

**Conventional  
Ammunition Management  
Gap Analysis**

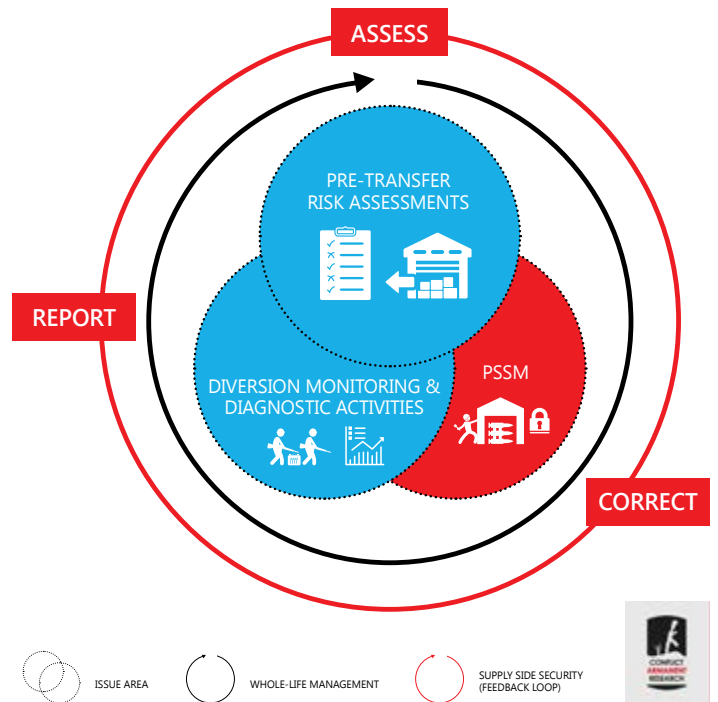
## INTRODUCTION

In 2018 and 2019, UNIDIR conducted a series of seminars for the project 'Framing and Informing Key Issues and Processes Pertinent to the Management of Conventional Ammunition'. As a result of this project, UNIDIR has developed this Conventional Ammunition Management Gap Analysis.

This document is designed in the form of a gap analysis to highlight key findings and opportunities relevant to conventional ammunition in four areas: security, safety, international cooperation and assistance, and frameworks. Additionally, it presents a comprehensive approach to the gaps identified: a responsible and accountable cycle for safe and secure management of ammunition.

The purpose of this document is to provide an introduction for government officials, diplomats and non-technical audiences to the key issues and processes of conventional ammunition management.

Figure 1: Responsibility and Accountability Cycle for Safe and Secure Management of Ammunition developed by Conflict Armament Research



## Responsibility and accountability cycle for safe and secure management of ammunition

To prevent unplanned explosions and diversion of ammunition to unauthorized users, conventional ammunition management approaches need to be comprehensive in order to respond to both safety and security risks. National ownership is a central precondition for an effective ammunition management approach. Conventional ammunition management is a multi-faceted undertaking that goes beyond stockpile management measures. This undertaking requires placing national, regional, and international efforts within a wider supply chain and monitoring framework to encourage the safe, secure, and accountable management of conventional ammunition throughout its whole-life. An effective ammunition management framework needs an exhaustive and multi-dimensional approach, hence the need for a systemic approach that situates physical security and stockpile management (PSSM) within a wider framework with at least three interrelated areas (see figure 1):

**Pre-Transfer Risk Assessments**



**PSSM Measures**



**Diversion Monitoring & Diagnostic Activities**





## PRINCIPLES AND ELEMENTS OF THE RESPONSIBILITY AND ACCOUNTABILITY CYCLE FOR SAFE AND SECURE MANAGEMENT OF AMMUNITION

A responsibility and accountability cycle for safe and secure management of ammunition considers the systemic aspects of ammunition control carefully, recognizing the linkages between pre-transfer risk assessments (supply-side controls), PSSM, and the critical role of diversion monitoring and reporting to promote coordinated action at national, regional, and international levels.

