



Russia's Non-strategic Nuclear Weapons in Their Current Configuration and Posture: A Strategic Asset or Liability?

Citation

Saradzhyan, Simon. 2010. Russia's Non-strategic Nuclear Weapons in Their Current Configuration and Posture: A Strategic Asset or Liability? Cambridge, MA: Belfer Center for Science and International Affairs, Harvard University.

Published Version

http://belfercenter.ksg.harvard.edu/publication/19940/russias_nonstrategic_nuclear_weapons_in_their_current_configuration_and_posture.html

Permanent link

<http://nrs.harvard.edu/urn-3:HUL.InstRepos:24890952>

Terms of Use

This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at <http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA>

Share Your Story

The Harvard community has made this article openly available. Please share how this access benefits you. [Submit a story](#).

[Accessibility](#)

RUSSIA'S NON-STRATEGIC NUCLEAR WEAPONS IN THEIR CURRENT CONFIGURATION AND POSTURE: A STRATEGIC ASSET OR LIABILITY?

BY SIMON SARADZHIAN



HARVARD Kennedy School
BELFER CENTER for Science and International Affairs

JANUARY 2010



Belfer Center for Science and International Affairs

John F. Kennedy School of Government

Harvard University

79 JFK Street

Cambridge, MA 02138

Fax: (617)495-8963

Email: bcsia_ksg@harvard.edu

Website: <http://belfercenter.org>

Copyright 2010 President and Fellows of Harvard College

Printed in the United States of America

Commissioned by the Nuclear Threat Initiative.

The author of this report invites liberal use of the information provided in it for educational purposes, requiring only that the reproduced material clearly state: Reproduced from Simon Saradzhyan, *Russia's Non-strategic Nuclear Weapons in Their Current Configuration and Posture: A Strategic Asset or Liability?* (Cambridge, Mass: The Belfer Center, Harvard University, January 2010).

RUSSIA'S NON-STRATEGIC NUCLEAR WEAPONS
IN THEIR CURRENT CONFIGURATION AND
POSTURE: A STRATEGIC ASSET OR LIABILITY?

BY SIMON SARADZHIAN



HARVARD Kennedy School
BELFER CENTER for Science and International Affairs

JANUARY 2010

The author would like to thank Matthew Bunn, Associate Professor at Harvard University's John F. Kennedy School of Government and Pavel Podvig, Researcher at the Center for International Security and Cooperation at Stanford University.

TABLE OF CONTENTS

I. Abstract.....	2
II. Post-Communist Russia’s NSNWs: Reductions and Current Status.....	4
III. Roles Assigned to Russian NSNWs: Perceptions and Reality.....	9
IV. Risks and Costs Incurred by Russia’s Non-strategic Nuclear Weapons.....	21
V. Conditions and Obstacles on the Way towards Negotiation and Implementation of a Verifiable NSNW Reduction and Accounting Agreement with Russia.....	25
VI. Why Russia Could and Should Pursue the Reduction of NSNWs.....	33

I. ABSTRACT

Russia's military-political leadership envisions a formidable range of uses for the country's arsenal of non-strategic nuclear weapons (NSNWs).¹ In the eyes of Russian leaders, these weapons play a critical role in the nation's defense and security posture as part of the country's overall nuclear arsenal and as an equalizer for the weakness of the nation's conventional forces vis-a-vis NATO and China. Russia's military-political leadership and policy influentials also assign a number of specific roles to NSNWs, including deterrence of powers in the south.

Given these perceived and real benefits of possessing NSNWs, it is rather difficult to imagine that Russia will agree to eliminate all of its non-strategic nuclear weapons in the foreseeable future even if its actions are fully reciprocated by the U.S. and other nuclear weapons states. However, securing Russia's consent to negotiate an arms control treaty that would reduce the numbers of non-strategic nuclear weapons and put them under accounting and verification regimes is not a mission impossible.

First, only some of the roles envisioned for these weapons are realistic, and these roles require far fewer NSNWs than what Russia has today. Second, the Russian leadership's perceptions of NSNWs' roles can change too. In fact, Russia has already either indicated or explicitly stated conditions that if met, would facilitate Moscow's consent to verifiable reductions of Russian and U.S. NSNWs, which are now subject only to unilateral U.S. and Russian presidential initiatives, which are unverifiable and non-binding. There are also a number of other factors that can help lower the value of NSNWs in the eyes of the Russian military-political leadership.

1 Russian strategic documents, such as the Urgent Tasks of the Development of the Armed Forces of the Russian Federation and the Strategy of National Security Until Year 2020, refer to "strategic nuclear forces" or "strategic deterrence forces," which, by exclusion, implies that there are also non-strategic nuclear forces. These documents do not define, however, what strategic nuclear weapons or non-strategic nuclear are. There was, however, a definition offered by a Russian government official and I will use it because my paper discusses the Russian authorities' perception of the roles played by these weapons. This definition has been given by Vladimir Rybachenkov, senior counselor at the Russian Ministry of Foreign Affairs. Rybachenkov defined non-strategic nuclear weapons as all nuclear weapons, which are "not covered by the class of the strategic nuclear weapons that are designed to engage objects in geographically remote strategic areas (over 5,000 kilometers) with the purpose of accomplishing strategic missions." Vladimir Rybachenkov, lecture on "Nuclear Strategy of Russia," NATO School, Obberamergau, March 1, 2001. Cited in Gunnar Arbman and Charles Thornton, "Russia's Non-strategic nuclear weapons. Part I: Background and Policy Issues," Swedish Defense Research Agency, November 2003.

