



Center for Global Health & Security

Issue Brief: U.S. and Russian Tactical Nuclear Weapons: A Forgotten Threat

Introduction

The United States and Russia currently possess thousands of tactical nuclear weapons (TNW). Deployed widely, these weapons present a grave threat to international peace and security. Despite their comparatively small size, the use of a tactical nuclear weapon could still result in great destruction. Since they are small and mobile, tactical nuclear weapons are especially vulnerable to theft and/or transfer to nuclear aspirant countries or terrorist groups. Some older tactical nuclear weapons lack electronic locking mechanisms making them more vulnerable to unauthorized use in a time of crisis. Furthermore, since TNWs have smaller yield and are specifically intended for battlefield use, some military planners in the United States, and in other countries, perceive them to be "usable nukes." This perception, quite dangerously, lowers the overall threshold for use of nuclear weapons, whether tactical or strategic, and undermines efforts toward nonproliferation. For all of these reasons, this issue brief argues that it is imperative for the United States and other nations take steps to eliminate remaining TNW stockpiles.

Definitions: TNWs, SNWs, and 'Mini-Nukes'

There is no universally agreed upon definition of a tactical nuclear weapon. However, TNWs are loosely defined as nuclear weapons that are under 1 megaton of explosive power and are intended to be "lobbed" onto a remote battlefield, thus eliminating a huge number of the enemy with one blow. In this respect they are different from strategic nuclear weapons that can range in size from 1 megaton to 20 megatons (fusion weapons). Strategic nuclear weapons (SNW) are intended to be used on vast areas, strategic targets such as whole cities, fortified launch sites, bunkers or other huge targets. SNWs can be delivered by ballistic missile or by free-fall bombs, but because of their size and design, these warheads cannot be "lobbed" by cannon fire or by battlefield missile. TNWs are different from a new breed of nuclear weapon termed "mini-nuke," although these two are often lumped together in general discussions. Mini-nuke refers to a precision nuclear weapon with a yield of 5 kilotons or less (weapons designers in the United States hope to produce mini-nukes with even lower yields - down to a few tens of tons). Mini-nuke proponents claim that the main purpose of these weapons is to destroy deeply buried, hardened targets - such as weapons facilities or bunkers buried in rock or mountains.

Estimated United States TNW

| | 1991 | 2001 |
|-------------------|-------------|-----------------|
| Army/Marine Corps | 3040 | 0 |
| Navy | 1150 | 320 SLCMs |
| Air Force | 2975 | 1350 B-61 bombs |
| Air Defense | 0 | 0 |
| Total | 7165 | 1670 |

Estimated Soviet Russian TNW

| | 1991 | 2001 |
|---------------|----------------------|-------------|
| Ground Forces | 3040 | 0 |
| Navy | 1150 | 850 |
| Air Force | 2975 | 1540 |
| Air Defense | 0 | 1200 |
| Total | 15,000-21,700 | 3590 |

Source: Joshua Handler, "The September 1991 PNIs and the Elimination, Storing, and the Security Aspects of TNWs," presentation for "Time to Control Tactical Nuclear Weapons," seminar hosted by United Nations Institute for Disarmament Research (UNIDIR), September 24, 2001, available electronically at http://www.princeton.edu/~jhandler/CV/JH_UN_24_Sept_01_TNW_Talk.pdf

Tactical Nuclear Weapons: History of Development

Tactical nuclear weapons were first developed by the United States in the early 1950's to counter a variety of Soviet threat scenarios. By this time, U.S. nuclear weapons designers had successfully developed miniature nuclear explosive devices, making it possible to design nuclear shells for high-caliber artillery. In the following years, the United States developed nuclear warheads for tactical missiles, front combat aircraft, and a broad variety of sea-based systems (torpedoes, missiles, anti-submarine weapons). The United States continued to produce tactical nuclear weapons at an accelerated rate and by the early 1970's the country's TNW arsenal contained some 7,000

warheads. The overwhelming majority of the United States tactical nuclear weapons were then deployed in Europe to defend U.S. allies against a Soviet attack and to demonstrate U.S. commitment to NATO.

