

Introduction: Conventional Ammunition in Surplus

James Bevan

Overview

Unstable and ineffectively secured accumulations of surplus conventional ammunition pose a risk to public safety, a security threat to societies, and, ultimately, a challenge to the state's monopoly on the use of force. Surplus is a problem in its own right, but one that must be understood as part of a wider set of safety and security risks that are inherent to national stockpiling of conventional ammunition.

The risk posed by conventional ammunition

Unlike weapons, many of the components in ammunition are designed to detonate or combust (CHAPTER 2). Propellants, primers, and explosives are inherently unstable and require comprehensive physical and chemical surveillance (CHAPTER 6). Managing them requires thorough planning and attention to their safe storage, handling, transportation, and disposal. A failure to institute these necessary management practices can have severe consequences. Ammunition that is allowed to become unstable or is mishandled may ignite, explode, or contaminate the environment (CHAPTER 13). Because stockpiles of conventional ammunition often run into thousands of tonnes, any one of these occurrences can lead to large-scale loss of life, drastic impacts on local economies, and the destruction of high-value military assets. Stockpiles of large calibre conventional ammunition and hazardous toxic components, such as liquid rocket fuel (CHAPTER 11), represent serious threats in this regard.

Conventional ammunition is also in high demand on the illicit market. It is a commodity that has many applications, ranging from misuse in illegal firearms to unlawful mining and fishing. Stockpiles therefore require comprehensive measures to protect them against theft or any losses that might result in illegal acquisition (CHAPTER 7). These measures include adequate physi-

cal security to protect against illegal entry to stockpiles, and comprehensive inventories, accounting practices, and oversight mechanisms that are designed to detect and prevent the misappropriation of ammunition. When these management systems fail, state stockpiles provide criminals, insurgent groups, and terrorist organizations with ammunition (CHAPTER 15)—whether in the form of small arms cartridges; advanced light weapons, such as man-portable air defence systems (CHAPTER 12); larger conventional ordnance; or components of improvised explosive devices (CHAPTER 14).

These are the essential risks posed by conventional ammunition—on the one hand, a safety risk to the public, and on the other, a significant security risk to states and societies. As these introductory remarks make clear, conventional ammunition is always a latent threat from either perspective. Containing that threat is largely contingent on effective stockpile management.

The specific problem with surpluses

The one area, however, where this set of risk is not completely dependent on stockpile management is the issue of ammunition surplus. Surpluses, as their name suggests, are not required. But this does mean that they are unwanted. States have a considerable incentive to either retain them, in case of future need, or to transfer them.

Surplus retention

If they have the capacity to identify surpluses (CHAPTER 10), states have already made the decision that the ammunition in question is beyond their existing requirements. This decision may be based on a number of factors, including anticipated excess, obsolescence, and instability. However, if states do not have the capacity to thoroughly inventory and monitor the contents of their stockpiles, they may not even recognize that they have a surplus in the first place.

Whether or not they detect surpluses, states often have a tendency to retain ammunition stocks and, indeed, arms and ammunition more generally. To some extent, this results from the difficulty of planning for future emergencies. The severity of a potential emergency is hard to predict, and so too is the possible demand for ammunition. But many states do not even attempt to forecast future

requirements. Combined with a failure to properly inventory and monitor conventional ammunition stockpiles, this means that the states in question cannot make any *expected demand vs extant supply* calculation—even should they wish to. The retention of surplus is therefore not a decision, but a non-decision based, perhaps, on the erroneous rationale that ‘more is probably better’.

The result is an excessive build-up of conventional ammunition, and with it, an excessive build-up of the potential safety and security risks it poses.

Surplus transfer

It is expensive for states to dispose of ammunition, and there are many potential buyers on the international market, ranging from other states to non-state armed groups and criminal organizations.

The one thing these potential recipients have in common is relatively weak purchasing power. They acquire surplus ammunition because it is cheap and because they do not have the funds to purchase newly manufactured supplies. Very often, such purchases are a function of urgent need: states may feel pressured to maintain armament parity with their neighbours, while states or armed groups involved in conflict will have a critical need for continuous supplies of ammunition.

Transferring the problem

Even if surpluses do not fuel instability, there is an added risk that any surplus that is cheaply acquired will be subsequently stored under conditions of minimal investment. There is, arguably, a direct correlation between the acquisition of surplus ammunition and the likelihood that the recipient state has ineffective management practices. States that purchase surpluses are largely confined to the developing world, and it is here that conventional ammunition stockpiles pose the greatest safety and security risks. The result is not only a transfer of surplus ammunition, but a transfer of the latent threat it poses, whether from the perspective of safety or security.