### Pre-transfer Risk Assessments



**Principles:** Effective national controls over the transfer of conventional ammunition are necessary to prevent diversion and illicit transfers. Pre-transfer risk assessments to evaluate the risks of diversion along the supply chain and ensure that only authorized users have custody of the ammunition are a key security element to prevent diversion. These assessments are a supply-side measure that complements PSSM and diversion monitoring activities.

#### Elements:

**Technical assessment:** 1) analysing the goods in relation to the end user; 2) understanding the different natures of ammunition and their differentiated risks; and 3) considering risk mitigation measures including marking requirements

**Access to information:** 1) verification of all parties involved in the transfer; 2) maintaining registers and databases of transfers, end users, manufacturers, brokers, shippers, freight forwarders, vessels and aircraft; 3) examining the role of private sector actors; 4) accessing all relevant information from primary and open sources; 5) considering the risks of transit, transshipment, and routes; and 6) assessing the regional, sub-regional, and national security situation in the importing State

**Documentation:** 1) verifying and authenticating transfer documentation; 2) making use of pre-delivery verification and post-delivery verification; 3) elaboration of a check list for risk analysis with diversion indicators; and 4) abiding by assurances related to re-export

**Communication and cooperation:** 1) ensuring fluid communication and cooperation between customs and national licensing authorities, between national authorities and private sector actors, and among exporting, transiting, and importing States; and 2) recognizing regional cooperation when conducting risk assessments

### Physical Security & Stockpile Management Measures



**Principles:** Diversion of conventional ammunition may occur due to leakage, theft or loss caused by weakened stockpile management practices. To establish effective PSSM measures it is important to obtain political buy-in that allows advances in national legislation, regulations, and institutional architectures. The International Ammunition Technical Guidelines (IATGs) are essential and provide authoritative and extensive guidance for PSSM.

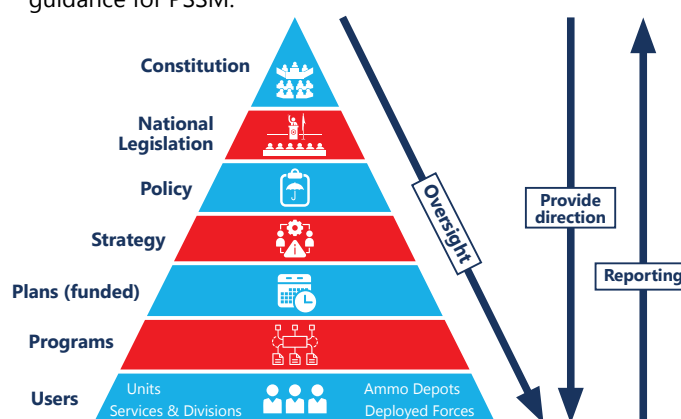


Figure 2: National PSSM oversight system

**Elements:** Security plans; vetting of personnel; physical security interventions before, during, and after operations; accountancy; surveillance; record-keeping; surplus determination; political buy-in; and national oversight.

### Diversion Monitoring & Diagnostic Activities



**Principles:** Accurately identifying the point of diversion is crucial to preventing future diversion. Establishing monitoring and diagnostic methods and measures is critical, primarily at the national level. Monitoring and diagnostic activities are essential elements for prevention and conducting pre-transfer and PSSM controls. Post-delivery verifications, end-use and end-user monitoring, and ammunition tracing are essential to identify points of diversion. Ammunition tracing and profiling are possible both in conflict and non-conflict settings and, even when ammunition is unboxed, it is possible to establish lines of investigation to generate intelligence from head-stamps and other markings. Monitoring should be undertaken but cooperation remains challenging to support enforcement.

**Elements:** Development of techniques for ammunition identification, profiling, tracing and analysis; data collection mechanisms; recording information (databases); exchanges of practices; implementation of tracing and profiling trainings and capacity-building; and end-use and end-user verification (randomized or based on risk assessments).

