

December 2009

Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe

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Prepared for
Unit for Policy Planning and Research
Finnish Ministry for Foreign Affairs

THE JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES

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Contents

Foreword.....	v
Executive Summary.....	vii
Introduction.....	1
Challenges of TNW.....	5
Roles of TNW in Russian and U.S. Nuclear Forces.....	13
U.S. and NATO Perspectives on TNW.....	19
Striking a Balance Between the Desirable and the Possible.....	33
Conclusion.....	41
Appendix: Russian and U.S. Sub-Strategic Weapons Stockpiles.....	43

Foreword

At the request of the Unit for Policy Planning and Research of the Finnish Ministry for Foreign Affairs in 2008 and 2009, a team of specialists from the James Martin Center for Nonproliferation Studies (CNS) undertook an analysis of the prospects for reducing and regulating nonstrategic nuclear weapons in Europe. An initial draft of the report was presented at a seminar in Helsinki in June 2009 and refined after feedback from that event and in light of other developments.

The work of the lead authors was supported by other CNS experts. While the recommendations presented in this study represent the consensus of the principal authors, they should not be taken as institutional positions of CNS or its parent organization, the Monterey Institute of International Studies.

CNS wishes to express its appreciation to the Ministry for Foreign Affairs of Finland for its support of this research.

Executive Summary

Control of tactical nuclear weapons (TNW) has remained an elusive goal since the early 1990s when the United States and the Soviet Union/Russia adopted a set of unilateral parallel political obligations to reduce and store at central locations the larger part of their TNW forces. Efforts by the international community to nudge the two countries to give these unilateral statements a legally binding, verifiable character did not succeed, and one can point to little headway with respect to TNW arms control in the intervening 18 years.

TNW continue to present a serious challenge in several respects. They remain the only element of U.S. and Russian nuclear forces that are not subject to a formal arms control regime. While the United States and Russia continue to reduce their TNW arsenals, the lack of a regime governing these weapons creates problems due to their relative lack of transparency, potential to aggravate crisis instability, and greater vulnerability to theft and/or unauthorized use. The deadlock that has continued for almost two decades also raises doubts about the commitment of the nuclear superpowers to Article VI of the Treaty on Nonproliferation of Nuclear Weapons (NPT) and to the Final Document of the 2000 NPT Review Conference, which included a specific reference to further reductions in TNW.

Given the longstanding deadlock, new approaches are needed to jump-start serious negotiations on TNW. Based on analysis of national perspectives on TNW and the role of these weapons in the national security policies of the United States and Russia, this paper identifies several actionable initiatives that are substantially different from prior approaches.

The first proposal involves the unilateral U.S. withdrawal of tactical nuclear weapons from Europe—a long-standing demand of Russia, and one that if implemented would make it difficult for Moscow to resist additional measures to strengthen the informal TNW arms control regime. A second approach entails a “grand bargain” built around an “exchange of concerns” in which Russia would seriously discuss a legally binding and verifiable treaty governing TNW (a Western concern) and the United States would support a serious discussion by NATO of changes in the Conventional Forces in Europe (CFE) Treaty (a long-standing Russian concern). The paper further identifies a role for third parties, in particular in the context of the NPT review process, that might provide additional incentives for the two nuclear powers to adopt practical measures to reduce and eliminate TNW.

Introduction

As U.S. and Russian negotiators in fall 2009 hammer out a new treaty reducing their nuclear arsenals, tactical nuclear weapons (TNW) will not be on the table. Nonetheless, these arms constitute a significant part of the U.S. and Russian arsenals – the former is estimated at 1100 and the latter at 5,000 warheads. They are not subject to any legally binding verifiable arms control regime; the only regime governing U.S. and Russian TNW consists of a series of unilateral parallel political statements first issued by U.S. President George H.W. Bush and Soviet President Mikhail Gorbachev in 1991 (Gorbachev's statement was confirmed and slightly expanded in January 1992 by Russian President Boris Yeltsin), the so-called Presidential Nuclear Initiatives (PNIs), whose current status is unclear.

Arms control efforts regarding TNW have remained in relative limbo for the larger part of this decade. The previous attempt to establish a stronger arms control regime and to reduce their stocks dates back to the mid-late 1990s. In 1996, Swedish Foreign Minister Lena Hjelm-Wallen noted that the reduction of TNW was even more important to the security of small states such as Sweden than were strategic arms reductions, and urged that the 1991 PNIs be codified into international law. Norway also endorsed this approach, and in 1997 Finland raised the issue in the context of the NPT review process.¹ It remained, however, for the New Agenda Coalition (composed of Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa, and Sweden) to transform national sentiments into an international initiative to make the 1991 PNIs legally binding. The mobilization of the international community around the TNW issue coincided—and was partially a response to—Russia's consideration of a new role for its TNW in 1996-97 in response to the impending enlargement of NATO. The high point of the campaign to limit, reduce, and eventually eliminate TNW was the inclusion of language on non-strategic weapons in the 13 Practical Steps on disarmament adopted by the 2000 Nuclear Nonproliferation Treaty (NPT) Review Conference: it called for further reductions on a voluntary basis as well as for making these weapons “an integral part of the nuclear arms reduction and disarmament process.”

These efforts, however, yielded few direct dividends thanks to a diplomatic paradox. During the past decade, both the United States and Russia blocked progress on TNW reductions, albeit for different reasons. On the U.S. side, the George W. Bush administration held legally binding verifiable arms control in disdain as a matter of principle, while Russia under Vladimir Putin's presidency adopted a tough, often unyielding attitude toward Western concerns and refused to move on an issue that could be used as leverage to achieve other goals. At the same time, many of the advocates in multilateral fora for further TNW reductions, including the NAC,

¹ See NPT/CONF.2000/PC.ii/. Finland also tabled a working paper on the subject at the 1998 NPT Prep Com and again addressed the issue at the 1999 Prep Com.

2 Introduction

Norway, and Finland, moved from an active to a “listening mode.” This was most apparent at the 2009 NPT Prep Com.

Still, both the United States and Russia continued to gradually reduce their TNW arsenals. The most recent development on the NATO side was the withdrawal of U.S. TNW stored in the United Kingdom – a step that was not announced publicly and for which the United States did not receive proper credit. The status of Russian TNW is unknown, but there are reasons to believe that it has reduced its TNW arsenal to levels approximating those mandated by PNIs, although it remains unclear whether it has acted on other provisions of its pledges, especially with respect to deployment locales. The number of Russian TNW probably continues to shrink slowly as warhead warranty periods expire, but this process should be properly classified as optimization rather than disarmament.

The advent of the Obama administration and the president’s commitment to a “world free of nuclear weapons” has directed renewed attention to TNW, with leading political parties in key NATO states urging that their reduction be a central element of the new disarmament push. The future of the small number of TNW the United States keeps in Europe has become an important part of the debates over the U.S. Nuclear Posture Review and NATO Strategic Concept. The revitalized U.S.-Russian dialogue on reduction of strategic arsenals is bound, sooner or later, to involve tactical nuclear weapons.

Under these circumstances, it is necessary to reassess the paths that might lead to TNW arms control. The earlier approach, which was built around reaffirmation of the PNIs, remains sound and desirable, but may be infeasible today for political reasons, if only because Russia has downgraded the status of its 1991-92 unilateral statements from an “obligation” to a “goodwill gesture.” A 2004 statement by an official representative of the Foreign Ministry clearly indicated that while Russia “continued” to reduce these weapons, it did not consider itself bound by the earlier statements, a position consistent with more recent Russian commentary.² New options need to be found to move the issue forward.

This paper seeks to analyze the national positions and perspectives that could affect the resolution of the TNW issue and, based on that analysis, identifies several promising actionable initiatives. The first option entails unilateral withdrawal of U.S. TNW from Europe – a step that could conceivably deprive Russia of a major argument

² “Otvét ofitsialnogo predstavatelya MID Rossii A.V. Yakovenko na vopros rossiiskikh SMI na press-konferentsii v RIA-Novosti otnositelno initsiativ Rossii po sokrashcheniyu takticheskogo yadernogo oruzhiya” [A response by an official representative of the Foreign Ministry of Russia A.V. Yakovenko to an inquiry of Russian media regarding Russia’s initiatives on reduction of tactical nuclear weapons], July 10, 2004, document 2153-07-10-2004, <http://www.mid.ru/ns-dvbr.nsf/50ce23af9ceacf46432569ea00361254/432569d800226387c3256f26003780c5?OpenDocument>. This stance is consistent with the reluctance of Russian officials to confirm that the PNIs remain in force. [View expressed to one of the authors on October 3, 2009 by a senior Russian Foreign Ministry official.]

against reduction of its own TNW arsenal and jump-start a substantive discussion of these weapons. The other option involves a package deal that would include Russian agreement to start negotiations on TNW reduction, on the one hand, and NATO agreement to discuss changes in the Conventional Forces in Europe (CFE) Treaty to address Russian security concerns. Neither approach guarantees success and both are likely to generate serious domestic opposition in Russia and in NATO countries. Yet, the alternative to forward-looking, if politically risky, action is continuation of the present-day uncertainty with regard to TNW. Although it is difficult to calculate the probability of progress on the TNW front, it is safe to say that prospects for success are not improved to the extent that former international advocates for further reductions are silent in multilateral fora such as the First Committee and the NPT review process.

4 Introduction

Challenges of TNW

Tactical nuclear weapons comprise the least regulated category of nuclear weapons. Even the term is poorly defined and often is used inconsistently—effectively, the PNIs covered by default all nuclear weapons that were not subject to the START and INF Treaties. A more precise term is “sub-strategic” or “non-strategic,” but these formulations also are not without difficulty as noted in a study conducted by the United Nations Institute for Disarmament Research.³ The term “non-strategic” has been usually employed in multilateral discourse, including in the UN and the NPT contexts. For purposes of convenience, we use the term TNW in this report. This term was used in the PNIs and has since been widely used in internal U.S. and Russian debates to denote the same class(es) of weapons.

American and Russian TNW are subject only to the PNIs, which consist of non-binding unilateral declarations made in 1991-92.⁴

The statement by U.S. President George H.W. Bush included the following provisions:

- complete elimination of warheads from land-based missiles and artillery shells;
- withdrawal of all nuclear warheads except warheads for submarine-launched ballistic missiles (SLBMs) from submarines and surface ships and dismantling about half of them; this included nuclear depth bombs for land-based naval aircraft; and
- under a separate initiative of October 17, 1991, the United States and Great Britain agreed to reduce their stockpile of nuclear gravity bombs in Europe from 1,400 to 700 (200 of those were removed by Great Britain and the remaining 500 by the United States).

Mikhail Gorbachev responded on October 5, largely reciprocating in kind, with only a few minor modifications. Together with Boris Yeltsin's additions on January 29, 1992, the response included:

- Complete elimination of warheads for tactical land-based missiles, artillery shells, and mines;
- Elimination of one half of the warheads for antiballistic and anti-aircraft missiles; the remaining warheads to be stored at central facilities;

³ See William C. Potter, Nikolai Sokov, Harald Mueller, and Annette Schaper, *Tactical Nuclear Weapons: Options for Control* (UNIDIR, 2000).

⁴ The texts of the statements by George Bush, Mikhail Gorbachev, and Boris Yeltsin can be found in SIPRI Yearbook 1992 (Stockholm: SIPRI, 1993) pp. 65-73, 85-92.

6 Challenges of TNW

- Elimination of one-third of the warheads for surface ships and submarines, with the exception of SLBMs; the remaining warheads to be stored at central facilities;
- Partial elimination of warheads for naval aircraft; the remaining warheads will be stored at central facilities; and
- Elimination of half of the warheads for tactical Air Force aircraft.

In the fall of 1991 the Soviet Union also proposed to launch full-scale talks on a legally binding verifiable treaty on tactical nuclear weapons, but at that time the U.S. government was reluctant to move down that path, reportedly because the U.S. Navy was reluctant to permit more intrusive on-site inspections.

Lack of transparency

The failure to conclude a formal treaty resulted in the absence of any kind of hard data on the number of warheads to be put in central storage (without defining the term “central storage”), eliminated, or deployed. The initiatives only indicated the *share* of warheads subject to elimination, and inevitably produced two unwelcome consequences which haunt the U.S.-Russian and international arms control agenda today: uncertainty with respect to their implementation and considerable disparity in numbers.