Third, while there are perceived benefits of possessing tactical nuclear weapons, there are also formidable risks and costs incurred by Russia's current NSNW posture.

I would argue that a Russian-U.S. arms control treaty with verification and accounting mechanisms would be a good first step to both reducing these risks and costs and to bringing the numbers of NSNWs down to levels sufficient for the roles that these weapons can realistically play.

II. POST-COMMUNIST RUSSIA'S NSNWs: REDUCTIONS AND CURRENT STATUS

In October 1991, in response to U.S. President George Bush Sr.'s Presidential Nuclear Initiatives (PNIs) on NSNWs, Soviet president Mikhail Gorbachev announced that:

- “Nuclear artillery munitions and nuclear warheads for tactical missiles are being eliminated.”
- “Nuclear warheads for surface-to-air missiles are being removed from the forces, concentrated at central bases and some of them are being eliminated.”
- “All nuclear mines are being eliminated.”
- “All tactical nuclear weapons are to be withdrawn from surface ships and from multi-purpose submarines. These weapons and also the nuclear weapons of the navy’s land-based aviation are to be stored in places of central, centralized storage. A portion of them is to be eliminated.”

Gorbachev—who by then had already ordered the withdrawal of Soviet NSNWs from Eastern Europe—also proposed that the Soviet Union and the U.S. act on a reciprocal basis to:

- Eliminate all naval tactical nuclear weapons.
- Withdraw all nuclear warheads, aerial bombs, air-launched missiles from combat units, front and tactical aviation and place them in central storage bases.²

In January 1992, post-Communist Russia’s first President Boris Yeltsin confirmed the gist of Gorbachev’s pledges, but modified them:

- While the Soviet leader said “a portion” of nuclear warheads for air defense missiles will be eliminated, post-Communist Russia’s first president vowed to destroy “a half” of these warheads.
- Gorbachev pledged to have a “portion” of the warheads “from surface ships and multipurpose submarines” destroyed while Yeltsin said “one-third of the sea-based tactical nuclear weapons” will be eliminated.
- Yeltsin also made an additional commitment to “halve the stocks of air-launched tactical nuclear munitions.”³

2 Statement by Mikhail Gorbachev, USSR President, broadcast by the Soviet Central Television’s First All Union Program, October 5, 1991. Translated by BBC Summary of World Broadcasts in “Gorbachev Proposals on Nuclear Arms Control,” on October 7, 1991.

3 Statement by Boris Yeltsin, Russian President, broadcast by the Russian Television’s Channel 1, January 29, 1992. Translated by BBC Summary of World Broadcasts in “Yeltsin Sets Out Proposals On Arms Reduction,” on January 30, 1992.

Like Gorbachev, Yeltsin proposed the removal of tactical air-launched nuclear armaments from Russia's combat units if the same was done by the United States. Implementation of this proposal would have amounted to the elimination of the remaining U.S. nuclear presence in Europe, something that Moscow has long sought and Washington has refused to do so far.⁴

In January 1992, President Boris Yeltsin also vowed that Soviet NSNWs would be relocated from now-independent Kazakhstan, Belarus and Ukraine to Russia by July of that year as agreed to by Moscow, Washington and these three former Soviet republics.⁵

As said above, the United States had announced commitments to downsize its own tactical nuclear arsenal even before the Soviet Union did. In September 1991, President Bush Sr. announced his PNIs, pledging to:

- withdraw to the United States all ground-launched short-range weapons deployed overseas and destroy them along with existing U.S. stockpiles of the same weapons; and
- cease the deployment of tactical nuclear weapons on surface ships, attack submarines, and land-based naval aircraft during "normal circumstances." Implicitly, the United States reserved the right to redeploy these arms in a crisis.⁶

Both governments have repeatedly said that they have fully implemented the PNIs, which today remain the sole regulators of U.S. and Russian NSNW arsenals. There are, however, doubts about whether the commitments have been fully met as well as whether these self-imposed constraints remain in place.

One indication that these doubts are not groundless is a 2003 interview with Colonel General Vladimir Zaritsky, commander of the Rocket and Artillery Forces of the Army (RViA). In that interview Zaritsky asserted that "at this time, the Army's main means of using tactical non-strategic nuclear arms are at the disposal of RViA." Further, when answering a question from a Russian reporter on "systems, which possess nuclear weapons of short and medium range," the commander said that "these [weapons] were, are and will remain sufficiently reliable." "I would also like to stress that RViA combat units are capable of accomplishing any nuclear strike missions against the enemy under any operational conditions, any time and under any weather conditions,"

4 David S. Yost, "Russia's Non-Strategic Nuclear Forces," *International Affairs* 77 (July 2001), pp. 531-551.

5 Andrew Katell, "Yeltsin Makes U.N. Debut, Offers Cuts in Multiple Warheads," *Associated Press*, January 31, 1992.

6 The Presidential Nuclear Initiatives (PNI's) on Tactical Nuclear Weapons at a Glance, Strategic Arms Control and Policy, Fact Sheet, *Arms Control Association*, March 2006, <<http://www.armscontrol.org/factsheets/pniglance>>.

the commander said.⁷ Neither Zaritsky nor his superiors elaborated on how the commander's comments square with Russia's unilateral commitments to eliminate nuclear artillery munitions and nuclear warheads for tactical missiles.⁸ It might be the case that Zaritsky meant that his forces were maintaining delivery systems, which could be used to carry NSNWs, but are officially assigned to carry conventional weapons.