Risk reduction and mitigation is an essential consideration across the transfer, stockpile and monitoring cycle. To mitigate risks, it is important to understand the linkages between areas of the cycle. If one area of the cycle breaks, the entire system may fail, because it is an interdependent system.



# 1 Security of Conventional Ammunition

## Context

Diversion of ammunition to unauthorized/unintended users is an enabling and contributing factor for insecurity and the escalation of armed violence and conflict. Conflict, instability and financial gains are common causes of stockpile diversion—particularly the lack of security during and after operations.



## Findings



Beyond stockpiles, ammunition diversion also happens by other means. It can happen via false or fraudulent documentation, illicit brokering, unauthorized retransfer to non-State end users, diversion in-transit, etc.



Diversion from stockpiles could happen at the time of manufacture, during transportation, during operations, on the battlefield, during training, in storage, during disposal processes, and could be aggravated by factors such as poor physical security and ineffective ammunition management practices.



Stockpiles remain one of the key sources of safety and security risks, and application of the IATGs remains key. It is important to focus on the links between PSSM and pre-transfer and monitoring activities to ensure effectiveness of interventions in each area.



It is essential to differentiate types of diversion (loss of national control, desertions, stockpile leakages, State-sponsored diversion, in-route diversion, etc.). A typology of diversion is important because some areas of diversion can be addressed nationally, and others require coordinated efforts among States.



Moreover, there is an economic aspect to consider in ammunition diversion. Ammunition is a valuable commodity and it has a tradeable value.



Based on observations in conflict-affected areas, methods to disguise diversion are getting more sophisticated (e.g. obliterated markings, fake packaging).

## Opportunities



A top-down approach to ammunition security was deemed necessary to provide direction from the highest level of government to the personnel responsible for the delivery of military capability, operational units, and the stock-holding ammunition storage areas.



Effective pre-transfer risk assessments are a key security element to prevent diversion of ammunition throughout its whole-life. This must be done with a view to identifying essential control steps and measures at the national level, including risk indicators, sources of information, roles and responsibilities, end-user control systems, verification, and information-exchange mechanisms and related documentation.



Education and knowledge transfer are important to improve security. Invest in people rather than electronic security measures. Fences are good at marking boundaries, but they need to be monitored and patrolled. Practical and simple security measures can be very effective.



To improve security, it is important to understand where are the weaker points of the ammunition control system. Monitoring and diagnostic activities provide this information and need to be designed and conducted consistently. Currently, such activities are underdeveloped in the conventional ammunition management cycle and need further analysis and attention.

## 2 Safety of Conventional Ammunition



### Context

There is a need to manage and reduce the risks related to the safety of ammunition to prevent unplanned explosions at munitions sites. Unsafe and unserviceable ammunition presents a high risk to people and critical infrastructure.



### Findings



Improperly managed ammunition poses a critical risk to safety due to the potential for unplanned explosions at munitions sites.



In terms of safety of conventional ammunition, there are two basic approaches that should be considered: 1) reduce the risk of an accidental explosion occurring in the first place; and 2) mitigate the effects of an accidental explosion should it occur.



Efforts need to focus on reducing the likelihood and consequences of accidental explosions.



Ammunition surplus is a by-product of a well-functioning ammunition management system and its determination is key to reducing safety risks.



Utilizing the IATGs is fundamental to achieving safe stockpiling of ammunition and reducing the risk of unplanned explosions at munitions sites.

### Opportunities



Utilization of the IATGs and good ammunition management practices are fundamental to ammunition safety.



A targeted approach is key: although stockpiles remain one of the key sources of safety and security risks and application of the IATGs remains essential, it is crucial to focus on reducing the highest risks bearing in mind the capacity of the State in question.



It is essential that excess and unserviceable stockpiles be considered as liabilities rather than assets.