For some time, the United States and Russia updated each other and other countries on the progress of reductions. A more formalized process was initiated in 1997 when the NATO-Russia Permanent Joint Council emerged as a venue for exchanges of information with respect to TNW reductions. To be sure, even in that forum, the sides only revealed the share of warheads eliminated or transferred to central storage, not absolute numbers. In 1999, in the wake of the NATO bombing of the former Yugoslavia, contacts in the Permanent Joint Council were severely limited and information exchanges on TNW temporarily stopped.

The absence of any kind of verification and transparency measures led to at least one serious political crisis after a report, in early 2001, that Russia was transferring nuclear warheads for tactical Tochka-U missiles to Kaliningrad Oblast.⁵ These allegations caused considerable international consternation, especially in Eastern Europe, and led Poland to publicly demand an inspection of Russian military facilities in that region.⁶ Subsequent investigation showed that the rumors were based on questionable and misinterpreted information⁷ and the crisis soon dissipated. It

⁵ Bill Gertz, “Russia Transfers Nuclear Arms to Baltics,” *Washington Times*, January 3, 2001.

⁶ The only type of inspection legally available to NATO at that time—under the Conventional Forces in Europe Treaty—was not relevant to discovering nuclear warheads.

⁷ See Nikolai Sokov, “The Tactical Nuclear Weapons Controversy,” *Jane’s Defense Weekly*, January 31, 2001.

remains a reminder, however, of the potential for new crises to arise due to the lack of transparency and predictability inherent in the PNIs.

The current status of the 1991-92 statements, at least where Russia is concerned, is uncertain at best. The United States announced the completion of its unilateral obligations in 2000 (two years later than the original deadline). The original Russian deadline (2000) also slipped, but the last time Moscow formally reported on the implementation of PNIs was at the NPT Prep Com in April 2004. At that time, the Russian representative specifically mentioned that his country had “practically implemented” its “initiatives” except for warheads assigned to Ground Forces and that the pace of elimination was constrained by the technological capability of the Russian nuclear industry and available funding.⁸ Six months later, an official representative of the Russian Foreign Ministry declared Russia was not bound by the PNIs, which were characterized as a “goodwill” gesture, not an obligation.⁹

In a report distributed at the 2005 NPT Review Conference, Russia declared that it had reduced its TNW arsenal to one-fourth of what it was in 1991 (without a direct reference to the PNIs).¹⁰ The following year, the Chief of the 12th GUMO (the Main Directorate of the Ministry of Defense responsible for handling nuclear weapons), confirmed that information and even asserted that reductions exceeded the original promise (He asserted that the 1991 statements foresaw a 64 percent reduction while Russia had reduced its TNW arsenal by 75 percent).¹¹

Speaking in 2007, the new Chief of the 12th GUMO, General Vladimir Verkhovtsev, repeated the 75 percent figure and added that the promised elimination of TNW warheads assigned to Ground Forces had been completed.¹²

⁸ Vystuplenie Glavy Rossiiskoi Delegatsii A.I. Antonova na 3 Sessii Podgotovitel'nogo Komiteta Konferentsii po Rassmotreniyu Deistviya DNYaO [A Statement of the Head of the Russian Delegation A.I. Antonov to the 3rd Session of the Preparatory Committee of the NPT Review Conference], April 28, 2004, Document 927-28-04-2004 (<http://www.mid.ru/Ns-dvbr.nsf/10aa6ac6e80702fc432569ea003612f0/432569d800226387c3256e840046adc4?OpenDocument>).

⁹ See footnote 2.

¹⁰ Prakticheskie Shagi Rossiiskoi Federatsii Oblasti Yadernogo Razoruzheniya” [Practical Actions of the Russian Federation in the Area of Nuclear Disarmament], Report presented at the 7th NPT Review Conference, slide 13 ([http://www.mid.ru/ns-dvbr.nsf/10aa6ac6e80702fc432569ea003612f0/526da088ef7526e3c325700d002f81c7/\\$FILE/Prese-ntation-Russian.pdf](http://www.mid.ru/ns-dvbr.nsf/10aa6ac6e80702fc432569ea003612f0/526da088ef7526e3c325700d002f81c7/$FILE/Prese-ntation-Russian.pdf)).

¹¹ “Rossiya Perevypolnila Plany po Sokrashcheniyu Yadernogo Oruzhiya” [Russia Has Overfulfilled the Plan for Reduction of Nuclear Weapons], RIA-Novosti, June 22, 2005, <http://www.rian.ru/politics/20050622/40566772.html>.

¹² To be sure, some analysts have pointed to statements from a few Russian officials that appear to argue that the weapons assigned to Ground Forces have not been eliminated. One prominent example is Col.-Gen. Vladimir Zaritski, commander of the Rocket and Artillery Forces, which are part of the Ground Forces (sometimes referred to as General Purpose Forces). In 2003, Zaritski declared that “the main delivery assets for the use of tactical nuclear weapons are in the hands of Rocket and Artillery Forces.” (Oleg Falichev, “Bog Voyny v Zapas ne Ukhodit” [The God of War Does Not Retire], *Voенно-Promyshlennyyi Kurier*, November 19-25, 2003). In subsequent publications, Zaritski did not mention

8 Challenges of TNW

He also indicated that Russia did not deploy TNW on surface ships and submarines, but “if necessary... could deploy them [and], no one should doubt that.”¹³

In the absence of official baseline data, it is difficult to assess absolute numbers. If the figure provided by Alexei Arbatov, a prominent Russian researcher and a former deputy chair of the Duma Defense Committee, is taken as a baseline, in 1991 the Soviet sub-strategic stockpile (including both deployed and stored warheads) consisted of 21,700 warheads.¹⁴ This would render a figure for 2004 of about 5,400 warheads. By 2007, if all warheads assigned to Ground Forces had been eliminated, as Verkhovtsev asserted, the stockpile was reduced to less than 5,000 warheads.¹⁵ Breaking down that figure into categories is a considerably more challenging task and there is no satisfactory data on how many warheads are assigned to different forces (see Appendix for details).

While official data on the U.S. sub-strategic arsenal is absent, nongovernmental sources typically estimate that U.S. TNW stands at 1,100 warheads), including 300 warheads for SLCMs (the remainder are gravity bombs),¹⁶ which are currently stored on shore, but reportedly can be redeployed on submarines, primarily for possible use

TNW at all or alluded to some nuclear role for the Ground Forces in a general, non-specific way without identifying, missions or assets and referring to earlier, late 1990s military manuals or doctrines. See Vladimir Zaritski, "O Razrabotke Novoi Metodiki Planirovaniya Ognevogo Porazheniya Protivnika v Operatsii i Bouyu" [Toward Developing New Methods for Planning of Use of Firepower Against Adversary in an Operation and a Close Fighting], *Voyennaya Mysl*, No. 12, 2006; "Napravleniya Sovershenstvovaniya Form i Sposobov Boevogo Primeneniya RViA v Obshchevoiskovoi Operatsii (Bouyu)" [Ways to Enhance the Ways and Means of Combat Use of Rocket Forces and Artillery in an Operation (Close Combat) of General Purpose Forces] *Voyennaya Mysl* No. 11, 2006; V. Zaritski, L.Kharkevich, *Obshchaya Taktika* [Foundations of Tactics], Tambov, 2007.

Information supplied by the Chief of the 12th GUMO, the Defense Ministry agency directly responsible for handling of all nuclear weapons, should probably be regarded as more authoritative. The statements by Zaritski could also signify that nuclear weapons are still regarded by a significant sector of the Russian military as desirable both in terms of mission support and status. His attitude seems to be in line with the insistence of Russian Navy officials that they need nuclear weapons to support some of their missions. The Strategic Rocket Forces, similarly, pushed for the abrogation of the 1987 INF Treaty (SRF in such a scenario would have control have intermediate-range missiles). Although the value of Zaritski's assertion as direct evidence with regard to the status of sub-strategic weapons in Russia should probably be questioned, it certainly testifies to the "nuclear romanticism" of many Russian military leaders.

¹³ Nikolai Poroskov, "Takticheskii Yadernyi Kozyr" [A Tactical Nuclear Ace], *Vremya Novostei*, September 7, 2007.

¹⁴ Alexei Arbatov, "Deep Cuts and de-Alerting: A Russian Perspective," in: *The Nuclear Turning Point* (The Brookings Institution Press: Washington, DC, 1999), p. 320.

¹⁵ According to Arbatov's figures, the number of warheads assigned to Ground Forces in 1991 was 6,700. Since a large portion of these warheads was said to have been already eliminated by 2004, the remaining number of such warheads eliminated between 2004 and 2007 was probably no more than 1,000 and probably closer to 500 warheads.

¹⁶ Norris and Kristensen, "Nuclear Notebook: U.S. Nuclear Forces, 2009."

in defending Japan (100 of these warheads are said to be in operational condition).¹⁷ As with Russia, the number of nuclear weapons (gravity bombs) the United States keeps in Europe is declining. A decade ago that total was estimated at roughly 500. Today, following the withdrawal of American gravity bombs from the United Kingdom (some were apparently transferred to other bases in Europe while others were returned to the United States), Hans Kristensen of the Federation of American Scientists estimates the total number of U.S. TNW in Europe at between 150 and 200.¹⁸

Crisis (In)Stability

An issue of serious concern is the relative availability of TNW for early deployment. While the location of remaining TNW stocks are unknown, it is reasonable to expect that a large share of the warheads for short-range delivery vehicles is kept close to those delivery vehicles in a relatively high degree of readiness for use.

The PNIs do not define the meaning of “central” storage and fail to provide for a clear-cut distinction between warheads that should be considered “deployed” as opposed to “nondeployed.” Warheads for aircraft kept at or near airbases are usually classified as “deployed” while warheads for sea-launched cruise missiles (SLCMs), which Russia also keeps at bases, are supposed to be “nondeployed.” In reality, the bulk of Russian SLCM warheads could be deployed at relatively short notice. These storage sites are classified by Russia as “central” because administratively they belong to the 12th GUMO rather than the Navy. Similarly, the United States keeps a number of warheads for SLCMs available for deployment as part of its extended deterrence capability in support of Japan.

The absence of any degree of transparency with regard to warheads that are stored adjacent to delivery vehicles fosters crisis instability because each party could expand its nuclear arsenal on short notice without the knowledge of the other. In this regard, the overwhelming superiority of Russia in the TNW category presents a serious problem. Yet, even a much smaller TNW arsenal of the United States, especially the ability to equip SLCMs with nuclear warheads, is regarded as a potential security challenge by Russia.

Furthermore, employment of TNW is closely associated with conventional forces: both the American extended deterrence and the Russian “de-escalation” strategies foresee conflicts that start as conventional ones that more or less quickly transcend the threshold into limited use of nuclear weapons. The theoretical scenarios of employment of TNW argue for the pre-delegation of launch authority to combatant

¹⁷ Ibid; Amy Woolf, “Nonstrategic Nuclear Weapons,” Congressional Research Service, January 28, 2009, p. 12, <http://ftp.fas.org/sgp/crs/nuke/RL32572.pdf>.

¹⁸ Hans Kristensen, “U.S. Nuclear Weapons Withdrawn from the United Kingdom,” FAS Strategic Security Blog, June 26, 2008, <http://www.fas.org/blog/ssp/2008/06/us-nuclear-weapons-withdrawn-from-the-united-kingdom.php>. Hans Kristensen and Robert Norris, “Nuclear Notebook,” *Bulletin of the Atomic Scientists*, March/April 2009, p. 61

10 Challenges of TNW

commanders in the early stages of or perhaps even in the run-up to a conventional war with further decrease of crisis stability, diminished control by political leaders, and the lowering of the nuclear threshold. Thus, in a very direct and tangible way the continued existence of TNW in national arsenals enhances the probability of nuclear war, whether intentional or by accident, and represents a threat to international security.

Safety and Security Concerns

TNW remains a category of nuclear weapons that is particularly vulnerable to illegal acquisition, theft, or other forms of loss of control by proper authorities. Tactical nuclear weapons – as well as warheads for air-launched strategic weapons (bombs and long-range air-launched cruise missiles, or ALCMs) – are inherently more vulnerable because they are kept at storage facilities. In contrast, the bulk of warheads for ICBMs and SLBMs are permanently mated to delivery vehicles and remain inside silos and submarines (which come with their own built-in defenses of personnel and security systems). In addition, there exist procedures for release of TNW to troops on short notice, which presuppose shortcuts in security procedures.