Following the U.S.-Soviet détente and reduction of tensions in Europe in the mid-1970s, the number of U.S. TNW deployed in Europe gradually declined. By end of the 1980's, according to former Defense Secretary Robert McNamara, there were 4,680 U.S. nuclear weapons in Europe, including drop bombs, warheads for surface-to-surface and air-defense missiles, artillery shells and ground mines. The yield power of these systems varied from one to several hundred kilotons.

The first Soviet tactical nuclear weapon was deployed in 1954, a small nuclear drop bomb to be carried by a tactical jet bomber, the Il-28A. Soon after, the Soviet Union went on an accelerated production mode to increase its TNW arsenal for a number of reasons. First, in the early years of the Cold War, the Soviet approach towards tactical nuclear weapons was defined by the country's operational strategic concepts. The Soviet military strategy at that time called for such a rapid and overwhelming counterattack by the Soviet armed forces in the European theater that it would have been absolutely impossible, even theoretically, without massive use of nuclear weapons. Secondly, the inter-service rivalry within the Soviet armed forces led to exaggerated demands for tactical nuclear weapons from the Soviet army, navy and the airforce. By late 1970s the Soviet Union was believed to have over 20,000 non-strategic nuclear weapons.

Managing the Threat of Tactical Nuclear Weapons

While there are a number of formal international agreements devoted to reduction of the global strategic nuclear weapons stockpile, no such framework exists for managing the world's TNW arsenals. During the period September-October 1991, U.S. President George Bush and then Soviet leader Mikhail Gorbachev agreed on an informal regime created by unilateral, parallel statements from the two leaders - not codified in a bilateral or international treaty - to reduce and manage their TNW stockpiles. This agreement is based on reciprocal unilateral obligations between the two countries and lacks any verification mechanism. Under this agreement all ground- and sea-launched TNW of the United States and the Soviet Union were withdrawn to storage facilities (along with long range sea-launched cruise missiles). The two countries also agreed to reduce their air-launched arsenal under this agreement.

The informal TNW regime was further developed with the agreements concluded within the Commonwealth of Independent States (CIS) at the end of 1991 and in early 1992 (indirectly codified by the Lisbon Protocol to the START I Treaty). Under these agreements, Russia agreed to withdraw its tactical nuclear weapons deployed in the territories of Belarus, Ukraine, and Kazakhstan. Similarly, in December 1996, the North Atlantic Council ministerial meeting pledged to refrain from deploying tactical nuclear weapons on the territories of the future new members of the North Atlantic Treaty Organization (NATO).

Despite achieving initial progress, the Russian-U.S. informal agreement on reduction and control of TNW has a number of problems and is highly unlikely to accomplish lasting success. First, this agreement lacks provisions for data exchange and verification, meaning there is no transparency to monitor success or failure of the agreement. Consequently, the exact sizes of the U.S. and Russian TNW stockpiles remain unknown. The two countries did not make this information public at the time of the 1991 agreement, nor was it disclosed in the confidential briefings held in the aftermath of the parallel statements.

Unofficial estimates put the current U.S. TNW stockpile around 1,670 warheads. Most U.S. TNWs are believed to be in storage, but some 150 U.S. gravity bombs remain readily deployable in Europe. The presence of U.S. TNWs in Europe has been a great source of contention between the United States and Russia, and to varying degrees, among European governments. The size of the Russian TNW arsenal is even less certain. Unofficial estimates of the Russian TNW have ranged from around 4,000 to as high as 22,000, while the share of the Russian TNW deployed in Europe is unknown. Some speculate that Russian officials themselves are unaware of the actual number.

Uncertainties in TNW numbers make it difficult to examine the true success of the U.S.-Russian agreement. Even among each nation's policymakers, there seems to be some doubt about the other party's compliance with the TNW agreement. The United States remains unsure of the Russian share of warheads slated for elimination and those moved to storage. U.S. frustration over the uncertainty of TNW elimination in Russia was evident in fall 1996 when then Secretary of Defense William Perry called on Russia to complete the elimination of TNWs that had been subject to elimination under the 1991 agreement. The process of warhead elimination has not become any more transparent since that time.