NSNW expert Nikolai Sokov argues that Russia has altogether stopped mentioning the unilateral initiatives and has come to regard them as no longer "required to implement," starting from 2003-2004.⁹ As evidence, Sokov cites a 2004 statement by Foreign Ministry spokesman Alexander Yakovenko. In that statement, Yakovenko made a point of noting that Russia's NSNW initiatives were "goodwill" initiatives, not obligations, but still maintained that they were being implemented.¹⁰ By late 2004, Russia had cut "more than 50 percent" of its tactical nuclear arsenal and further reductions were underway, according to Yakovenko's statement. By doing so, Russia "fully implemented all of the displayed initiatives on reducing tactical nuclear weapons," Yakovenko said.¹¹

Yet, in September 2006, almost two years after Yakovenko's statement, Russian multi-purpose submarines were still carrying tactical nuclear weapons on patrol, according to then-Defense Minister Sergei Ivanov even though the PNIs said that nuclear weapons should have been withdrawn from such submarines.¹²

In 2007, however, Russian officials renewed their assurances that the country had honored all of the commitments on tactical nuclear weapons made by Yeltsin. Colonel-General Vladimir Verkhotsev, the head of the Defense Ministry's 12th Main Directorate, said all tactical nuclear missiles

7 Interview with Colonel General Vladimir Zaritsky in Oleg Falichev, "Bog voyny v zapas ne ukhodit" (The God of War Doesn't Retire into Reserve), *Voyenno-Promyshlennyyi Kuryer*, November 19-25, 2003.

8 The commitments the author is referring to are outlined in: Statement by Mikhail Gorbachev, USSR President, broadcast by the Soviet Central Television's First All Union Program, October 5, 1991. Translated by BBC Summary of World Broadcasts in "Gorbachev Proposals on Nuclear Arms Control," on October 7, 1991, and statement by Boris Yeltsin, Russian President, broadcast by the Russian Television's Channel 1, January 29, 1992. Translated by BBC Summary of World Broadcasts in "Yeltsin Sets Out Proposals On Arms Reduction," on January 30, 1992.

9 Nikolai Sokov, "Tactical (Substrategic) Nuclear Weapons" in Dennis M. Gormley, Patricia M. Lewis, Miles A. Pomper, Lawrence Scheinman, Stephen Schwartz, Nikolai Sokov and Leonard S. Spector, "Four Emerging Issues in Arms Control, Disarmament, and Nonproliferation: Opportunities for German Leadership," The James Martin Center for Nonproliferation Studies, July 2009. Also see Miles Pomper, William Potter and Nikolai Sokov, "Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe," James Martin Center for Nonproliferation Studies, December 2009.

10 "Otvét ofitsialnogo predstavatelya MID Rossii A.V. Yakovenko na press konferentsii v RIA Novosti otnositelno initsiativ Rossii po sokrashcheniu takticheskogo yadernogo oruzh'ia" (Response of official representative of MFA of Russia A.V. Yakovenko at a press conference at RIA Novosti to a question on initiatives of Russia on reduction of tactical nuclear weapons), October 7, 2004, Official web site of the Russian Foreign Ministry.

11 *Ibid.*

12 Pavel Felgenhauer, "Russia Hasn't Kept Its Word On Tactical Nuclear Weapons Limitations," *Novaya Gazeta*, September 14-17, 2006. Also cited in Associated Press, "Report: Russian navy to rely on tactical nukes," March 23, 2009.

had been removed from Russian battleships and submarines. He also said, “Russia particularly committed itself to removing tactical nuclear weapons from the ground forces completely. Those weapons were also cut by 50 percent in the Air Force, by 60 percent in missile defense troops and by 30 percent on nuclear submarines of the Russian Navy.”¹³

It is impossible to either verify Verkhovtsev’s assurances or to say with certainty how many NSNWs Russia still has since the PNIs provide for neither accounting nor verification. Estimates vary as to the current number of non-strategic nuclear weapons in the Russian arsenal. One recent study estimated that the total number of Russian non-strategic warheads, including those operational and those in storage or awaiting dismantlement, had been brought down to less than 5,000 warheads by 2007. The same study put the total number of U.S. non-strategic warheads at less than 1,100 warheads.¹⁴