These dangers are usually associated with the Russian TNW arsenal, which is only natural given its size and the well-known security problems it experienced in the 1990s. However the recent Minot incident in the United States, when warheads for ALCMs were unwittingly transported across the country due to a mistake of low-level personnel, demonstrates that this problem is shared by this entire class of nuclear weapons. Without prejudice to measures such as upgrades to storage facilities and improvement of security procedures, the only reliable way to reduce the danger of unauthorized access and acquisition of nuclear weapons is to reduce the number of weapons: the smaller the stockpile, the more efficient the security procedures and the smaller chance of loss of control. In this regard, reduction of the Russian TNWs certainly remains a high priority. An additional measure that could be achieved through negotiations on TNW is reduction of the number of storage facilities and their relocation to remote areas where access can be controlled more reliably.

Proliferation of TNW

The longer the stalemate over TNW continues, the greater the chance that negative features associated with U.S. and Russian TNW will spread to other countries. The arsenals of short-range missiles and other delivery vehicles in China, India, and Pakistan continue to grow along with the potential risk that they will be fitted with nuclear weapons. The bulk of the (still very small) arsenals of the latter two consist of short- and intermediate-range weapons, which are apparently not permanently equipped with nuclear warheads. Consequently, they present the same challenges of unauthorized access as described above with regard to American and Russian arsenals. Reliance on sub-strategic nuclear weapons in these countries and potentially in China is also fraught with the danger of crisis instability along the lines outlined above.

Early practical steps by the United States and Russia to reduce and eventually eliminate their TNW stockpiles could contribute in a tangible way to averting the same threats and challenges in other nuclear weapons states.

12 Challenges of TNW

Roles of TNW in Russian and U.S. Nuclear Policies

The continuing deadlock on the TNW issue could mean that (a) these assets are regarded in the United States and Russia as a vital element of their security policy and/or (b) that the political lineup in these countries prevents action on the reduction and eventual elimination of TNW. This section will assess the military role of TNW in the United States and Russia and the politics surrounding these weapons.

As noted previously, the term TNW as used in reference to the PNIs can be confusing.¹⁹ Normally, TNW connote short-range nuclear-capable delivery vehicles and warheads for them. But in fact the weapons restricted by the PNIs include a very broad array of assets, some genuinely tactical and others of intermediate range (except for land-based intermediate-range missiles, which had been eliminated under the 1987 INF Treaty). The term “tactical” can properly be applied to such systems as short-range (less than 500 km) land-based missiles, air defense missiles, nuclear landmines, artillery shells, as well as weapons for short-range aircraft. At the same time, warheads for air-launched missiles and gravity bombs delivered by medium-range bombers as well as sea-launched cruise missiles of any ranges should be more properly classified as intermediate-range. The distinction between short- and intermediate-range varieties of nuclear weapons is central for understanding the roles sub-strategic assets play (or do not play) in Russian nuclear strategy.

TNW in Russian Security Policy. Russian tactical nuclear weapons attracted international attention in the mid-1990s when Russian government, military, and non-governmental experts were discussing options for a response to the increased level of perceived threat as a result of NATO enlargement.²⁰ At that time, reliance on short-range assets was regarded by some as an appropriate method of balancing that threat due to their perceived greater usability (limited use that would not necessarily provoke a global war) and Russian military forces could rely upon relevant manuals and military doctrines for their use

The evolution of Russian nuclear strategy took a different path, however. In 1997 and 1998 the Russian government adopted a series of documents – “The National Security Concept” (December 1997) and several decrees signed by Boris Yeltsin in July and August 1998,²¹ which regarded nuclear weapons only in the context of strategic deterrence (i.e., deterrence of global war only).

¹⁹ For a discussion of the definitional challenges, see for example, Gunnar Arbman and Charles Thornton, “Russia’s Tactical Nuclear Weapons. Part I: Background and Policy Issues,” Swedish Defense Research Agency, FOI-R-1057-SE, November 2003, pp. 9-11. See also Potter et al., op cit.

²⁰ For details of the debates on TNW role in Russia in mid-1990s see Nikolai Sokov, “Tactical Nuclear Weapons Elimination: Next Step for Arms Control,” *Nonproliferation Review*, 4 (Winter 1997), pp. 17-27.

²¹ The text of the 1997 National Security Concept could be found at the Internet site of the Russian Security Council <http://194.226.83.2/documents/decrees/1997/1300-1.html>. The 1998 decisions included a decree of Boris Yeltsin “On urgent measures toward reforming the Armed Forces of the

Russian views changed again, however, in the aftermath of the war in Kosovo, which was seen as evidence that the United States and NATO were prone to use force whenever diplomacy did not work. To deter numerically and qualitatively superior U.S. and NATO conventional forces, the new Military Doctrine adopted in 2000 proposed the concept of “de-escalation”—a threat of a limited nuclear strike in response to a large-scale attack that exceeds the capability of Russian conventional forces.

Contrary to common assumptions, short-range weapons do not appear to have a place in that strategy simply because potential targets are too distant. Exercises in the last ten years (since the adoption of the 2000 Military Doctrine) simulated limited nuclear use against airbases and aircraft carriers from which the United States is expected to fly missions against Russia, as well as command and control centers. Targets that featured in these simulations were located throughout Europe, the Pacific, South-East Asia, Indian Ocean, and even the continental United States. Short-range weapons (such as tactical land-based missiles or tactical aircraft) cannot reach these targets. Instead, simulations featured medium and heavy bombers carrying gravity bombs, short-range missiles, and ALCMs.

There are indications that the number of warheads assigned to this scenario is small—it has been in single digits in all large-scale exercises in the last ten years that simulated use of nuclear weapons against these classes of targets. Consequently, the limited—and still shrinking—sub-strategic nuclear arsenal should be sufficient for existing missions and Russia, at least in theory, does not need the entire arsenal it still has in that category.

Nuclear warheads for sea-launched cruise missiles of various ranges, which are stored at 12th GUMO facilities at naval bases, appear to be another component of the forces Russia could use in a conflict with NATO. Russian naval commanders admit that they simply cannot confront the U.S. Navy—in case of a direct clash between Russia and the United States—without reliance on these assets. Accordingly, crews of surface ships and submarines have reportedly trained to mate warheads to SLCMs and launch them.²² In fact, Vice-Admiral Oleg Burtsev, deputy chief of the Navy’s Main Staff declared recently that the role of tactical nuclear weapons on attack nuclear

Russian Federation,” (July 1997), and two Security Council documents: “The Concept of Development of Nuclear Forces until 2010” and “The Foundations (Concept) of State Policy in the Area of Defense Development until 2005” (July-August 1998). The texts of these documents are classified, but their general thrust could be gleaned from newspaper publications. See “Sovet Bezopasnosti RF Reshil Sokhranit Trekhkomponentnyi Sostav Strategicheskikh Yadernykh Sil,” Interfax, No. 4, July 3, 1998; “Russia to be Major Nuclear Power in 3d Millennium—Official,” ITAR-TASS, July 3, 1998; Ivan Safronov and Ilya Bulavinov, “Boris Yeltsin Podnyal Yadernyi Shchit,” *Kommersant-Daily*, July 4, 1998; Yuri Golotuyk, “Yadernoe Razoruzhenie Neizbezhno,” *Russkii Telegraph*, July 11, 1998; Yuri Golotuyk, “Moskva Skorrektirovala Svoi Yadernye Argumenty,” *Russkii Telegraph*, July 4, 1998; Anatoli Yurkin, “Perspektivy Voennogo Stroitelstva,” *Krasnaya Zvezda*, August 5, 1998, p. 1, 3; Oleg Falichev, *Vpervye So Vremeni Miluykovskikh Reform*, *Krasnaya Zvezda*, August 18, 1998, p. 1,2.

²² Interviews by one of the authors with Russian officials (who requested anonymity).

submarines would increase. “The range of tactical nuclear weapons is growing, as is their accuracy. They do not need to deliver high-yield warheads, instead it is possible to make a transition to low-yield nuclear warheads that could be installed on the existing types of cruise missiles,” he asserted.²³

The past statements of Russian President Dmitri Medvedev that Russia could deploy new short-range *Iskander* missiles in Kaliningrad Oblast if the United States deployed missile defenses in Eastern Europe were sometimes interpreted as a threat to deploy short-range nuclear weapons. Yet, these missiles have been consistently classified in Russian official and unofficial statements as conventionally armed and, furthermore, available data (such as the statement of Verkhovtsev referenced above) suggests that Russia no longer has nuclear warheads for land-based tactical missiles. While such warheads could presumably be produced, there are no indications that nuclearization of *Iskanders* is on the short-term agenda.

Short-range weapons are also often said to have another role—that of deterring Chinese conventional forces.²⁴ The logic is similar to the common beliefs about the role of TNW vis-à-vis NATO: if the opponent has superior conventional forces, Russian needs to rely on nuclear weapons. While in the Western theater, Russia faces a conventional force that is technologically superior, in the Eastern theater Chinese preponderance is numerical.

This logic appears faulty, however. The Russian-Chinese border is primarily a land border, but, if public statements of Russian officials are to be believed, Russia no longer has land-based short-range nuclear weapons. Also, there are few valuable targets on the Chinese side of the border and, if TNW were used to repel a hypothetical Chinese offensive, nuclear weapons would be used on the Russian side of that border—a densely populated and economically developed area. Indeed, confidential interviews with high-level Russian military indicate that nuclear weapons assigned to deterrence of China are strategic and intermediate-range, i.e., weapons capable of reaching political, military, and economic targets deep inside China. That is, the logic here is similar to the one used in the Military Doctrine for deterrence of the United States and NATO: the emphasis is made on long-range assets while short-range ones do not have a discernible military role.

Thus, logically speaking, Russia could, without changing its present-day nuclear strategy, reduce the entire short-range category of nuclear weapons, which it apparently does not need. Furthermore, it could also implement deep reductions in the intermediate-range variety of sub-strategic nuclear weapons because, as it was demonstrated above, it only needs a small number of those. Yet, it refuses to do that.

²³ “Rol Takticheskogo Yadernogo Oruzhiya na Mnogotselovykh APL Vozrastet – VMF” [The Role of Tactical Nuclear Weapons on Multipurpose Submarines Set to Grow – the Navy], RIA-Novosti, August 23, 2009, http://www.rian.ru/defense_safety/20090323/165742858.html.

²⁴ See, for example, Alexei Arbatov, “Deep Cuts and de-Alerting: A Russian Perspective,” p. 321.

The most apparent, “technical” explanation for the discrepancy between policy and strategy lies in the limited capacity for dismantlement of nuclear weapons. That capacity has shrunk in the last ten years: the number of warhead production and dismantlement plants has been cut in half (from four to two) and Russia has reported plans to reduce the number to just one. Since most of that capacity is devoted to refurbishment of warheads that are intended to remain in service (primarily warheads for strategic delivery vehicles), dismantlement plans have to be shelved. In fact, there are indications that many warheads for tactical delivery vehicles that are formally part of the arsenal have expired warranty periods and have been stored awaiting dismantlement.

While that explanation can account for a disproportionately large sub-strategic arsenal, the question remains as to why Russia refuses so steadfastly to even discuss reduction of these weapons remains unanswered. The answer should be more properly sought in politics, not military strategy.

The Politics of Russian TNW. Russian discourse on TNW can be quite misleading. Many publications cite Russian commentators that attach military importance to TNW, but a closer look would reveal that their authors are outside the government and uniformed military. Since strategic planning or rational cost-benefit calculation do not provide an adequate explanation for the Russian refusal to subject their TNW arsenal to reductions, domestic politics is a logical next place to search for an explanation. The Russian government attitude toward TNW appears to represent a complex mix of domestic and bureaucratic politics, (mis)perceptions, and idiosyncrasies. Its main elements could be summarized in the following way:

- *“No More Unreciprocated Concessions.”* The determination to keep a large arsenal of weapons that do not have obvious utility is related to the deep-seated dissatisfaction with what is seen as excessive, unreciprocated concessions during the Gorbachev and early Yeltsin eras. In the present day, giving up any advantage, no matter how illusory, is rebuffed almost by default. The problem is further aggravated by the fact that the United States keeps a limited number of TNW warheads in Western Europe—a capability, which, seen from Russia, does not have a logical justification given the overwhelming conventional superiority of the United States and NATO over Russia. Furthermore, persistent attempts to persuade Russia to reduce its TNW or at least disclose their location, numbers, and other information, tend to be regarded with suspicion almost automatically, without serious thought about the reasons for these proposals. Instead, such attempts are seen as proof that these weapons are truly valuable.
- *Inertia.* The longer the same position is maintained, the more entrenched it becomes. The key elements of the current Russian position have remained unchanged for over a decade. Changing it without sufficient reason might seem an unjustified concession to the other party. Such a position can be changed either when the leaderships changes (as happened when Gorbachev assumed

the highest office in the Soviet Union) or when the environment changes. Neither is present today.

