the Control of Small Arms and Light Weapons and Armed Violence Reduction - National SALW Commission	CNC-ALPC
DDR	Disarmament, demobilization and reintegration (of former combatants)	DDR
DRC	Democratic Republic of the Congo	DRC
EUPOL DR Congo	European Union police mission in the Democratic Republic of the Congo	EUPOL DR Congo
EUSEC	European Union Security Sector Reform Mission in the	EUSEC
DR Congo	Democratic Republic of the Congo	DR Congo
FARDC	Armed Forces of the Democratic Republic of Congo	FARDC
GRIP	Group for Research and Information on Peace and Security	GRIP
IATG	International Ammunition Technical Guidelines	IATG
ISACS	International Small Arms Control Standards	ISACS
MAG	Mines Advisory Group	MAG
MLC	Movement for the liberation of the Congo	MLC
NAP	National Action Plan on SALW control	NAP
PNC	Congolese National Police	PNC
PSSM	Physical security and stockpile management	PSSM
RCD	Congolese Rally for Democracy	RCD
SADC	Southern African Development Community	SADC
SALW	Small arms and light weapons	SALW
SARCOM	Sub-regional Arms Control Mechanism	SARCOM
SOP	Standard operating procedure	SOP
SSR	Security sector reform	SSR
STAREC	Stabilization and Reconstruction Plan for Eastern Democratic Republic of the Congo	STAREC

UNMAS	United Nations Mine Action Service	UNMAS
UN PoA	United Nations Programme of Action to Combat, Prevent and Eradicate the Illicit Trade in Small Arms and Light Weapons in All its Aspects.	UN PoA
UNSAC	Standing Advisory Committee of the United Nations in Charge of Security Issues in Central Africa	UNSAC

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Mines Advisory Group (MAG) is a humanitarian non-governmental organization that works to save and improve lives by reducing the devastating effects armed violence and remnants of conflict have on communities around the world. MAG's international headquarters is based in Manchester, United Kingdom (UK) and is the support hub for MAG's operations worldwide. MAG's work in the DRC is amongst its most holistic and nationally empowering, employing humanitarian mine action and arms management and destruction initiatives to build national capacity and realize genuine resilience.

MAG remains the only Mine Action operator authorized by the DRC's Ministries of Interior and Defence to work on arms management and destruction.

The Groupe de recherche et d'information sur la paix et la sécurité (GRIP) is an independent, non-profit research institute based in Brussels, Belgium. GRIP has a track record of policy-driven research on arms transfers and on action to contain the uncontrolled spread of SALW. GRIP fieldwork and policy advice have focused on the governance and security situations in French-speaking countries on the African continent. GRIP currently participates in efforts coordinated by the UN Regional Centre for Peace and Disarmament in Africa (UNREC) and arrangements by the UN Trust Facility Supporting Cooperation in Arms Regulation (UNSCAR).

The Commission Nationale de Contrôle des Armes Légères et de Petit Calibre et de Réduction de la Violence Armée (CNC-ALPC) is an inter-ministerial organization based in Kinshasa tasked with the coordination of all small arms and light weapons-related control activities in the Democratic Republic of the Congo. The CNC-ALPC has several field offices and served as the primary government counterpart for this evaluation providing access and liaising between the Congolese army, air force, naval forces and police forces. The main point of contact for the CNC-ALPC is Colonel Kasongo who serves as the FARDC liaison for CNC-ALPC and is the Head of Programming. The CNC-ALPC also deployed a fourmember delegation to assist with the study headed by Danilon Lifongo Bokila accompanied by Captain Budri Adobe Boise, Jacques Mulumba and Bijoux Mulumba.

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