After announcing the PNIs, the U.S. and Russia made no strong effort to make NSNWs the subject of bilateral reduction for more than ten years. At their summit in Helsinki in 1997, U.S. President Bill Clinton and Russian President Boris Yeltsin issued a joint statement, which said “that in the context of START III negotiations their experts will explore, as separate issues, possible measures relating to nuclear long-range sea-launched cruise missiles and tactical nuclear systems, to include appropriate confidence-building and transparency measures.”¹⁵ However, neither START III nor the NSNW measures were negotiated. During the negotiations of the 2002 SORT Treaty Russian officials refused to discuss tactical nuclear weapons and the George W. Bush administration didn’t push for it even though U.S. officials have said Washington would be interested in an arrangement that would ensure better transparency and accountability of Russian NSNWs.¹⁶

The Barak Obama administration has publicly stated its interest in making non-strategic nuclear weapons the subject of U.S.-Russian arms control talks if and once the START treaty, which expired in December 2009, is replaced with a new one. “I certainly believe we should begin exploring the issues with the Russian Federation and decide how to fit that into the agenda,” chief U.S. negotiator and U.S. Assistant Secretary of State Rose Gottemoeller said in April 2009. She added that President Obama believes that “this is an area that should be” dealt with at some

13 “Russia determined to keep tactical nuclear arms for potential aggressors,” Pravda.ru, October 31, 2009

14 Miles Pomper, William Potter and Nikolai Sokov, “Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe,” James Martin Center for Nonproliferation Studies, December 2009.

15 U.S. President Bill Clinton and Russian President Boris Yeltsin, Joint Statement On Parameters Of Future Reductions In Nuclear Forces, Helsinki, Finland, March 21, 1997.

16 Nicholas Kravev, “Battlefield Nukes Left out of Arms Talks,” *The Washington Times*, April 16, 2009.

point.¹⁷ In May 2009 Gottemoeller said that the U.S. is prepared to begin talks over tactical nuclear arms stationed beyond its national territory and talks on this issue may begin after the completion of negotiations to replace START.¹⁸ And in December 2009 the *New York Times* reported that even with a START replacement agreement yet to be signed, U.S. and Russian diplomats were already working on a new deal that would not only make even deeper cuts in the number of deployed weapons, but would also reduce non-strategic nuclear weapons.¹⁹

The Russian side, however, appears to be less enthusiastic, at least publicly. When asked about the possibility of negotiating a tactical nuclear arms control treaty with the U.S., Russian diplomats do not rule such talks out, but warn that a deal on NSNWs will be contingent on a number of conditions, which I outline in a separate section below.

17 Nicholas Kravov, "Battlefield Nukes Left out of Arms Talks," *The Washington Times*, April 16, 2009.

18 Ellen Barry, "U.S. Negotiator Signals Flexibility Toward Moscow Over New Round of Arms Talks," *New York Times News Service*, May 5, 2009.

19 *New York Times*, "START and Beyond," December 19, 2009.

III. ROLES ASSIGNED TO RUSSIAN NSNWS: PERCEPTIONS AND REALITY

Senior Russian commanders, including chief of the General Staff of the Armed Forces Army General Nikolai Makarov, Verkhovtsev and Zaritsky, have repeatedly underscored the importance of non-strategic nuclear weapons. Moreover, some of the commanders even assert that their importance may increase. In March 2009, deputy chief of the Navy's Staff Vice Admiral Oleg Burtsev asserted that "probably, tactical nuclear weapons will play a key role in the future" in the Russian Navy. Burtsev said it is the increasing range and precision of tactical nuclear weapons that make them an important asset,²⁰ but didn't shed light on how their deployment would square with Moscow's aforementioned unilateral initiatives, which stipulated that NSNWS would be withdrawn from surface ships and multi-purpose submarines as well as from the navy's land-based aviation. It is unclear whether Burtsev was merely reflecting the Russian admirals' enduring interest in returning NSNWS to surface ships to equalize for the Navy's weakness vis-a-vis NATO forces or whether he was also foretelling a change in Russia's official position on the issue.

There have been several reports indicating that such a change is in the works.

An "authoritative Russian military man" told a group of visiting Western scholars and journalists in September 2009 that the role of tactical nuclear arms is being significantly upgraded.²¹ He also said that "internal struggles over how we will restructure our forces will be much more important than any negotiations." Indeed, internal debates on what roles Russia's new defense doctrine should assign to nuclear weapons continued in Russia's military-political leadership throughout 2009. The presidential Security Council has taken the lead in drafting the new doctrine and a recent statement by Nikolai Patrushev, the secretary of this advisory but influential body, represents, in my opinion, another sign that tactical nuclear weapons may be assigned a greater role as Russia and the U.S. ponder deeper cuts of their strategic nuclear arsenals. Patrushev said in October 2009 that, when compared to the 2000 defense doctrine, the changes in the new doctrine include "the adjustment of conditions for the use of nuclear weapons when repelling an aggression with the use of conventional means of destruction, not only in a large-scale war, but also in a regional and even local war."²² Patrushev would not say whether it is NSNWS or strategic nuclear weapons (SNWS) that would be used in a local war, but the former is more likely to be selected by Russia's

20 Associated Press, "Report: Russian navy to rely on tactical nukes," March 23, 2009.

21 Jim Hoagland, "Nuclear Pushback," *Washington Post*, September 27, 2009.

22 Interview with Nikolai Patrushev in "Menyaetsya Rossiya, menyaetsya I ee voyennaya doktrina" (Russia Changes, and So Does its Military Doctrine," *Izvestia*, October 14, 2009.