- *“Capabilities-Based Planning.”* The Russian elite, including the military leadership, acutely feels the uncertainty of the international environment. The main threat is still associated with the United States and its allies, but other potential threats are emerging, and the Russian military is reluctant to part with any assets. In 2005-2007, similar arguments were made in favor of the withdrawal from the INF Treaty, which was justified by “other states” possessing or developing similar weapons. Although specific states were never mentioned, the culprits are obvious—China, India, Pakistan, Israel, and Iran; perhaps also North Korea. One can detect an attitude that follows the logic of the concept of “capabilities-based planning” that favors maintenance of all available assets as insurance against unforeseen (and unforeseeable) threats.
- *Parochial Group Politics.* The current Russian position on TNW can also be attributed to a peculiar alignment of relevant interest groups. As noted above, the Navy is interested in keeping TNW as a “just-in-case” option.²⁵ In contrast, the Air Force appears much less interested in TNW except for weapons assigned to Tu-22M3 medium bombers. Other groups probably have even less interest in TNW, but are unlikely to invest political resources in a push to get rid of these weapons. Similarly, the Foreign Ministry, another important player, is reluctant to push for a change of the Russian position: it has many other more pressing items on its agenda, and probably intends to use TNW as a lever to remove American nuclear weapons from Europe. Since no parochial group is interested in changing the existing position, the Navy’s interest wins by default.
- *Arms Control Challenges.* Russian ambivalence with regard to TNW might also reflect the challenges of crafting a verifiable treaty. The traditional approach, according to which nuclear weapons are accounted for and reduced indirectly through accounting and reduction of nuclear-capable delivery vehicles, is inapplicable to TNW. New accounting rules and verification procedures need to be designed for TNW. This, in turn, involves much more intrusive verification at military bases and, for the first time, one of the most sensitive categories of nuclear-related facilities—storage sites for nuclear weapons. While such procedures are, in principle, not unthinkable, it would take serious investment of political resources to overcome entrenched resistance and political opposition.

The Russian position on TNW appears very static and also very stable. Support for keeping a relatively large arsenal of such nuclear weapons appears rather weak:

²⁵ It is ironic that confidential interviews collected in 1991-92 among U.S. officials attributed the rejection by George H.W. Bush of the Russian proposal to start negotiations on a legally binding and verifiable treaty on TNW to the U.S. Navy, which was reluctant to allow on-site inspections of ships and submarines to confirm the absence of nuclear warheads.

18 Roles of TNW in U.S. and Russian Nuclear Policies

short-range weapons do not have a role while retention of intermediate-range assets enjoys very limited support in the Air Force and only the Navy appears to be a true advocate of keeping them. Of greater importance is the fact that support for the reduction of sub-strategic weapons does not exist at all. While American TNW in Europe are few, they provide a convenient justification for rejection of any initiatives aimed at reducing the Russian TNW arsenal. Moscow can maintain this position almost indefinitely.

U.S. and NATO Perspectives on TNW

As noted previously, the U.S. TNW arsenal is fairly small and is estimated to total 1100 warheads, most of which are in storage. Of that amount about 150-200 are in Western Europe: in Belgium, Germany, the Netherlands, Italy, and Turkey. This figure represents a deep reduction from the estimated 2,480 warheads, which the United States had in Europe in 1991 at the end of the Cold War).²⁶ The largest number (50-90) is kept in Turkey. The United States also maintains on its territory as many as 300 warheads intended for SLCMs (including 100 that are in operational condition) that could be deployed if necessary to provide external deterrence in support of Japan. As far as NATO is concerned, the issue of TNW is limited to the 150-200 warheads on the European continent because Great Britain no longer has TNW and French nuclear weapons should be more properly classified as either strategic or intermediate-range.

The single mission assigned to TNW today is that of extended deterrence: these assets are supposed to provide a clear-cut, unambiguous guarantee that the United States would come to defense of its allies. Another element of extended deterrence guarantees are troop deployments. It should be noted, however, that the symbolic role of troops and that of TNW have never been identical. The prospect of loss of American life virtually guarantees that the United States would be involved; TNW, in contrast, are supposed to provide an asset that could be used in combat as the aggression is repelled, but they, in and of themselves, do not guarantee American involvement in conflict.

Following the end of the Cold War the mission assigned to TNW has also undergone serious modification and is increasingly challenged. In its 1991 Strategic Concept, NATO effectively eliminated the traditional mission of deterrence of a large-scale conventional attack from the USSR and its allies. Nuclear weapons became a “just-in-case” asset against uncertain threats that might materialize in the future and were no longer specifically targeted against Russia. Furthermore, as NATO enlarged to the east, neither TNW nor the infrastructure associated with them moved in that direction. In 1997, the NATO-Russia Charter specifically declared that NATO had “no intention, no plan and no reason to deploy nuclear weapons on the territory of new members, nor any need to change any aspect of NATO's nuclear posture or nuclear policy—and do not foresee any future need to do so.”²⁷ That policy covered nuclear infrastructure, including weapons storage sites. Moreover, according to available information, in the 1990s the United States no longer certified aircraft deployed in Europe for carrying nuclear weapons, meaning, in effect, that by the end of the decade it no longer had the means to deliver the weapons it still had in Europe.

²⁶ Data compiled by Hans Kristensen, Federation of American Scientists, conversation with Kristensen. Of this total 1,400 were gravity bombs. Toward the end of 1991, NATO agreed to cut the number of gravity bombs in half.

²⁷ Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation Paris, May 27, 1997; <http://www.nato-russia-council.info/htm/EN/documents27may97.shtml>.

TNW Role in Alliance Defense: Limitations of Common Assumptions. In the post-Cold War world, TNW are believed to have three distinct roles:

- *A “just-in-case” deterrence against unforeseeable threats*, such as “Russia going bad” or new threats from other directions. In this sense, NATO thinking is similar to the “capabilities-based planning” that is practiced by Russia. The situation in the world remains unpredictable, and it is difficult to rule out the emergence of direct immediate threats ten or twenty years from now. While Russia is not such a threat today, its growing assertiveness might translate into a desire to restore influence over the former Soviet empire as (and if) its power continues to grow. Russia’s summer 2008 war with Georgia is regarded by many, especially in Eastern Europe, as a troubling sign. There can be other threats as well: Iran is developing missiles capable of reaching Europe and might—especially if it acquires nuclear weapons—extend its influence over the entire Middle East.
- *A symbol of the security link between European NATO and the United States* and of American extended deterrence, which provides a security (including nuclear) umbrella for Europe. According to this argument, the presence of TNW enhances the ability of the United States to react to possible aggression against Europe by providing it with a means for responding to such aggression. This concern is particularly strong in Eastern Europe: new members of NATO that share a border with Russia or are close to it (Baltic states, Poland, etc.) have little confidence in the willingness or the ability of Western European states to defend them vis-à-vis a resurgent Russia and regard the United States as the most reliable provider of security.
- *A justification for (or a reason for continued existence of) the Nuclear Planning Group, or NPG*. Admittedly, without TNW in Europe, the NPG could become hollow and the United States would not have a reason to continue its involvement in its work. Europe would thus lose leverage on U.S. nuclear policy.

The greatest difference between the Cold War and present-day missions assigned to TNW is in the sense of urgency—or lack thereof. In the past, TNW were regarded as an essential instrument of security, which would be used perhaps in the first hours of conflict. Today, they do not have a clear-cut role in security policy of the alliance, except as a symbol. The continuing debate over the remaining small number of TNW testifies to the lingering questions about the validity of these missions.

If a direct military threat to European NATO materializes in the future, **it is far from obvious that the United States will resort to nuclear weapons at all, including tactical weapons.** U.S. and NATO conventional forces are the most advanced in the world and can address every—or nearly every—imaginable contingency without crossing the nuclear threshold. In any event, it is difficult to envision a situation when

nuclear weapons are engaged promptly after a conflict starts, because no threat on the horizon appears to be as overwhelming and immediate as the Soviet threat was perceived to be. Indeed, Russian military strategists probably are more concerned about U.S./NATO advanced conventional arms than they are about the small number of TNW that remain on the European continent.

TNW, like other nuclear weapons, are virtually unusable vis-à-vis the most likely form of external security threat, international terrorism. The challenges of fighting terrorist organizations in Afghanistan and Pakistan testify to the problems inherent in the application of nuclear capabilities to this type of contingency.

TNW are no longer front-line weapons. In fact, they do not reach Russia at all. They are also far from another area of possible conflict, in the Middle East (assuming that Iran decides to threaten European members of NATO). The time needed for delivery of TNW by aircraft from current bases is not radically different from the time it would take to deliver nuclear weapons by strategic bombers from U.S. territory. If B-52s (and potentially B-2s) are redeployed to the United Kingdom, they can be perhaps delivered even faster than TNW.

To make these weapons militarily useful, that is to restore the original employment options vis-à-vis Russia, TNW would have to be relocated to the territory of one or more of the East European members of NATO, or, for a role vis-à-vis the Middle East, to the Balkans, in addition to the existing deployment in Turkey. Such redeployment is extremely unlikely under current geopolitical circumstances.

It is also far from obvious that the presence or absence of a limited number of U.S. nuclear bombs in Europe influences the Russian perception of the credibility of American extended deterrence, including with regard to Eastern Europe. If the situation is contemplated from Moscow's perspective, the decision of the United States to interfere in a possible conflict is likely to be influenced by a much broader array of variables, including American interest in maintaining its global role, the overall indicators of U.S. power, willingness to use advanced conventional weapons (which is perceived as very high), etc. Ultimately, the question on the minds of future Russian policymakers, if they contemplate possible designs on European members of NATO, will be about the political will of U.S. leaders, not about specific assets that might or might not be used for deterrence.

Even if nuclear weapons were to play a role in this contingency, **the choice of nuclear options is not limited to TNW.** Should gravity bombs currently deployed in Europe be withdrawn, the United States could still, if the perceived need arose, forward deploy nuclear-capable heavy bombers, for example in the United Kingdom (as was done multiple times during the wars in Kosovo, Iraq, and Afghanistan). Temporary deployment in Europe is even allowed under the START I Treaty and will likely be allowed by its replacement. Nuclear warheads for SLCMs could also be made available for extended deterrence in Europe in the same way as they are assigned to the defense of Japan.

The only possible exception to the limitations inherent in TNW is for weapons deployed in Turkey, where U.S. TNW are seen in the context of the suspected Iranian nuclear weapons program. While their military utility is debatable given the distance between Turkey and Iran and it is difficult to conceive of a scenario in which Iran undertook military action against Turkey, nevertheless Turkish officials are not eager to part with the weapons and routinely invoke the Iranian threat in discussions with visiting Americans. On occasion, they also raise the specter that the withdrawal of U.S. TNW might push Turkey to pursue its own nuclear weapons option, despite studies casting doubt on the likelihood of such an event.²⁸ Therefore, withdrawal or retention of these assets must be a matter of a political decision for NATO made in a broader context of alliance security policy.

An emerging technical challenge to the retention of the limited TNW force in Europe is **the approaching end of the lifetime of dual-capable aircraft that are intended to deliver these weapons** as well as the continuing need to certify them for employment of nuclear weapons. This problem is quite high on the minds of U.S. and NATO military planners. Eventually, the United States and NATO as a whole will have to make a decision whether they are prepared to commit resources to replace these aircraft or accept an end to the TNW element of extended deterrence for technical reasons.

In any event, **the problem of aircraft lifetime creates an objective limit to how long NATO could use U.S. TNW in Europe as a lever vis-à-vis Russia:** if these systems are allowed to expire, Russia will have little or no reason to put its own TNW on the table; if aircraft are replaced, then significant financial and industrial investment will make the U.S. and NATO reluctant to contemplate changes in the existing nuclear posture for a long time.