In cases in which states have, themselves, generated large surplus stockpiles, the process of surplus accumulation is often a result of systemic failures in the management of the entire national stockpile of arms and ammunition. Surplus ammunition is therefore in itself indicative of ineffective national

inventorying and, with it, minimal regard for the safe and secure management of arms and ammunition.

The scale of the surplus ammunition problem

National surplus ammunition stockpiles continue to increase in size as states reduce the size of their armed forces, invest in new weaponry, or simply maintain acquisition rates above their national requirements. The countries of Eastern Europe and the former Soviet Union provide the most high profile examples of surplus stockpiles that are the direct legacy of force reductions, but the problem is not restricted to these countries. The surplus stockpiles of China, India, Iran, and Iraq are also thought to be very large.

At the national level alone, the scale of conventional ammunition surpluses can be vast. Ukraine, for instance, was formerly a base for strategic reserves of arms and ammunition during the cold war, in addition to having a large domestic military-industrial complex. The country is now faced with conventional ammunition stockpiles that, by some estimates, exceed 2.5 million tonnes (see Table 1). A significant percentage of this stockpile resides in exposed and inappropriately equipped storage facilities, a situation that serves to accelerate its deterioration.

Ukraine is not alone in the challenges it faces. As Table 1 illustrates, for a mere 10 countries, national surplus ammunition stocks accumulate to around 4.5 million tonnes. Global estimates remain elusive due to a lack of transparency and adequate record keeping on the part of national authorities.

The risk posed by surpluses, however, is not necessarily proportional to their size. Despite the fact that the world's largest surplus ammunition stockpiles have received the lion's share of public interest, relatively small amounts of ammunition can cause loss of life when they are allowed to become unstable, whether by explosion or contamination (CHAPTER 13).

The scale of stockpiles can also be misleading from the perspective of the security risk they pose. Small calibre ammunition, for example, is relatively stable under most circumstances. It poses only a minor explosive risk when stockpiled in the most decrepit conditions. Even when stored or deployed in

Table 1

Selected national ammunition stockpile estimates*

Country	Estimated stockpile (tonnes)
Afghanistan	100,000+
Albania	120,000
Belarus	1,000,000
Bosnia and Herzegovina	67,000
Bulgaria	153,000
Iraq**	400,000
Montenegro	11,200
Serbia	200,000+
Ukraine	2,500,000
Total	4,551,200+

* Estimates compiled by Adrian Wilkinson.

** The United States has already destroyed more than 200,000 tons.

relative small amounts, however, it can easily be diverted (CHAPTER 15) to the illicit market when accounting and monitoring procedures are lax.

The origins of surplus

National ammunition surpluses accrue for a number of reasons, including major changes in the amount of ammunition required by states, changes in types of weapons in service or in doctrine, and through a lack of planning and monitoring that allows surpluses to accumulate undetected.

Large-scale force reductions

The most publicized cases of surplus accumulation include the states of the former Soviet Union and Eastern Europe. These countries represent extreme cases, whereby the rapidly diminishing size (downsizing) of armed forces following the break-up of the Soviet Union created large surpluses of arms and ammunition. Such states typify several effects of changing ammunition requirements.

First, by virtue of their former strategic location, some states retained excess munitions that had been destined for larger (effectively multinational) forces. Second, other countries reduced the size of their armed forces due to a combination of economic and strategic factors, which made large militaries either untenable or unnecessary. A large part of the arms and ammunition formerly required for these demobilized forces was designated as surplus. Third, several arms-manufacturing states maintained previous rates of arms production irrespective of decreasing domestic demand, which contributed to growing national surpluses.

All of these impacts resulted from the difficulties that states faced in adjusting to rapid changes in 'domestic' demand for arms and ammunition. Surpluses were, to a large extent, made problematic through ineffective stockpile management—including safe storage (CHAPTER 8) and stockpile security (CHAPTER 7), which together might have alleviated the threat of munition instability and theft. Additionally, more rapid disposal or destruction (CHAPTER 9) could have removed the temptation for states to transfer their surpluses to the world's conflict zones.

Changes in the deployment of troops and materiel

Changes in doctrine prompt military reorganization that can result in requirements for different quantities and types of weapons. These changes may result in reduced demand for weapons among some users, which can prompt surplus accumulation. The impact of such changes differs little from the effect of downsizing, except in scale and the fact that they tend to create surpluses of specific varieties of weapon. For example, revised doctrine and tactics often lead to the declining utility of some types of weapons. Large conventional munitions, for instance, may be relegated to surplus if states decide to create smaller, more mobile forces.