military-political leadership if it wishes to demonstrate resolve to try to de-escalate a conflict. There were conflicting reports on whether the sections of the new doctrine, which contained regulations on use of nuclear weapons, would be classified.²³

While Russian commanders routinely claim the importance of non-strategic nuclear weapons, none of Russia's current strategic documents make an explicit distinction between NSNWs and SNWs. Some of these documents, such as the Urgent Tasks of the Development of the Armed Forces of the Russian Federation and the Strategy of National Security Until Year 2020, do refer to "strategic nuclear forces" or "strategic deterrence forces," which, by exclusion, implies that there are also non-strategic nuclear forces.

One explanation for the absence of a definition or a reference to NSNWs in Russian strategic documents could be that it is a result of a premeditated ambiguity. Some argue that such an ambiguity may increase NSNWs' deterrence potential since potential foes are kept in the dark on Russian NSNWs' assigned missions. But it is also possible, however, that the absence of either a definition or a reference to NSNWs could be a result of a lack of consensus among Russia's military-political leadership on what roles these weapons as a whole, and their naval, air force and land components in particular, should be playing.

Some of the roles publicly suggested for NSNWs by Russian policy influentials seem plainly unrealistic while others can be played solely by either SNWs or conventional weapons.

For instance, it is extremely doubtful that NSNWs or SNWs would be able to deter nuclear terrorism as suggested by Russia's former atomic energy chief, Viktor Mikhailov. Mikhailov—who is now the head of State Corporation Rosatom's Institute of Strategic Stability—claimed in 2002 that Russian armed forces would launch a nuclear strike to obliterate Chechnya if Chechen insurgents

23 As this paper went to press, President Dmitry Medvedev signed the new "Military Doctrine of the Russian Federation" on February 5, 2010 along with "the Principles of State Nuclear Deterrence Policy to 2020." The full text of the doctrine was released to the public, but the principles, which, most probably, contained regulations on use of nuclear weapons, were classified. The doctrine's list of the external military threats starts with NATO, but the new document's language on nuclear weapons appeared more constrained than the 2000 doctrine. The 2010 doctrine allows use of nuclear weapons "in case of aggression against the Russian Federation with use of conventional weapons, which threaten the very existence of the state" as well as in response to actual use of nuclear weapons or other weapons of mass destruction (WMD) against Russia or its allies. However, we will be able to ascertain whether Russia has changed its use of nuclear weapons policy only if the Principles of State Nuclear Deterrence Policy to 2020" are publicly released.

attempted an act of nuclear or radiological terrorism.²⁴ Mikhailov didn't specify what kind of nuclear weapons could be used in such a strike, but it is obvious that NSNWs would be a 'preferred' option thanks to their lower-yield, which is important given the target and that the strike would have been carried out on Russia's own territory. At the time Mikhailov made the threat, however, Chechen fighters had already abandoned territorial defense to switch to guerilla warfare and therefore no longer had a return address even for a NSNW, I would argue. I would also argue that, in reality, such threats could hardly deter terrorist groups such as those based in Russia's North Caucasus, whose members have proved willing to embark on suicidal missions and have sought to provoke a disproportional response to their attacks.

Interestingly, a Russian military exercise in 2000, aimed at developing methods of "localizing and neutralizing" armed conflicts and tactics for fighting "large bandit formations" in Russia's border regions, was to have involved simulated use of nuclear weapons.²⁵ I believe that, given NSNWs lower yield, it is use of these nuclear weapons that the Russian military would have gamed out in that exercise.

One can also theoretically envision how the Russian military can use NSNWs to penetrate "bandits" mountain hideaways within or without Russian borders if they carry out an act of catastrophic terrorism against Russia. However, I would argue that Russia would rather use multiple conventional bombs than one low-yield NSNW in such a situation in order to preserve a taboo whose existence is crucial for maintaining credibility of deterrence and for facilitating non-proliferation.

Other roles are too vaguely-defined to allow any serious planning of either NSNW or SNW use, as is the case with a recent observation made by chief of the General Staff Makarov, who said that nuclear weapons can be used to prevent unspecified "non-military threats" in the future.²⁶

The roles which Russian strategists have envisioned specifically for NSNWs include the following:

-
- 24 Alexander Khokhlov, "Viktor Mikhailov, byvshii ministr po atomnoi energii: esli chechentsy zaimutsya yadernym shantazhom, Chechni na zemle ne ostanetsya" (Viktor Mikhailov, Former Atomic Energy Minister: If Chechens engage in nuclear blackmail, there will be no Chechnya left on the earth), *Izvestia*, December 4, 2002.
- 25 Then-chief of the General Staff's Main Operational Directorate Colonel-General Yuriy Baluevsky said ahead of the joint exercise of the Siberian and Far Eastern Military Districts in August 2000 that the command of the exercise may decide to resort to "simulated use of nuclear weapons," "depending on the situation." Yuri Golotyuk, "Uchebny yaderny udar po banditam" (Simulation of Nuclear Strike on Bandits), *Vremya Novostei*, August 24, 2000.
- 26 News.ru, "Glava Genshtaba rasskazal, chto budet s planami obnovleniya armii v krizis i kak RF zaschititsya ot vneshnikh ugroz" (Chief of the General Staff Described What Would Happen to the Plans of Reforming the Armed Forces at a Time of a Crisis), February 9, 2009.