An important factor in any decisions with regard to the future of TNW in Europe is **the availability of alternative options** for the employment of the threat of nuclear use. These alternative options may include, for example, pre-deployment of nuclear weapons to address possible threats from the Middle East, which are less likely to be viewed by Russia as a threat (for example, on ships and aircraft carriers in the Indian Ocean and the Persian Gulf, on Diego Garcia, etc.).

Where Russia is concerned, long-range nuclear weapons based either in the United States or pre-deployed to bases in and seas around Europe are also available. Emphasis on long-range assets in this case will be a better match for Russia's de-escalation strategy, which emphasizes reliance on long-range nuclear assets to deter U.S. and NATO conventional forces. (For a description of this strategy see the previous section.)

²⁸ See for example, Alexandra Bell, "Turkey's Nuclear Crossroads," *Good*, August 25, 2009, available at <http://www.good.is/post/turkey%e2%80%99s-nuclear-crossroads/>.

In the end, **the value of forward-deployed TNW as an instrument of extended deterrence and a security link between the United States and NATO appears questionable.** Whereas some Europeans might regard them as a material symbol of U.S. involvement in European security and a tangible proof of extended deterrence, there is no evidence that these weapons affect the calculations of potential foes. Paradoxically, the withdrawal of U.S. TNW could affect European perceptions of American security guarantees, but not necessarily the perceptions of those whom these guarantees are supposed to deter.

U.S. TNW can be kept in Europe, at least to avoid tensions within the alliance, as long as they do not incur significant political or other costs. This has been the case for the last 15 years. The advisability of the continued deployment of that force has to be assessed in terms of external variables, such as the Russian unwillingness to engage on TNW limitation and reduction. If withdrawal of TNW can facilitate the removal of that perceived threat, and if handled properly, it is possible that this change can be brought about with quite limited, if any, consequences for NATO security and cohesion.

TNW Politics in the United States. The recent attention that the issue of extended deterrence and specifically that of TNW in Europe has garnered in the United States has surprised many observers. To be sure, there were some early indications that the Obama administration planned to tackle it, and the issue of TNW reductions also had been raised in the presidential campaign by Senator McCain. Rose Gottemoeller, the Obama administration's lead nuclear arms control negotiator, summed up the current awkward status quo last year, before taking on her new official duties:

It appears that the United States and the NATO allies have arrived at a new place in their long and stormy marriage, without explicit action but decisive effect: They have decided to sell the nuclear beach house and buy a conventional house in the mountains. Now they just have to figure out how to tell the children.²⁹

Although this view has not been abandoned, and actually was reinforced indirectly by President Obama's embrace of "the road to zero" at his April 2009 Prague speech, the administration also has signaled that there are more pressing arms control and nonproliferation issues on its agenda than TNW, in particular the negotiation and ratification of a START replacement treaty and ratification of the Comprehensive Nuclear Test Ban Treaty. The administration was also inclined to wait to tackle the issue until after the completion of its Nuclear Posture Review, due in early 2010, in which the role of tactical nuclear weapons is sure to be considered. Indeed, U.S. officials have indicated that they will take up the TNW question with Moscow only during the next stage of nuclear arms reduction talks, which will probably begin in 2010 after the treaty currently under negotiation is ratified by both countries.

²⁹ Rose Gottemoeller, "Eliminating Short Range Nuclear Weapons" in *Reykjavik Revisited; Steps Toward a World Free of Nuclear Weapons*, (Palo Alto: Hoover Institution Press, 2008) pp. 107-158.

Still, some immediate attention to the issue was forced by the release of the bipartisan congressional commission on the U.S. strategic posture in the spring of 2009 and by a battle over funding related to life extension programs affecting the B-61 gravity bomb.

Earlier in 2009, the commission report underscored the importance of maintaining extended deterrence and argued that, "All allies depending on the U.S. nuclear umbrella should be assured that any changes in its [nuclear] forces do not imply a weakening of the U.S. extended nuclear deterrence guarantees. They could perceive a weakening if the United States (and NATO) does not maintain other elements of the current arrangement than the day-to-day presence of U.S. nuclear bombs."³⁰ The report gave considerable weight to assertions that allies in Europe consider these weapons essential to prevent coercion by Russia and Iran. The strong emphasis on the argument that some European countries are staunchly opposed to the withdrawal of TNW is widely attributed to commission co-chairman James Schlesinger, who has been championing this theme of late.³¹ It should be noted that recent studies and interviews with representatives of these countries challenge the accuracy of this representation of their countries' views by the commission.³²

Nonetheless and unexpectedly for some, the language of the commission's report on extended deterrence acquired major political salience, particularly among congressional Republicans and their conservative supporters. For instance, the conservative Center for Security Policy's New Deterrent Working Group, which includes a number of former Bush administration officials, argued in a recent report that "U.S. policy [on nonstrategic nuclear forces, or NSNF] should be guided by two principles. First, the United States should seek substantial reductions in the large force of Russian NSNF. Second, no changes to the U.S. force posture should be made without comprehensive consultations with all U.S. allies (and within NATO as such)."³³ A high-level member of Obama's arms control team acknowledged that the

³⁰ William J. Perry, Chairman, James R. Schlesinger, Vice-Chairman, "America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States," May 6, 2009, p. 68, http://www.usip.org/strategic_posture/final.html.

³¹ Schlesinger thinking was even more evident in his December 2008 report for the Secretary of Defense's task force on nuclear weapons management, which stated, "[Dual-Capable] fighters and nuclear weapons are visible, capable, recallable, reusable, and flexible and are a military statement of NATO and U.S. political will. These NATO forces provide a number of advantages to the Alliance that go far beyond USEUCOM's narrow perception of their military utility. Nuclear weapons in Europe provide a continuous deterrence element; as long as our allies value their political contribution, the United States is obligated to provide and maintain the nuclear weapon capability." "Report of the Secretary of Defense Task Force on Nuclear Weapons Management—Phase II: Review of the DoD Nuclear Mission," December 2008, p. 59.

³² For views on this issue contrary to those expressed in the commission report, see, for example, Lucacz Kulesa, *Reduce Nuclear Weapons in Europe to Zero and Keep NATO Strong (and Nuclear): A View from Poland*. PISM Strategic Files, No. 7, Polish Institute of International Affairs, March 2009.

³³ Center for Security Policy, New Deterrent Working Group, "Towards a New Deterrent: Analysis and Recommendations for the Commission on the Strategic Posture of the United States," January 26, 2009, http://www.centerforsecuritypolicy.org/p17857.xml?cat_id=110.

congressional report has served as a rallying point for conservative opposition and threatened to jeopardize ratification of START replacement treaty in the Senate, in addition to forcing the TNW issue on the administration.³⁴ At a recent conference organized by the U.S. Strategic Command, a wide range of speakers espoused a view that the United States must continue to provide extended deterrence to its allies along the same lines as in previous years. One of the speakers, quoting the report of the congressional commission (known as the Perry-Schlesinger report) declared that “if allies think they need nuclear weapons in Europe for their security, the United States must provide nuclear weapons.”

In passing their versions of a fiscal year 2010 spending bill for the nuclear weapons programs of the Department of Energy, the House of Representatives and Senate had taken very different approaches to an administration request for \$65 million for a study on upgrading the B61. Strategic Command briefing slides indicate that changes would be made to the bomb’s arming, fuzing, and firing mechanisms as well as additional safety, security and reliability features. Four of the five deployed versions of the B61 would be combined into a new version called the B61-12.³⁵

The House did not include the requested funds in its version of the bill. House appropriators have long pressed for the executive branch (particularly throughout the Bush administration) to first outline a strategy for the nuclear stockpile and complex before seeking changes in funding for nuclear weapons systems. The cut was not supported by the Senate, however, or the administration which said in a July 14, 2009 policy statement that “without refurbishment of these components, the sustainment of the B61 bomb family, a key component of our deterrence strategy will be in jeopardy.” U.S. Strategic Command spokeswoman Maj. Regina Winchester said the upgrade was “essential to provide our NATO allies with a visible sign of our extended deterrent commitment and to maintain a credible strategic air-delivered nuclear deterrent capability.”³⁶

Final compromise House-Senate legislation provided half the funds (\$32.5 million) the administration requested and restricted the study to looking at the non-nuclear components of the bomb absent prior approval by both chambers’ appropriations committees. It also called for two studies looking at the future of the B61. It called for the National Academy of Sciences to launch a study within two months of the completion of the Nuclear Posture Review, examining the national security and extended deterrence value of the B61 for both strategic and tactical purposes in light of nuclear terrorism risks and military threats. The JASON Defense Advisory Group (a high level scientific panel)—are supposed to launch a study within three months of

³⁴ Confidential interview with a high-ranking member of the Obama Administration, June 2009 and August 2009

³⁵ Bill Gertz, “Tactical Nuclear Battle” in “Inside the Ring,” *The Washington Times*, September 3, 2009. Available at: <http://www.washingtontimes.com/news/2009/sep/03/inside-the-ring-23008574/>.

³⁶ Administration and Strategic Command statements are cited in Gertz, “Tactical Nuclear Battle.”

the completion of the posture review to look at whether without nuclear testing the B61-12 can be expected to offer sufficient performance margins and other advantages to “constitute a long-term 21st century weapon, or whether it is more likely to be an interim weapon leading to near-term replacement or retirement.” The reports are due six months from commissioning.³⁷

Meanwhile, members of the Obama team have staked out different approaches to the issue in a debate that is being played out in the Nuclear Posture Review. While Robert Einhorn, the State Department’s special advisor for nonproliferation and arms control made a statement at the Strategic Command conference that clearly favored withdrawal of TNW from Europe, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy Brad Roberts--the primary drafter of the Perry-Schlesinger report--espoused a more cautious approach. Both were, however, united in promoting the need to hold consultations with European allies with regard to the optimal configuration of extended deterrence assets.³⁸

Indeed, NATO has been preparing for this task for some time, having authorized in 2007 an internal review of nuclear deterrence requirements for the twenty-first century.³⁹ In addition, the Obama administration has already begun informal consultations with NATO allies on the subject. More fully and formally working through this process would allow the United States and selected other allies (most likely the United Kingdom and, to a lesser extent France) to find means for reassuring the most concerned states that their Article 5 protections will remain intact without the forward deployment of TNW. Some European sources indicate that the United Kingdom in fact has been pushing for such enhanced discussions to take place, but to date has been held back by Germany, which has wanted to postpone any discussion until after its September 2009 national elections and the subsequent sorting-out of its new government.

Given that questions about TNW in many ways serve as a proxy for broader concerns about the direction and vitality of the alliance, it makes sense to gain some consensus within NATO as part of the process of adopting a new Strategic Concept, the first such document in a decade.⁴⁰ Administration officials have also been quick to emphasize that Russia and the United States have already pledged to follow up the START replacement treaty with further negotiations that they hope will include non-strategic nuclear weapons.

³⁷ Fiscal 2010 Energy and Water Development and Related Agencies Appropriations Act (H.R. Rep No. 11-278, (2009).

³⁸ See “U.S. Could Pull Back Europe-Based Nukes, State Department Official Says,” Global Security Newswire, August 5, 2009, http://gsn.nti.org/siteservices/print_friendly.php?ID=nw_20090805_4929; “Pentagon Says Nuclear Review Will Address Disarmament, Deterrence,” Global Security Newswire, Aug. 4, 2009, http://gsn.nti.org/gsn/nw_20090804_2506.php.

³⁹ Final Communiqué, NATO, Ministerial Meetings of the Defence Planning Committee and the Nuclear Planning Group, Brussels June 15, 2007.

⁴⁰ Author’s discussion with senior administration official, August 2009.

Whether such efforts will be sufficient to assuage congressional concerns about Russian TNW—and lessen the need to offer other assurances in the context of START ratification deliberations—is unclear. What does seem apparent, however, is that any U.S. withdrawal of TNW made without some corresponding moves by Russia are likely to evoke considerable Congressional opposition.