A second and even more significant problem facing the U.S.-Russian TNW agreement is its easy reversibility. Because this agreement is based on a concept of reciprocal unilateral obligations, either party can reverse its unilateral obligations by a simple governmental or a legislative decision. The termination of agreement by one party does not involve advance warning to the other. In fact, the Russian government has threatened to reverse this process on a number of occasions based on its objection to NATO enlargement and, more recently, U.S. plans to develop and deploy a missile defense system.

Furthermore, it is essential to understand that the current informal TNW agreements between the United States and Russia are limited to deep reductions and management of TNW arsenals, but do not contemplate the elimination of

these weapons. On the contrary, both countries continue to argue in favor of maintaining their TNW stockpile at some level and, more dangerously, their defense planners continue to envision possible scenarios where the use of these weapons may even be "necessary."

For example, the United States continues to maintain its TNW deployment in Europe on the basis that: a) they provide a counter-balance to Russian nuclear forces, including Russia's TNW arsenal; b) they deter "rogue" states and terrorist groups with suspected nuclear, chemical or biological weapons (CBW) capabilities. United States policy does not rule out the use of nuclear weapons as a response to chemical or biological attacks on U.S. interests. Should such a response become "necessary," it is argued, the use of TNWs might be more appropriate than strategic weapons because of their smaller yield. The Russian government, on the other hand, has its own logic for maintaining TNW. Russia views its TNW arsenal to be essential a) for compensating apparent weaknesses of conventional forces brought on by economic retraction; b) for upholding Russian status and prestige in the post-cold war world; c) for countering the threat of CBW; d) for preventing localized regional conflicts and deterring strategic escalation; and e) for fulfilling roles in battlefield nuclear combat.

Conclusions and Recommendations:

Thousands of TNWs currently maintained and deployed by the United States and Russia present a serious threat to global security. Although TNWs have never been used, the world has come frighteningly close to instances when they could have been. One well-documented instance is the Cuban Missile Crisis of 1962. A number of high-level Soviet military officials have disclosed that the local Soviet commanders in Cuba had been given control of their tactical nuclear weapons during this crisis. If the United States had launched a conventional attack on Cuba, there would have been little to keep Soviet commanders from using those tactical nuclear weapons just 300 miles South of Florida.

Some four decades after the Cuban Missile Crisis, the threat posed to U.S. and world security by TNWs may not be so different. The sheer presence of thousands of TNWs in the U.S. and in the particularly difficult-to-monitor Russian arsenal leave the door open for possible theft, transfer, or unauthorized use of these weapons. In a time of crisis, as in the aftermath of the September 11 terrorist attacks on the United States and the subsequent U.S. military campaign against Afghanistan, shortsighted actions involving TNWs become very possible. In fact, following the September 11 terrorist attacks, there have been suggestions - although not directly from the U.S. military or Bush administration officials - that the United States should consider the use of low-yield nuclear weapons to teach a lesson to Osama Bin Laden, his El-Qaeda network, and the Taliban rulers of Afghanistan. It is unlikely that the United States would consider using nuclear weapons, regardless of yield, in Afghanistan, given the country's proximity to Pakistan, India, China, and Russia - all nuclear weapons states who are not likely to take U.S. use of nuclear weapons lightly.

Whether or not the United States and Russia would actually use a TNW is a matter of speculation. It is a matter of certainty, however, that maintaining thousands of these weapons in U.S. and Russian arsenals and devising "battlefield scenarios" in which they could be used - as done by the defense planners of the two countries - lowers the threshold for their use. It is, therefore, in the national interests of the United States and Russia to refocus their efforts on further reducing and eventually eliminating their TNWs.

Exactly a decade ago, in September-October 1991, then U.S. President George Bush and the Soviet leader Mikhail Gorbachev took unprecedented steps by recognizing the dangers associated with maintaining large number of TNWs and agreed to drastically reduce their TNW stockpiles. It is up to the current U.S. and Russian leaderships to, first, formalize the TNW reduction and control regime so that progress can be better monitored, verified, and made nonreversible; and, second, take a bold initiative to completely eliminate these weapons.

The United States must work with Russia to assure that there is a better accounting of Russian TNWs and they are not vulnerable to transfer or theft. In addition, U.S. TNWs deployed in Europe should be removed-a step that is certain to improve U.S.-Russian cooperation in the area of TNW reduction and address the concerns of U.S. allies in Europe.

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