Deterring U.S. and NATO and equalizing for the weakness of Russia's conventional forces vis-a-vis Western armed forces. "Tactical nuclear weapons ... are a factor of deterrence against the enormous amount of weapons that are currently deployed in Europe," chief of the General Staff Makarov said in December 2008.²⁷ Zaritsky of RViA has also spoken of deterrence. "Rocket and Artillery Forces have been assigned the decisive role in a modern war, given that the main methods of deterring an enemy from aggression are demonstrative preparation of nuclear forces for delivery of artillery and rocket nuclear strikes, as well as delivery of single rocket nuclear strikes," Zaritsky said in the 2003 interview.²⁸ While Zaritsky was referring to a "modern war," his statement arguably reflects what renowned Russian arms control expert Pavel Podvig describes as preparations to "fight one last war" which would feature World War II-style large-scale ground invasions, but would be ultimately won by nuclear arms.²⁹

It was the 1999 NATO bombing of the former Yugoslavia over the conflict in Kosovo that re-affirmed the importance of nuclear weapons, including NSNWs, as a deterrent in the eyes of Russian leaders. Indeed, if I were a Russian leader, I would have wondered whether NATO could have used its superior conventional forces to intervene in Chechnya as it did in Kosovo if Russia didn't have nuclear weapons. The bombing of Yugoslavia over Kosovo was still underway when then-President Yeltsin convened a meeting of his Security Council to discuss Russia's nuclear weapons complex with a focus on NSNWs and subsequently signed a decree on a concept of developing and using non-strategic nuclear weapons.³⁰

However, in my opinion, Russian SNWs are capable of playing this deterrence role without NSNWs and will retain such capability for many years to come.³¹ As for the wartime equalizing role, NSNWs, particularly if brought back to the Navy, may indeed help offset NATO's conventional superiority. However, such equalizing will become largely irrelevant, in my opinion, as soon as the conventional conflict escalates into an all out nuclear war where both sides have more than

27 ITAR-TASS, "Takticheskoye yadernoye oruzhie Rossii – eto faktor sderzhivania gromadnykh vooryznenii, nakhodyashchikhsya v Yevrope – general Makarov" (General Makarov: Russia's Tactical Nuclear Weapons are a deterrent for the enormous arms located in Europe), December 10, 2008.

28 Interview with Colonel General Vladimir Zaritsky in Oleg Falichev, "Bog voyny v zapas ne ukhodit" (The God of War Doesn't Retire into Reserve), *Voyenno-Promyshlennyi Kuryer*, November 19-25, 2003.

29 Pavel Podvig's review of the author's draft, November 19, 2009.

30 Tom Whitehouse, "Yeltsin Ups Nuclear Ante. Russia Plans To Develop New Tactical Missiles Amid Anger At NATO Bombing Campaign," *The Guardian*, April 30, 1999.

31 Russia reported 3,897 strategic nuclear warheads associated with 809 strategic delivery systems in 2009, according to the July 2009 START data exchange. "START Aggregate Numbers of Strategic Offensive Arms" Factsheet, web site of the U.S. State Department, October 1, 2009. The Joint Understanding for the START Follow-on Treaty, which U.S. President Barak Obama and his Russian counterpart Dmitry Medvedev signed on July 6, 2009, commits the two countries to reducing their strategic warheads to a range of 1,500-1,675, and their strategic delivery vehicles to a range of 500-1100. Joint Understanding for the START Follow-on Treaty, Office of the Press Secretary, White House, July 6, 2009.

enough SNWs to destroy each other, while mainland U.S. would be out of immediate range of most of Russian NSNWs.

Nor, in my opinion, will NSNWs be necessarily needed to compensate for the deep reductions in strategic nuclear forces, as suggested by Defense Ministry strategists in their agency's lead journal.³² The Russian leadership has already said that it won't agree to deep cuts unless the U.S. and other nuclear states fulfill a number of compensatory conditions—such as constraints on missile defenses, the inclusion of other nuclear states into the reductions and constraints on conventional forces—which will help to offset whatever negative impact these cuts may have on Russia's military capabilities.

Serving as a equalizer vis-a-vis China whose conventional forces in the Far East are already superior to Russia's assets in the region and this disparity continues to grow. The two countries have settled their border disputes, signed a treaty of friendship in 2001 and are partners in the Shanghai Cooperation Organization. They also agreed to not be the first to use nuclear weapons against each other or to target their nuclear weapons at each other in a deal signed in 1992.³³ However, all this doesn't fully preclude the possibility that fast-growing China, which is already challenging Russia's dominance in oil- and gas-rich Central Asia, will not come to pose a security threat to Russia's resource-rich Siberia and Far East in the future.