If it nonetheless chooses to follow this path, the administration will find little public resonance for making cuts simply as a means of carrying out Obama's vision of a world free of nuclear weapons. Public polling indicates that the administration would be better off framing the move as an anti-terrorist effort: working with Russia to ensure that the most vulnerable weapons are secured.⁴¹

Diverging Views of European Members of NATO on Withdrawing U.S. TNW in Europe. U.S. officials have already told their European counterparts that they are prepared to withdraw TNW if that is what other NATO members want. Indeed, the U.S. European Command and an Air Force task force have cited concerns about the operating and security procedures for the weapons, with USEUCOM concluding that the U.S. military would be better off if they were withdrawn from Europe.⁴²

A task force report for Defense Secretary Robert Gates cited comments from senior EUCOM officers complaining that it could cost between \$120 million and \$180 million to cope with emerging threats to the weapons' security, with one senior military leader saying: "We pay a king's ransom for these things and . . . they have no military value."⁴³

European NATO members, however, are divided on the subject. Many Western European governments (including some of the few countries where the weapons continue to be based) would be pleased to have the weapons withdrawn as they face public opposition to their presence and perceive little security benefit from them. Moreover, some countries, such as Germany, are less than eager to take on the cost of soon fielding a new generation of dual-capable aircraft, given the low probability of

⁴¹ Polling Data from Democracy Corps (Stan Greenberg, James Carville, Jeremy Rosner and Kristi Fuksa), "DCorps: New Survey Reveals Obama Closing the Democrats Historical National Security Gap," May 19, 2009.

⁴² U.S. Air Force, "Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures," February 8, 2008, <http://www.fas.org/nuke/guide/usa/doctrine/usaf/BRR-2008.pdf>; Hans Kristensen, USAF Report: "Most" Nuclear Weapons Sites in Europe Do Not Meet U.S. Security Requirements, Federation of American Scientists Strategic Security blog, June 19, 2008, <http://www.fas.org/blog/ssp/2008/06/usaf-report-%20most-nuclear-weapon-sites-in-europe-do-not-meet-us-security-requirements.php>; Report of the Secretary of Defense Task Force on DOD Nuclear Weapons Management, Phase II: Review of the DOD Nuclear Missions, Washington DC, December 2008, pp. 59-64.

⁴³ Report of the Secretary of Defense Task Force on DOD Nuclear Weapons Management, "Phase II: Review of the DOD Nuclear Missions," Washington DC, December 2008, p. 59.

their use.⁴⁴

Guido Westerwelle, Germany's new foreign minister, campaigned for withdrawing U.S. tactical nuclear weapons from Germany. In a *Der Spiegel* interview, Westerwelle said:

"Peace through disarmament will be the hallmark of the next German government in which the Liberal party will be a partner. ... I will push through in the coalition that we start talks with the US and our other allies on the removal of the last nuclear warheads: In the coming government term Germany will at last become free of nuclear weapons."⁴⁵

Westerwelle appears to have at least partly succeeded in his goal: the new coalition's common program was reported to pledge that "in the context of the talks on a new Strategic Concept for NATO we will advocate within NATO and towards our U.S. allies a withdrawal of remaining nuclear weapons from Germany."⁴⁶ Germany is reported to have support from Belgium and the Netherlands and to have consulted with them on the issue, although, under pressure from NATO leaders and the United States, all parties have indicated that any they wish to move forward with a collective NATO approach to the issue rather than a country-by-country decision.⁴⁷

Still, some European countries continue to believe that even discussing the issue in NATO and other fora can only lead to political problems and would prefer that the United States make a decision and announce it to other states. One representative of a European state complained in a recent interview that the Obama administration had been seeking his country's advice on what to do about nonstrategic nuclear weapons. "They shouldn't come here asking us what to do," he said. "They should decide what to do, and pull the weapons out a week later."⁴⁸ In recent years, these countries have

⁴⁴ The German Tornado fighters are scheduled to go out of service and their replacement, the Eurofighter, has not been certified as nuclear-capable because Berlin fears that by doing so the United States could learn commercial secrets. Italy and the Netherlands have not made a decision on whether to buy a nuclear-capable variant of the new U.S. Joint Strike Fighter. Belgium plans to continue flying its current dual-capable aircraft until 2025, pushing off a decision for years.

⁴⁵ *Der Spiegel*, "Spiegel Interview with FDP Leader Westerwelle," August 18, 2009. Available (in English) at: <http://www.spiegel.de/international/germany/0.1518.643586.00.html>.

⁴⁶ <http://www.cdu.de/doc/pdfc/091026-koalitionsvertrag-cducsu-fdp.pdf>. There is no official translation of the text. This unofficial translation comes from Oliver Meier of the Arms Control Association and the Acronym Institute for Disarmament Diplomacy, "NATO and Nuclear Weapons: German Coalition Policy on Withdrawal of US Nuclear Weapons," available at <http://www.acronym.org.uk/nato/09bratislava.html>; "German FM Wants US Nukes Out," UPI, Oct. 26, 2009.

⁴⁷ Julian Borger, "Germans Press for Removal of US Nuclear Weapons in Europe," *The Guardian*, November 7, 2009; "Germaniya i Benelux Obsudyat Vyvod iz Evropy Yadernogo Oruzhiya SShA" [Germany and Benelux Will Discuss the Withdrawal of American Nuclear Weapons from Europe], RIA-Novosti, November 3, 2009; "NATO Chief Urges Germany to Discuss Plan to Remove US Nukes," Agence France Presse, November 3, 2009; "Interview of Secretary of State Hillary Clinton with Dr. Sebastian Hesse Kastein of MDR Radio," Berlin, Germany. November 9, 2009, U.S. Department of State.

⁴⁸ Interview conducted by Miles A. Pomper, Brussels, May 26, 2009.

been accommodated by a slow but silent drawdown of these weapons.

The conventional wisdom is that by and large, the “old Europe” does not see much value in TNW while newer members of NATO generally favor keeping them. The latter views were expressed directly to the Congressional commission and served as basis of the report cited above. A closer look suggests, however, that views on TNW vary significantly within individual countries and among members of both the “new” and “old” Europe. Typically, government representatives in Brussels tend to be more supportive of retaining TNW, while those MFA officials in capitals are more receptive to their removal. The views of Eastern European governments in NATO also are far from uniform. For example, an in-depth discussion of extended deterrence options with a high-level representative of the Polish government demonstrated that this country, which is widely believed to be in the forefront of the advocates of the nuclear component of extended deterrence, is not necessarily wedded to these particular assets and could be amenable to other options as long as they have sufficient credibility.⁴⁹

A concern that seems to be widely shared by NATO members throughout Europe is the future of the Nuclear Planning Group. European NATO members fear that unless U.S. TNW continue to be deployed in Europe, they will not have the opportunity to influence U.S. nuclear weapons policy and that the NPG—the main institution that allows for such influence—will disappear or at least lose its present role.⁵⁰ Based on interviews with several knowledgeable European diplomats, if U.S. TNW were withdrawn, a continuing role for NATO’s NPG would be essential to demonstrate the vitality of U.S. security commitments, as well as to preserve cohesion by giving non-nuclear members of NATO a voice in all aspects of alliance’s defense planning.

Moreover, the Obama administration has already generated concerns among some of NATO’s Central and Eastern European members by its decision to reverse the Bush administration’s plans for deployment of a U.S. missile defense system in Poland and the Czech Republic. Those two countries had invested considerable political resources to overcome domestic opposition to the defenses, believing they were highly important to Washington. Although some governments such as those in the Czech Republic and public opinion in both countries seemed to shrug off the missile defense decision itself,⁵¹ polling data indicates that more broadly the Obama administration is far less appealing to many in these new European states (in particular in Poland and the Baltic states) who tend to view most foreign policy initiatives through the narrow prism of its appeal in Moscow (“if it’s good for them it’s

⁴⁹ Confidential interview with a high-level official of the Polish government, June 2009.

⁵⁰ See, for example, Michael Ruhle, “Good and Bad Nuclear Weapons: Berlin’s Part in Shaping Nuclear Reality,” Korber Policy Paper No. 3, Korber Foundation for International Affairs, April 2009.

⁵¹ See for example, Helene Franchineau, “Czech Leader: Missile Deal No Problem,” *The Washington Times*, September 22, 2009 available at http://washingtontimes.com/news/2009/sep/22/czech-leader-missile-deal-no-problem/?feat=home_headlines; poll in Warsaw daily *Rzeczpospolita* cited in “Why Europe Welcomes US Missile Shield Decision,” *Christian Science Monitor*, September 21, 2009 available at <http://www.csmonitor.com/2009/0922/p06s01-woeu.html>.

bad for us”) than to those in their “old Europe” counterparts.⁵²

Another indication came in an “Open Letter to the Obama Administration from Central and Eastern Europe,” penned by such well-known leaders as former Czech president Vaclav Havel, former Polish president Lech Walesa, and former Lithuanian President Valdas Adamkus. The letter expressed concerns about the administration’s approach to Russia and lack of attention to Central and Eastern Europe and called for providing additional reassurance and shoring up Article V guarantees in light of Russian actions.⁵³

As such, withdrawing TNW, which some East European governments perceive as a symbol of U.S. commitment, could create a controversy within NATO regardless of the weapons’ military utility. Still it is worth noting that the “open letter” called not for continuing NSNW deployments or providing other additional means of nuclear deterrence, but focused on stepping up non-nuclear means of reassurance, including contingency planning and prepositioning of equipment that could be used in a conflict.⁵⁴

Likewise, the wavering response of NATO to Turkish requests for conventional deployments in the run-up to the 1991 and 2003 Iraq wars, the ongoing tension between Turkey and the EU over the former’s membership in the Union, and the bitter legacy of Turkish-U.S. relations in the Bush administration have raised questions in Ankara about NATO’s commitment to its security that could be exacerbated by the removal of TNW from that country. Thus, the issue of maintaining the American security “umbrella” in the absence of TNW should be handled carefully, especially where new members of NATO and Turkey are concerned.

To shore up the NATO commitment absent TNW, some have suggested reliance on the same option that has been used to reinforce extended nuclear deterrence for Japan—namely, to keep nuclear weapons assigned to the European theater in the United States with the option of prompt redeployment. It would also be possible to retain, at least temporarily, the existing infrastructure for TNW (such as storage sites) that could support relocation of these weapons to Europe in a time of crisis.

To be sure, a decision of this sort would have both short- and longer-term political, military, and diplomatic implications. It could weaken the political benefits that otherwise might be reaped from TNW withdrawal. In addition, some in NATO warn that an attempt to return the weapons could create an escalatory dynamic. It is recommended, therefore, that in case a decision is made to keep storage and other

⁵² German Marshall Fund of the United States, *Transatlantic Trends 2009*, September 2009

⁵³ Valdas Adamkus et al., “An Open Letter to the Obama Administration from Central and Eastern Europe,” *Gazeta Wyborcza*, July 15, 2009, available at http://wyborcza.pl/1,75477,6825987,An_Open_Letter_to_the_Obama_Administration_from_Central.html.

⁵⁴ Ibid.

infrastructure in place that it be clear that this is intended as a temporary step. One option, for example, would be for the U.S. weapons' dismantlement to be made contingent on a positive Russian response to the withdrawal of TNW.

While Turkey appears to be in the front ranks of those who demand retention of American TNW in its territory, public opinion in this case might prove less difficult to manage than the one involving Eastern European members of the alliance. Some opinion polls, for example, have found Turks more opposed to continuing deployments of nuclear weapons on their territory than the public of other NATO countries.⁵⁵

Moreover, addressing other issues in Turkish-EU and Turkish-U.S. relations could make it easier for Turkey to live without TNW, especially if there were headway in its long-stymied effort to join the EU. While little progress on this front seems likely in the near future, other efforts that conveyed Europe's interest in a close relationship would be welcome. President Obama's outreach to Turkey, including his recent visit, should serve as a first step in a continuing effort to repair the breach in U.S-Turkish relations that occurred during the Bush years. The more this effort progresses, the less likely that US and NATO relations with Turkey would be seriously strained by the removal of U.S. TNW or that Turkey would seriously contemplate pursuit of an indigenous nuclear weapons program.

It will be interesting to see how the Turkish government interprets the recent Obama administration decision on missile defense. By deploying some elements of the U.S missile defense system in the Eastern Mediterranean instead of in Poland and the Czech Republic, the administration may have found another means to strengthen security assurances to Turkey. Although it is difficult to envisage a realistic scenario in which Iran would contemplate military action against Turkey, deployment of a missile defense system near Turkey could have a positive symbolic effect in Ankara. On the other hand, further alterations to the Conventional Forces in Europe treaty, particularly its related flank limitation agreements (see below), could make Turkey more reluctant to part with TNW.