A greater detail of technical guidance should be developed in the areas of 1) unclassified ammunition, 2) surveillance and proof testing, and 3) shelf-life information.



Experts state that if there were only one thing that could be done, the most important to ensure safety is understanding and applying explosive quantity distances, including in peace operations.

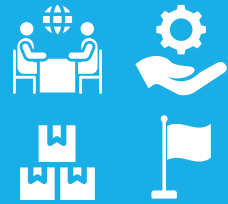


# 3 International Cooperation and Assistance



## Context

International cooperation and assistance on ammunition management predominantly focuses on PSSM. The IATGs provide authoritative and validated technical guidance to States, and comprehensive utilization of the IATGs would solve most of the ammunition safety issues and some of the ammunition security problems that governments encounter, particularly in relation to stockpiles.



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## Findings

The IATGs are the main tool to support the safe and secure management of conventional ammunition stockpiles but, if they are applied in isolation, they will not address all dimensions related to safety and security, including the different sources of ammunition diversion, which result from a number of weaknesses along the supply chain.



It is essential to sustain efforts to encourage uptake and use of the IATGs, with particular efforts placed on sensitization, long-term programming within national action frameworks, and the development of sustainable ammunition technical expertise. It is important to keep in mind the capacity of the State and focus on reducing the highest risks by promoting targeted approaches.



## Opportunities

National commitment and long-term relationships among actors involved in international assistance are key to enabling institutional capacity-building and knowledge strengthening, including through the development of national action plans and training.



International cooperation and assistance should promote physical infrastructure improvements, but also long-term engagement and institutional capacity-building to ensure sustainability. The IATGs offer positive support to ammunition management operations, but alone are not enough to deliver sustainable solutions for ammunition management.



Improvements in responsible, safe and secure management of ammunition could benefit from international cooperation in the areas of pre-transfer risk assessments and diversion monitoring.



The 2030 Agenda for Sustainable Development and Action 22 of the Secretary-General's Agenda for Disarmament may be useful frameworks to promote and facilitate dialogue and cooperation on conventional ammunition management cooperation and assistance.







# 4 Frameworks

## Context

Ammunition has been described as the 'orphan' of conventional arms control frameworks. Experts, practitioners, and State representatives underscore that ammunition control measures are present in a certain number of international and regional instruments, but they are fragmented and limited in scope. General Assembly resolution 74/53, and the request to the Secretary-General to convene a Group of Governmental Experts in 2020, might be an opportunity to fill this gap.



## Findings



There is a lack of a dedicated international framework to address issues related to conventional ammunition management. This makes it difficult to mobilize political action and poses challenges for international cooperation and assistance. In some regions, relevant legal frameworks that encompass small arms ammunition exist, but their implementation remains uneven and challenging.



Regional and sub-regional frameworks have gaps in scope and application, but they provide a foundation. Some States utilize regional instruments to drive national considerations for ammunition management.

## Opportunities



Regional approaches could support States' approaches towards a wider political objective at the multilateral level. Comprehensive roadmaps under existing or future regional frameworks could provide a good basis for regional approaches to ammunition. However, the value of replicability may need to be explored by each subregion given the different contexts.