While Russian officials generally remain mum on the issue, former officials and Russian experts do point to the potential threat of China's conventional supremacy. "After the end of the Cold War...Moscow lost its superiority in conventional forces over NATO, China and the far eastern alliance led by the U.S," according to Alexei Arbatov, one of Russia's most authoritative arms control experts who has reportedly been one of the co-authors of Russia's official Strategy of National Security Until Year 2020 that President Dmitry Medvedev approved in May 2009.³⁴ Now Russia sees its non-strategic nuclear weapons as the "nuclear equalizer" for lagging behind the West and China in conventional forces, according to Arbatov.³⁵

32 S.A. Ivasik, S.A. Pisyakov and A.L. Khryapin, "Yadernoye oruzhie i voyennaya bezopasnost Rossii" (Nuclear Weapons and Russian Military Security), *Voyennaya Mysl*, July 1999. The article also underscores the role of non-strategic nuclear weapons as an equalizer for the weakness of Russia's conventional forces.

33 Pugwash Meeting no. 279, "No First Use of Nuclear Weapons," workshop report by Tom Milne, London, UK, November 15-17, 2002.

34 An article on the new doctrine in Russian business daily *Vedomosti* quoted Arbatov, identifying him as "one of the authors of the document." Vera Kholmogorova and Natalia Portyakova, "Nishcheta, separatizm i kriminalitet bolshe ne ugrozhayut Rossii, sledyet iz strategii natsionalnoi bezopasnosti" (Poverty, separatism and crime no longer threaten Russia, according to Strategy of National Security Until Year 2020), *Vedomosti*, May 14, 2009.

35 Alexei Arbatov, preface to A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshhev, "Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrashcheniya," (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

More recently, the Defense Ministry has edged closer to acknowledging that China could become a rival. In July 2009 a reporter for the Defense Ministry's newspaper *Krasnaya Zvezda* pointed out to General Nikolai Makarov that one of the slides in the commander's own presentation "show that it is, after all, NATO and China that are the most dangerous of our geopolitical rivals." He then asked the general whether the brigades, which have replaced Cold War era divisions to make the armed forces more fit to fight local conflicts as opposed to all-out wars of the 20th century, will be prepared to "conduct defensive operations in massive warfare."³⁶ Makarov didn't mention either China or NSNW in his answer, but earlier at the same conference he did point out that "in terms of China, we are conducting a very balanced, well-thought policy."³⁷ However, as someone who has worked as a defense and security journalist in Russia for 15 years, the author of this article can note that *Krasnaya Zvezda* reporters more often than not get pre-approval for the questions they ask top commanders, so the reference to China as a "strongest geopolitical rival" is no accident.

More recently, in what leading Russian military expert Alexander Khramchikhin rightfully described as an "epochal statement," chief of the Ground Forces Staff Lt. General Sergei Skokov stated in September 2009, when describing what kind of warfare the newly-established Russian army brigades should prepare for, "If we talk about the east, then it could be a multi-million-strong army with traditional approaches to conducting combat operations: straightforward, with large concentrations of personnel and firepower along individual operational directions." Significantly, the only of the Russian Army's twenty four divisions to avoid re-organization into brigades is located in the Far East and its firepower is mostly submachine guns and artillery, according to the Defense Ministry.³⁸ "For the first time since the early days of Gorbachev, a high-ranking national commander has de facto acknowledged officially that PRC is our potential enemy," Khramchikhin wrote of Skokov's statement.³⁹

There is no public information on what exactly peacetime or wartime roles Russian NSNWs might have been assigned to play vis-a-vis China. Again, however, in my opinion, when planning for a nuclear equalizer vis-a-vis China, Russian generals probably can safely do with just SNWs and without NSNWs, that is, if they have such plans to fight a WWII-type war against a massive Chinese invasion, the probability of which appears to be very low in the foreseeable future.

36 Vlast, "Polnyi tekst vystyplenia generala Makarova" (Full text of General Makarov's statement), July 13, 2009.

37 *Ibid.*

38 Interfax, "Za tri goda v sukhopotnykh voiskakh Rossii rasformiruyut 23 divizii" (23 Divisions of the Russian Army to Be Disbanded in Three Years), November 7, 2008.

39 Alexander Khramchikhin, "A na vse pro vsyo – vsego 85 brigad postoyanno boevoi gotovnosti" (All in All Only 85 Permanent Combat Readiness Brigades), *Nezavisimoye Voyennoye Obozrenie*, October 16, 2009.

I would argue that, if China were to pose a real security threat to Russia in the future, it is most likely to be non-military and incremental, and it will be rooted in the growing disparity in population density and continuing labor migration across the border.

Deterring powers in the south. “Russia is not the U.S. ... which is separated from other countries by two oceans. Russia has a complex situation in the southern direction. There are nuclear powers on Russian borders. Therefore, possession of tactical nuclear weapons is a factor that deters aggression,” according to head of the Defense Ministry’s 12th Main Directorate Vladimir Verkhovtsev.⁴⁰ In his 2007 statement Verkhovtsev didn’t identify countries that the Russian military would deter with non-strategic nuclear weapons, but it is common knowledge that the security environment in the Caucasus remains rather volatile and that Russia fought a war with one of its southern neighbors, Georgia, in 2008. Another threat in the south is posed by the continuing turmoil in Afghanistan, which has the potential to destabilize Central Asia, a zone Russia also considers to be of “privileged interests.” In the longer term, Russia may rely on NSNWs if Iran decides to challenge Russia’s efforts to keep the Caspian regions, the South Caucasus and Central Asia within the zone of its “privileged interests.”