⁵⁵ See, for example, "Nuclear Weapons in Europe: Survey Results in Six European Countries," a study coordinated by Strategic Communications for Greenpeace International, May 25, 2006.

Striking a Balance Between the Desirable and the Possible

Even if the deadlock within NATO on the future of forward-deployed TNW could be resolved, Russia appears uninterested in pursuing a dialogue on reducing TNW stocks. Indeed, chances are negligible that Russia will agree to address any Western concerns about substrategic nuclear weapons in the near term, and the probability that it will agree to eliminate 5,000 of its substrategic weapons in exchange for reductions of 500-800 U.S. substrategic weapons is practically zero.

The prior, turn-of-the-century effort—to codify the PNIs and adopt transparency provisions—retains compelling logic. It is unlikely, however, that this approach will work any time soon, especially if Russia no longer regards its unilateral declarations to be in force. New approaches, therefore, are needed in order to induce Russia into seriously contemplating reduction of its large TNW force.

The Russian position is unlikely to change unless the current balance of parochial politics is altered. Although it is difficult to anticipate what would precipitate such a change, almost certainly it would require radical action on the part of the West that would make it politically difficult for Russia to avoid a substantive response. At a minimum, such action might encourage some interest groups (the Foreign Ministry, for example) to advocate a new policy in response to the Western/U.S. initiative.

It appears that any significant reduction of substrategic nuclear weapons will be limited to the short-range variety (TNW narrowly defined). Russia will hardly be prepared to forego longer-range assets (e.g., nuclear weapons for Tu-22M3 medium bombers and long-range SLCMs) while the United States is unlikely to eliminate nuclear warheads for its SLCMs, which could in principle be used to provide a “nuclear umbrella” for Japan.

Thus, the main focus of reductions in the foreseeable future is short-range American and Russian nuclear weapons that do not have a tangible military mission. On the Russian side, this involves nuclear weapons for tactical aircraft and perhaps shorter-range SLCMs as well as the remaining warheads for air defense missiles; for the United States this means its gravity bombs, including first and foremost those deployed in Europe. Where longer-range weapons are concerned, at best, it might be possible to agree on transparency measures until considerably deeper reductions in the overall nuclear stockpiles of both parties have been made.

The Scope of a Possible Agreement. Two approaches to action on TNW appear to be available:

- A “transparency package” that involves declarations of stockpiles, as well as perhaps, locations of storage facilities. These measures may or may not

34 Striking a Balance Between the Desirable and the Possible

involve limited reductions (the United States and Russia will likely continue unilateral limited reductions anyway);

- A full-scale legally binding and verifiable treaty. Such a treaty will be difficult to negotiate, but it would pave the way to subsequent measures to completely eliminate and ban nuclear weapons for short-range systems.

The “transparency package” appears desirable and reasonably achievable under current circumstances. At stake is not so much the formal (quantitative) TNW balance, but rather the predictability of the situation. Transparency measures can help achieve predictability and set the stage for subsequent, negotiated verifiable reductions. To the extent that Russia still perceives a need to retain longer-range sub-strategic assets and seeks to leverage the short-range variety to obtain concessions from the United States and NATO, transparency will not fundamentally alter its plans. Thus, while it is likely to balk at reductions, it could be persuaded, under the right circumstances and with the right inducements, to share information about these weapons. The same is true for the United States, whose planning will not be seriously affected by the provision of data.

A full-scale treaty on reduction of TNW is highly desirable, but might be difficult to achieve in the near future. Two challenges are likely to hinder negotiations on such a treaty:

- As noted above, Russia is unlikely to accept asymmetric reductions that force it to eliminate more weapons than the United States. The INF precedent does not seem applicable for psychological and political reasons (the atmosphere in Moscow is radically different from that during the early period of *perestroika*) and the fact that U.S. TNW do not present an immediate threat to Russia (unlike formerly deployed U.S. intermediate-range forces, which could strike the Soviet Union with very short warning time). For its part, the United States will hardly accept equal reductions because these would allow Russia to retain several thousand warheads for TNW, while all of the estimated 500 American warheads would be subject to elimination.
- Verification of TNW stockpiles is a non-trivial task that is likely to prove controversial both politically and technically. Some interested parties within each state are likely to be reluctant to accept a radical expansion of inspection rights (e.g., for storage facilities). Even if negotiations are conducted in earnest, the scale of the technical issues that have to be resolved will require considerable time and effort.

Transparency measures can help lower the political profile of Russian TNW and begin to reduce concerns among NATO countries about their possible military role. To a large extent these concerns result from the absence of information about the number, types, and deployment pattern of these weapons, which, in turn, promotes worse-case planning. The controversy over suspected relocation of nuclear warheads for

land-based short-range missiles to the Kaliningrad Oblast in 2001 is illustrative of this situation. Transparency measures can also help pave the way for more radical and far-reaching measures.

Taking the First Step. The biggest challenge is to induce some flexibility in what has been an unyielding Russian position on TNW. Two options merit consideration:

- A “grand package” of TNW and CFE, and
- Unilateral withdrawal of U.S. TNW from Europe.

The “grand package” is founded on the principle that NATO and Russia should address each other’s concerns. It involves an “exchange” of movement on the CFE Treaty by NATO in return for movement by Russia on TNW.

Rose Gottemoeller, prior to assuming her position in the Obama administration, suggested that a new Conventional Armed Forces in Europe Treaty, together with a large package of confidence-building measures, could go long way to reducing the perceived need in Russia to rely so heavily on nuclear weapons.⁵⁶ In Russia, similar proposals were developed (but not published) by scholars at the Institute of World Economy and International Relations of the Russian Academy of Sciences (IMEMO). Sergey Kislyak, Russia’s Ambassador to the United States, also suggested that such an exchange is not unthinkable.⁵⁷

The status of the 1990s CFE Treaty has been a constant irritant for Moscow: the original treaty signed in 1990 is hopelessly outdated because it was shaped along NATO-Warsaw Pact lines. Since then, the majority of countries that comprised the Warsaw Pact have joined NATO taking their national quotas under the treaty to the opposite side. According to some Russian calculations, NATO now has a 3:1 or even 4:1 superiority in CFE-mandated limits. (The actual balance of forces is not as disproportionate because most NATO countries are well below CFE mandated caps). Furthermore, the Baltic states are not parties to CFE, which means that NATO theoretically could increase conventional forces in their territories without any restrictions, and these forces would not be subject to transparency and verification measures.

The 1999 Adapted CFE treaty, which established national—as opposed to bloc—limits, has never entered into force because of a controversy involving the disputed political commitment by Russia to remove its forces and equipment from military

⁵⁶ Rose Gottemoeller, “Russian-American Security Relations After Georgia,” Carnegie Endowment for International Peace, Policy Brief No. 67, October 2008.

⁵⁷ Daryl Kimball and Miles A. Pomper, “A Fresh Start? An Interview with Russian Ambassador Sergey Kislyak,” *Arms Control Today*, December 2008, http://www.armscontrol.org/act/2008_12/KislyakInterview. More recently, Ambassador Kislyak was less encouraging about such a trade-off when asked about the issues in a public forum in Monterey. See Conversation with Ambassador Sergey Kislyak on U.S.-Russian Relations,” August 26, 2009, Monterey, CA. Interview will soon be available at <http://cns.miis.edu>.

bases in Georgia and Moldova. For its part, Russians have complained for years that NATO countries have not even begun to ratify the Adapted CFE. Moscow strongly suspects that even if it complies with all conditions advanced by NATO, the agreement would still not be ratified. The issue of bases has become even more difficult since the August 2008 war between Russia and Georgia, which has led Moscow to recognize parts of Georgia as independent states and to establish new military bases there.

There is also the issue of “flank limitations”—a provision that establishes a strict limit on the combined number of Russian troops in the northwest and south of Russia. That limit was originally intended to prevent the Soviet Union from amassing troops against countries like Norway and Turkey, but after the breakup of the Soviet Union and the division of the Soviet quota among new independent states, the Russian military has complained that the allocation left to Russia was too low. In fact, Russia de facto violated the flank limitation during the two wars in Chechnya, and NATO had to make a special exception to account for “temporary deployment” above the limit. While that concern was addressed, Russian military have also complained that the exception still does not leave them enough room to deploy even a modest force in the northwest. High-level representatives of the Ministry of Defense have indicated recently that acceptance of flank limitations is out of the question even under the Adapted CFE, making its entry into force even more questionable.

In 2007 Russia froze its participation in CFE citing the above-mentioned concerns, as well as U.S. plans to deploy a missile defense system in Europe. The intention was apparently to “hit NATO where it hurts,” i.e., deny any information about Russian conventional forces that could be obtained through notifications and inspections. Yet, NATO did not budge, and now Moscow faces an alliance that is not subject to any restrictions on its conventional forces. Lately, Russia has been seeking ways to reinstitute an arms control regime for conventional forces in Europe, albeit with the conditions it voiced earlier. Central among these attempts was the initiative of President Dmitri Medvedev to conclude a new comprehensive treaty that would address all aspects of the security situation in Europe.

Given the urgency of Russian concerns about the conventional forces imbalance in Europe as well as the need for transparency, it is possible that Russia would seriously contemplate concessions on tactical nuclear weapons if NATO would reciprocate in some fashion on CFE issues. German Foreign Minister Steinmeier offered a proposal along these lines during his June 10, 2009 visit to Moscow, stressing the need to “include sub-strategic and tactical nuclear arms in this disarmament process in order to finally dispose of the remnants of the Cold War kept in the territory of Russia and Europe.”⁵⁸

⁵⁸ “Germany Urges Revival of Major European Arms Treaty,” RT, June 10, 2009, http://www.russiatoday.com/meeting/2009-06-10/Germany_urges_revival_of_major_European_arms_treaty.html.

Although worthy of further consideration, the CFE-TNW package is likely to be highly controversial on both sides. It is unlikely that NATO will be able to reach consensus on accepting most Russian demands for the new treaty. In particular, removal of flank limitations will generate serious objections from the Baltic states and probably also Poland. Further, NATO will find it very hard to ensure ratification of the new CFE if it contains concessions to Russia on key elements outlined above. Finally, Russian bases in Abkhazia and South Ossetia will pose an enormous stumbling bloc because of fundamental differences between Russia and NATO over the international standing of the territory (ies) on which the bases are located. These difficulties, as well as many other smaller problems, will impinge on the ability of NATO to design a package that could entice Moscow to make serious concessions on TNW. Senior U.S. officials also say that they do not want to intertwine two sets of complex negotiations. "It's best to keep them on separate tracks," one said recently in a confidential discussion.⁵⁹

The second option would address TNW per se, without connecting them to other issues. Since Moscow links any move on TNW to the "withdrawal of all nuclear weapons to national territories," Russian officials would find it difficult to ignore such a move by the United States and NATO. Furthermore, the United States continues to withdraw its TNW from Europe—including nuclear bombs from the United Kingdom in 2008—but receives little credit because these actions are taken in secret. Since reductions are conducted in piecemeal fashion, they do not create the political momentum that could compel Moscow to respond.

The United States could put forward a statement on its own or on behalf of NATO in conjunction with TNW withdrawals in which it discloses basic information about its TNW stockpiles, and invites Russia to respond in kind. This move would be similar to the 1991 unilateral statements that constitute the PNIs, but would be made in a different context (first and foremost complete withdrawal of U.S. from Europe) and thus could revive the spirit and the format of that regime.

There is no guarantee, of course, that unilateral withdrawal of American TNW from Europe would prompt Russia to change its position. It would, however, make it more politically costly for Moscow to continue to stall on the TNW issue and, if Russia continued to refuse to put its TNW on the negotiating table, expose its current position as a bluff. If implemented against the background of positive movement in other issue areas, such as strategic arms reduction, this tactic has a decent chance of success.

The main advantage of the second option is that decision could be taken unilaterally by NATO and would not be constrained by possible Russian demands for additional concessions. NATO would also be free to make adjustments to its extended deterrence posture as it sees fit.