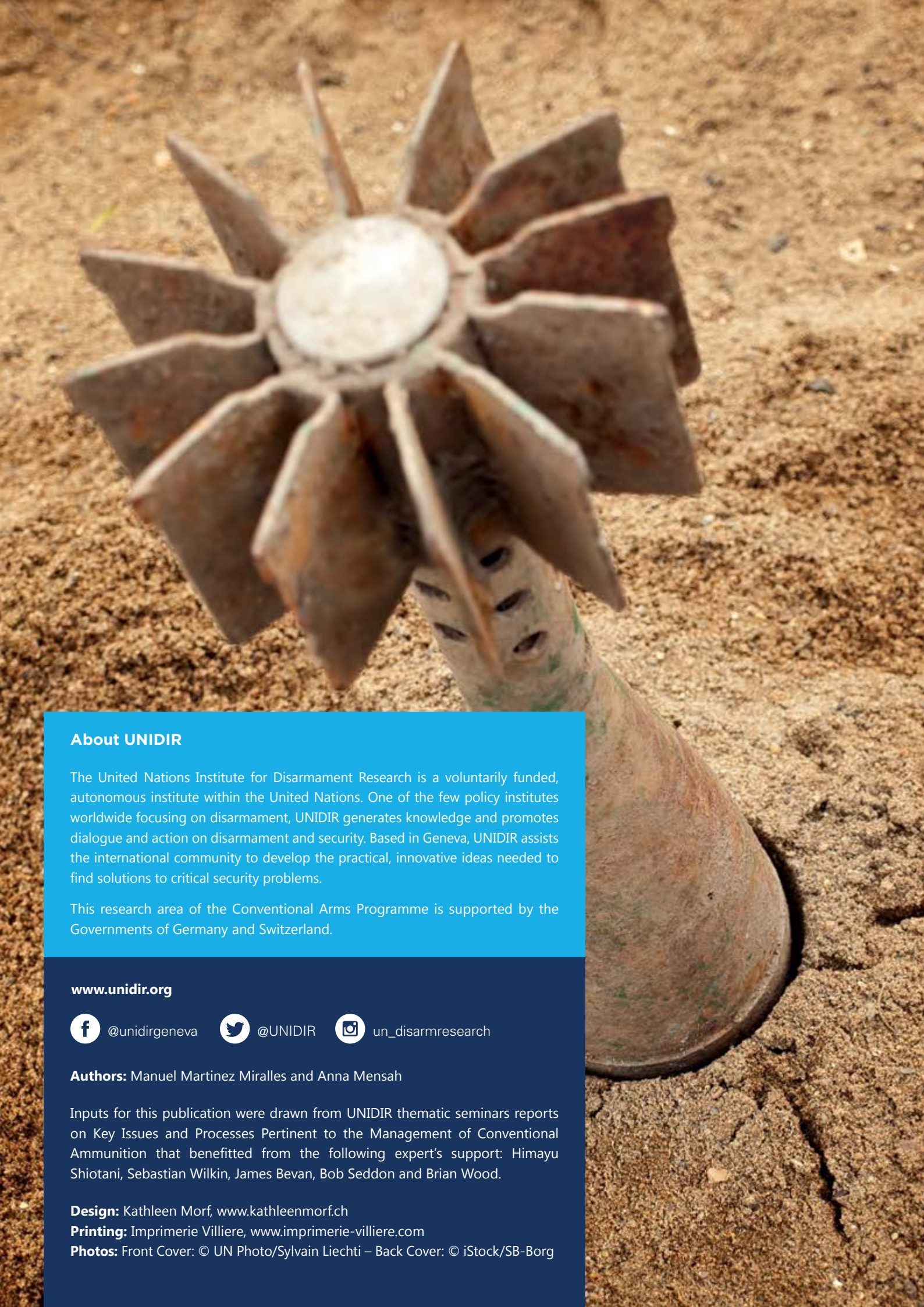
Consider the systemic aspects of ammunition control more carefully, recognizing the linkages between supply-side controls, stockpile management, and the critical role of monitoring and reporting as a way to promote coordinated action at the national, regional, and international levels.



The development and implementation of measures and mechanisms within national and regional frameworks would be useful in addressing the illicit trafficking of ammunition.







## About UNIDIR

The United Nations Institute for Disarmament Research is a voluntarily funded, autonomous institute within the United Nations. One of the few policy institutes worldwide focusing on disarmament, UNIDIR generates knowledge and promotes dialogue and action on disarmament and security. Based in Geneva, UNIDIR assists the international community to develop the practical, innovative ideas needed to find solutions to critical security problems.

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**Authors:** Manuel Martinez Miralles and Anna Mensah

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