Similar processes occur when states acquire new weapon systems. New acquisitions prompt the retirement of older weapons and can lead to surpluses of particular types of weapons and their components. States might, for example, choose to replace 175 mm and 210 mm artillery with multiple-launch rocket systems; or they might reduce the number of units deploying man-portable air defence systems (CHAPTER 12); or replace particular types of

missiles, leaving surpluses of older systems and rocket fuel (CHAPTER 11). Importantly, surplus accumulation under these conditions may be localized and specific to particular units within a state's security forces.

Hidden surplus accumulation

Often states do not have the accounting and monitoring mechanisms in place to discriminate between the arms and ammunition that are required for the efficient functioning of their security forces (often termed operational stocks) and surplus munitions (CHAPTER 10). Although most conventional ammunition is marked (CHAPTER 3) and therefore identifiable, without the necessary accounting procedures in place, states cannot ascertain where, and in what quantities, different types or batches of ammunition are stored. Surpluses effectively remain hidden, and their accumulation is directly attributable to a lack of comprehensive stockpile management—particularly accounting procedures (CHAPTER 5).

In these cases, analysis has to take the worst-case scenario—the entirety of the national ammunition stockpile (whether surplus or otherwise) may be poorly managed to the extent that it poses great dangers to safety and security. The problem is not one of surplus *per se*, but of state policies regarding the treatment of *all* arms and ammunition within the national stockpile.

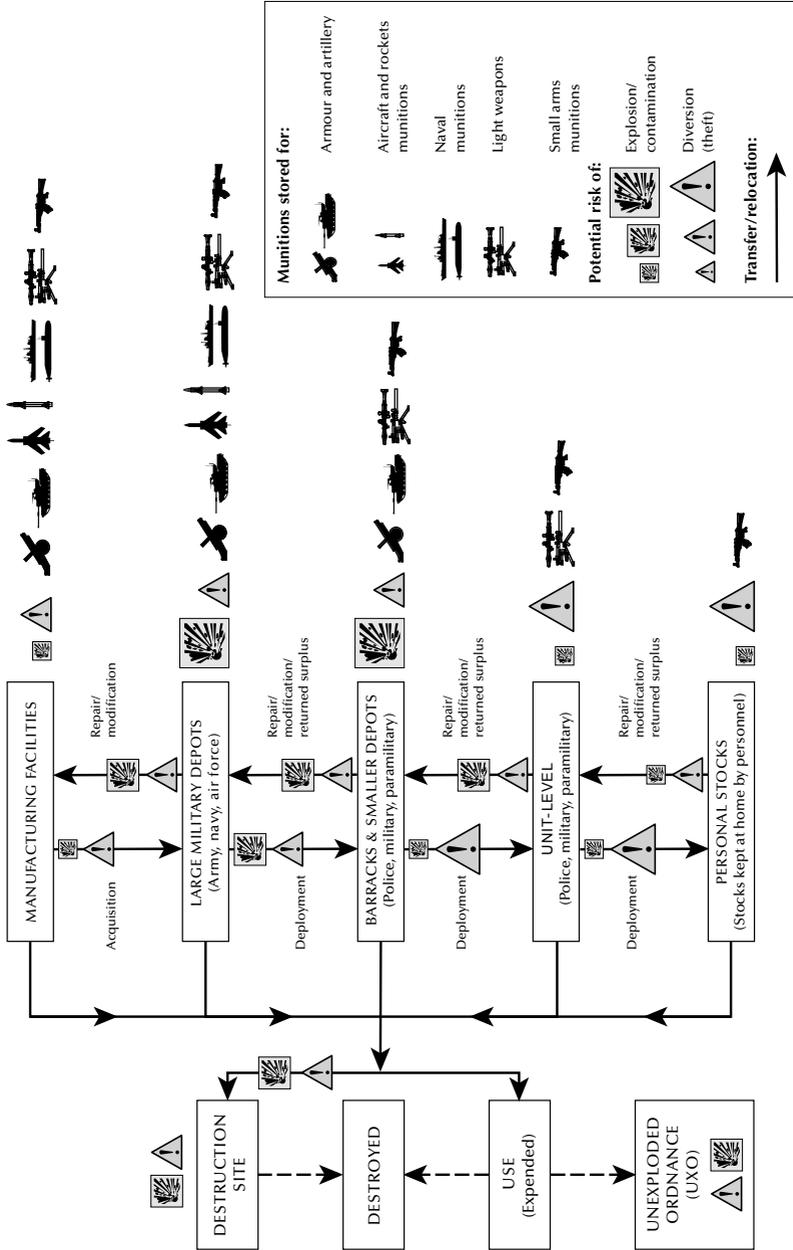
The chapters in this book recognize this to be the case in many states. In these countries, the issue of ammunition surplus is so seamlessly linked to broader stockpile management failures that any analysis of conventional ammunition in surplus must be situated within these wider concerns.