⁵⁹ Confidential discussion with senior administration official, August 2009

Subsequent Steps to Reduce TNW. As noted above, the “transparency package” (accompanied perhaps by additional measures, such as relocation of Russian TNW deeper into its national territory) is only the first, albeit important, step on the road to deep reductions of TNW. The following elements of the subsequent stage appear feasible and advisable:

1. Reduction of TNW stockpiles could be negotiated in conjunction with the next strategic arms agreement (i.e., the next stage following the current talks on START I replacement). A link between the two issues was recently acknowledged by Konstantin Kosachev, Chairman of the International Affairs Committee of the State Duma, who listed “tactical nuclear weapons deployed on high-precision cruise missiles” as one of the four most important issues that need to be resolved at strategic arms reduction talks.⁶⁰ This option implies that START talks would switch from focusing on reductions of delivery vehicles (the approach practiced since SALT I in the 1970s) and, in an indirect fashion, of deployed warheads, to reductions of the entire stockpile of both deployed and non-deployed warheads. Transitioning to a new approach will be difficult, as noted earlier, but also highly desirable, as this would be the first time that nuclear weapons themselves (rather than their delivery vehicles) would be subject to reductions and transparency measures. As was also noted above, TNW cannot be tackled through reduction of delivery vehicles because all relevant delivery vehicles are dual-capable.
2. Since Russia has many more TNW warheads than the United States, it is not unreasonable to allow it initially to be subject to a higher limit for non-deployed (stored) warheads or perhaps no limit on non-deployed warheads. This approach would help to address Russian resistance to asymmetric reductions. Such an approach should not be a serious security problem for NATO, however, as warheads kept in storage would be subject to verification.

Eventually, equal aggregate ceilings could be established for all nuclear weapons for each country. In that case, Russia would have a strong incentive to reduce its TNW (both short- and long-range substrategic systems) as a matter of priority, limiting it to perhaps a few hundred in a fairly short period of time. It is highly likely that the United States would also want to preserve a limited number of nuclear SLCMs. It is likely that in the relatively near future Russia would also want to bring the nuclear arsenals of the United Kingdom, France, and China into the arms control process. The Russian military has long argued that future negotiations should be of a multinational nature. In the above-referenced 2007 interview, General Verkhovtsev of the 12th GUMO points out, Russia may well insist that the United Kingdom and France join any talks that include a focus on TNW reductions. It might be possible, for example, to include the much smaller arsenals of other nuclear weapons possessors in the negotiating process in a limited and indirect manner by means of: (1) a freeze on the number of nuclear

⁶⁰ “Peregovoram po SNV Mozhet Pomeshat PRO SShA v Evrope” [American Missile Defense in Europe Could Hinder START Talks], RIA-Novosti, May 19, 2009.

weapons, both deployed and non-deployed, (2) basic transparency measures with regard to the smaller nuclear arsenals, and (3) limits on modernization. If possible, elementary verification measures, such as visits to facilities and bases associated with nuclear weapons would also be desirable. China is likely to become the greatest obstacle to agreement on such measures. A U.S.-Russian agreement on transparency of warhead stockpiles—including TNW—could facilitate the transition to multilateral negotiations and could constitute an additional inducement for Russia to put its TNW on the negotiating table.

Negotiation of a verification regime for nuclear warhead stockpiles, strategic and tactical, as well as deployed and non-deployed, would represent a further step forward. Measures might include warhead storage facilities, both central and at military bases, and provide for confirmation of numbers (declared in a data exchange) and possible movement of warheads in and out of storage as well as at production and dismantlement facilities to confirm elimination of warheads. (By implication, this would also be an important confidence-building measure, as it would provide early notification of possible deployment of warheads.). It is advisable to begin the discussion of such subsequent measures as early as possible, perhaps using Track Two and Track One-and-a-Half meetings to expand the pool of creative, practical political and technical solutions to problems likely to arise in formal negotiations of a legally binding and verifiable treaty.

It also is important for many of the early champions for legally binding TNW reductions to return to the fray and focus the international spotlight on the pressing need for international action. Ironically, the United States now appears to be ahead of many non-nuclear-weapon states on nuclear disarmament—at least as can be inferred from statements made (or not delivered) at the 2009 NPT Prep Com. While international efforts will not ensure more flexible U.S. and Russian positions on TNW, absence of attention to the issue will make it much less costly politically for the nuclear-weapon states to fail to undertake further reductions.

Conclusion

As the above analysis indicates, the issue of sub-strategic nuclear weapons, including U.S. deployments in Western Europe, is enormously complex and involves the competing views of numerous domestic and international actors. Yet, progress on this subject is vital if one is to extend the body of verifiable arms control regimes to a category of nuclear weapons that are attractive to nuclear terrorists and represent a major danger from the standpoint of early and/or accidental use.

It is now opportune to launch a new initiative to control TNW. The recent “road to zero” initiative by four former U.S. senior statesmen has resonated internationally and has shifted the tide toward deep reductions and nuclear disarmament. More recently, the new U.S. administration has reinvigorated bilateral U.S.-Russian and multilateral WMD arms control. The modest success of the 2009 NPT Prep Com also augurs well for a concerted effort at the 2010 NPT Review Conference to tackle issues that have too long experienced neglect. Furthermore, NATO’s development of a new Strategic Concept provides a mechanism for building consensus on this issue in the West and a deadline for taking action. On-going U.S. arms control discussions with Russia provide also useful opportunities for dialogue and inter-issue bargaining that could lead to mutually advantageous solutions to the TNW problem.

While there remains compelling logic to an approach that seeks to give legally binding and verifiable status to the 1991 PNIs, it is not obvious that this method currently has much prospect of success. As a consequence, it is worthwhile to explore several new paths.

First, it is advisable for international and bilateral efforts to focus on deep reductions, and preferably elimination, of one variety of sub-strategic nuclear weapons—those that are commonly classified as tactical, or short-range. These include, first and foremost, gravity bombs for short-range (tactical) aircraft. With regard to longer-range assets, a more cautious approach that promotes reductions and a transparency regime is advisable because these weapons are still viewed by many U.S. and Russian policy makers as serving various national security roles. In addition, given the sensitivity of this issue and the imbalance in numbers of sub-strategic nuclear weapons stocks, it may make sense to emphasize enhanced safety and security of these assets than straightforward reductions.

Second, the first step is also the most difficult one as a result of political inertia and the enduring deadlock, which have become almost a habit on both sides of the Atlantic. The Russian position seems particularly strongly entrenched, and our analysis has failed to identify domestic actors that favor and/or would expend political resources to change Moscow’s current stance. Two options for the all-critical first step appear feasible.

42 Conclusion

- (a) A “grand package” involving an exchange of concerns: action on sub-strategic nuclear weapons and NATO steps to modify and expedite entry into force of the Conventional Forces in Europe Treaty.
- (b) Unilateral withdrawal of U.S. TNW that remain in Europe. This action would remove the main justification—whether genuine or politically motivated—for Russia to refuse to reduce further its own TNW. We anticipate that such a step would increase pressure on Russia to respond positively to initiatives involving both TNW reductions and a transparency regime.

Subsequently, the issue of TNW reductions could be tackled in a variety of ways and in a variety of fora: as a separate, stand-alone issue, in the context of future START negotiations, and in the NPT review process. In addition, if significant headway is made in U.S.-Russian nuclear reductions, it will then become important for to multilateralize the approach to sub-strategic nuclear weapons arms control.

To take advantage of these opportunities, however, the nearly decade-long lack of attention to this issue on both sides of the Atlantic must first come to an end. Making progress on TNW will mean reassuring government officials and publics in Russia, the United States, and Europe that ending their deployment and ultimately eliminating them will make them safer. It will mean mobilizing international pressure to once again demand that Russia and NATO move forward on TNW disarmament as part and parcel of their Article VI obligations. Scandinavian governments, including Finland, need to reassume their past role in pressing for TNW to someday be counted among the world’s former nuclear dangers.

Appendix: Russian and U.S. Sub-Strategic Weapons Stockpiles

In the absence of official—much less verifiable—data, available estimates of the Russian sub-strategic weapons stockpile are unavoidably contradictory and often inconclusive. Information about the pace of reductions since the 1991 PNIs provided by Russian officials includes only the percentages of reductions—both the entire stockpile and each category, but official sources remain silent on absolute figures, including the baseline data.

The only reliable Russian source for the 1991 stockpile was provided by Alexei Arbatov—21,700 warheads in all categories, including both deployed and non-deployed warheads. Given the official statements—most recently by the chief of the 12th GUMO General Vladimir Verkhovtsev—to the effect that Russia has reduced its sub-strategic nuclear weapons by 75 percent, the total stockpile should constitute about 5,000 warheads today.

However, when percentages of reduction in each category supplied by Verkhovtsev are put against the breakdown by category in 1991 according to figures provided by Arbatov, serious discrepancies emerged. Specifically, the total shoots up to as high as 6,700 warheads (see table below for specific figures). This discrepancy could stem from possible inaccuracies in Arbatov's account of the breakdown by category, or the rounding of numbers by Verkhovtsev, or any other reason.

Another source of data on the Russian sub-strategic stockpile was provided by the Natural Resources Defense Council, a U.S. NGO. One methodological problem with that assessment is that NRDC addresses the maximum load of nuclear-capable sub-strategic delivery vehicles. That is, it probably omits a significant portion of stored warheads.

Russian Sub-Strategic Weapons Stockpile
(Calculated based on data for 1991 provided by Alexei Arbatov)

	1991 Stockpile ⁱ	Should be left under 1991 PNIs ^j	2007 Stockpile (Verkhovtsev data) ⁱⁱ
Ground Forces	6,700	0	0
Air Force	7,000	50 percent (3,500)	50 percent (3,500)
Air/Missile Defense	3,000	50 percent (1,500)	40 percent (1,200)
Navy	5,000	One-third (2,000)	One-third (1,660)
	21,700	About 7,000	About 6,700 (5,000 if calculated as 25 percent of the 1991 total)

Russian Sub-Strategic Weapons Stockpile
(Calculations of NRDC)

	1991 Stockpile ⁱⁱⁱ	2009 Stockpile ^{iv}
Ground Forces	4,800	0
Air Force	4,000	650
Air/Missile Defense	2,800	700
Navy	3,400	700
Total	15,000	2,050

U.S. Sub-Strategic Weapons Stockpile

	1991 Stockpile ^v	2008 Stockpile ^{vi}
Total	6,100 ^{vii}	1,100 ^{viii}
In Europe	2480 ^{ix}	150-200 ^x
No. of bases in Europe	125	10

ⁱ Data provided in Alexei Arbatov, "Deep Cuts and de-Alerting: A Russian Perspective," in: *the Nuclear Turning Point* (The Brookings Institution Press: Washington, DC, 1999), p. 320.

ⁱⁱ Data provided by General Vladimir Verkhovtsev (Nikolai Poroskov, "Takticheskii Yadernyi Kozyr" [A Tactical Nuclear Ace], *Vremya Novostei*, September 7, 2007.) Verkhovtsev asserted, specifically, that Russia had completely implemented its 1991 promises, including cutting the tactical warheads in its Air Defense Force by sixty percent, by fifty percent in the Air Force, one-third in the Navy, and completely in the Ground Forces.

ⁱⁱⁱ "Nuclear Notebook," *Bulletin of The Atomic Scientists*, July/August 1991, p. 48

^{iv} Robert Norris and Hans Kristensen, "Nuclear Notebook," *Bulletin of the Atomic Scientists*, May/June 2009(<http://thebulletin.metapress.com/content/h304370t70137734/fulltext.pdf>)

^v U.S. Nuclear Weapons Stockpile," *Bulletin of the Atomic Scientists*, June 1991, p. 49

^{vi} Robert Norris and Hans Kristensen, "Nuclear Notebook: U.S. Nuclear Forces, 2009," *Bulletin of the Atomic Scientists*, March/April 2009, p. 65.

^{vii} Ibid. According to the authors of the "Nuclear Notebook," in 1991 U.S. total nuclear weapons stockpile was 19,000, of them 35 percent in the non-strategic category.

^{viii} Ibid. According to Norris and Kristensen, 500 of this number are operational while another 600 is in inactive reserve. Of those, 100 warheads for nuclear SLCMs are operational and another 200 are in reserve; the rest of the stockpile consists of gravity bombs.

^{ix} Data compiled by Hans Kristensen, Federation of American Scientists

^x Norris and Kristensen, "Nuclear Notebook," March/April 2009, p. 61.