Addressing the problem

Most of the problems related to surplus accumulation, and the risks posed by conventional arms and ammunition more generally, are contingent on lax state stockpile management procedures. These failings can be broken down into a number of factors, which are explored in depth by the chapters in this book.

First, states that fail to maintain effective accounting procedures (CHAPTER 5) cannot assess the quality and quantity of their national stockpiles with any degree of accuracy. They are therefore limited in their capacity to distinguish

Figure 1 The national stockpile: risks and hazards in the conventional ammunition life cycle



surplus stocks from ammunition that is required for the efficient operation of their security forces (CHAPTER 10). Moreover, they have little means to identify the loss or diversion of ammunition (CHAPTER 15). Without adequate systems for marking and recording—and, in some cases, lot marking (CHAPTER 16)—ammunition, many states remain unaware that they have a problem.

Second, a lack of surveillance and technical inspection of ammunition (CHAPTER 6) leads to the accumulation of unreliable, potentially unstable, and ultimately unsafe stocks. These stocks pose numerous risks, ranging from a loss of efficiency at best, to environmental contamination and major stockpile explosions (CHAPTER 13) in the worst cases.

Third, poor physical security (CHAPTER 7) of munitions facilitates theft and sabotage. The failure to institute measures ranging from depot and perimeter security to the most basic lock and key systems leads to diversion and tampering, and, in the final analysis, jeopardizes the capacity of security forces to maintain law and order (see Figure 1).

These three sets of factors are facets of the same problem—a systemic failure in the management of many national ammunition stockpiles. Ineffective systems in one area, whether related to accounting, surveillance, or security, threaten the integrity of the entire management process. Planning for national stockpile management (CHAPTER 8), and thereby addressing the factors listed above, needs to be a comprehensive process. It is applicable not just to large stockpile facilities, but across the national stockpile: at the place of manufacture, in barracks and police stations, or when arms and ammunition are issued to members of the security forces.

Progress to date

Estimating ammunition stockpile levels is problematic due to a combination of insufficient national data and a ‘culture of secrecy’. Records kept in many developing or post-conflict countries have not been reliably maintained, and ammunition stockpiles are regarded as national secrets. Even where information on the disposal of surplus ammunition is made available, states provide inconsistent figures. The lack of transparency and accuracy makes assessing the global or regional problem, and hence developing plans to deal with it, very difficult.

While modest attempts have been made to improve stockpile management in the countries that experience the most significant surplus ammunition stockpiles, these initiatives have concerned a relatively small number of states. But defective stockpile management is the norm rather than the exception in many developing countries and in states recovering from armed conflict. In these countries, it is not necessarily surplus stocks of ammunition that should be the focus of attention, but policies related to the management of all conventional munitions. Continued failure to improve stockpile management will ensure: 1) that states remain unaware that they have surpluses; 2) that their national stockpiles of all munitions remain poorly maintained and a risk to public safety; and 3) that national stockpiles will continue to be a source of illicit weaponry used in crime and armed violence.

Recent initiatives (CHAPTER 1) to reverse these dangerous trends have culminated in the appointment of a United Nations Group of Governmental Experts, which is scheduled to address the issue of conventional ammunition comprehensively in 2008. For the numerous stakeholders (CHAPTER 17) in the issue—from states and security forces to the communities at risk from unsafe stocks (CHAPTER 18)—these efforts can only be welcomed.

Conclusion

The problem of surplus ammunition is much more than that of dealing with the consequences of downsizing militaries and the relics of past wars. Destruction programmes offer the best hope of removing the temptation for states and other parties to transfer surplus ammunition stocks to the world's conflict zones, or to simply leave unstable surpluses as a future threat to their populations. But, in the vast majority of cases across the globe, destruction is not the final solution. Without addressing the underlying reasons why states accumulate unsafe and unsecured ammunition surpluses, destruction will remain a short-term fix to a recurrent problem. This problem is primarily one of inadequate stockpile management. ■

Further reading

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