However Russia’s southern neighbors cannot be deterred by NSNWs in all scenarios. Arguably one example of the failure of deterrence is Georgia’s decision to try to re-take the separatist province of South Ossetia by force. Russia had not so tacitly supported the South Ossetian separatists and had its troops deployed in this self-proclaimed republic, yet Georgia attacked, firing not only on the South Ossetian paramilitaries, but also on the Russian peacekeepers. The conflict has once again underscored the limits of nuclear weapons’ capability in deterring a non-nuclear nation, especially in the absence of a robust conventional force capable of rapid reaction.⁴¹ As rightfully noted in the 2003 Urgent Tasks of the Development of the Armed Forces: “When we speak about the nuclear deterrence factor, especially when this notion is applied to the deterrence of threats associated with the use of conventional forces by the enemy, we should also take into account that under contemporary conditions such deterrence can be effectively carried out only if highly equipped and combat ready general-purpose forces are available.”⁴² And, again, even if Verkhovtsev did mean that the Russian commanders contemplate using nuclear weapons for deterrence in the south rather than make a statement for other purposes, which could range from arms con-

40 V. Marechenkov, “Rossiya gotova otvetit’ udarom na udar” (Russia is Prepared to Respond to A Strike With A Strike), *KM-News.Ru*, September 9, 2007.

41 For a discussion of how the weakness of Russian’s conventional forces was displayed during the August 2008 war with Georgia see Simon Saradzhyan, “Conflict Exposes Obsolete Hardware,” *The Moscow Times*, August 15, 2008.

42 Defense Ministry, “Aktualnye Zadachi Razvitiya Vooruzhennykh Sil Rossiiskoi Federatsii” (Urgent Goals for the Development of the Armed Forces of the Russian Federation), *Krasnaya Zvezda*, October 11, 2003.

trol bargaining with U.S. to the 12th GUMO's own parochial interests, this role can be played by SNWs alone, in my opinion.

Deterring U.S. global missile defense and ensuring the capability of destroying elements of this defense in Europe. Russian authorities have considered deploying non-strategic nuclear weapons in Kaliningrad or Belarus as a response to the deployment of U.S. missile defense elements in Eastern Europe. "Such proposals are being made," said Rtd. Colonel General Viktor Zavarzin, chairman of the State Duma's defense committee,⁴³ said in September 2008 when asked if Russian authorities are considering whether to deploy nuclear weapons in Kaliningrad. At that moment there was no need to deploy such weapons, but, in principle, there are no international legal constraints that would prevent Russia from doing so, said this senior member of the Duma's pro-Kremlin majority. The former commander, perhaps for a good reason, didn't delve into whether the proposed deployment would make any real sense from the military point of view or whether it would violate Russia's unilateral NSWN initiatives. The Defense Ministry's press service declined to comment on Zavarzin's statement, but noted that he is "of course a statesman."⁴⁴

Russian non-strategic nuclear weapons could also be deployed in Belarus in response to U.S. missile defense plans, Alexander Surikov, Russia's envoy to this country, said in 2007.⁴⁵ Belarussian president Alexander Lukashenko similarly said that he was prepared to discuss the deployment of Russian nuclear weapons in Belarus. "I should sit down with the president of Russia and calmly discuss and talk, for instance, about whether we will deploy tactical nuclear weapons in Belarus or not."⁴⁶

The supposed rationale for such a deployment weakened in September 2009 when the Obama administration cancelled the plan to deploy ground-based interceptors in Poland and a radar facility in the Czech Republic, opting for a shorter-range configuration. As of December 2009, however, Russia's powerful premier Vladimir Putin was still insisting that Russia needs to be fully briefed on the new configuration and that the START replacement treaty should contain constraints on missile defense.

I would argue that there is a reasonable hope that calls by senior U.S. officials for cooperation with Russia on missile defense and the joint pledge, which Obama and Medvedev made at their July 2009 summit, to "continue discussions concerning the establishment of cooperation in responding

43 State Duma is the lower and more powerful chamber of the federal parliament, which is officially called the Federal Assembly.

44 Gazeta.ru, "Yadernaya osen" (Nuclear Fall), September 4, 2008.

45 Vadim Solovyov and Viktor Myasnikov, "Moskva nachala yaderny zondazh v Yevrope" (Moscow Has Begun A Nuclear Probe in Europe), *Nezavisimoye Voyennoye Obozrenie*, August 31, 2007.

46 Nikolai Poroskov, "Taktichesky yaderny kozyr" (Tactical Nuclear Ace), *Vremya Novostei*, September 7, 2007.

to the challenge of ballistic missile proliferation,” will hopefully materialize into practical cooperation that would lessen the need (or rather perception of such a need) to deter missile defense with NSNWs in the future.⁴⁷

Moreover, even if the U.S. does deploy new elements of missile defense in Europe in a way that Russia would perceive as a threat, I would argue that, still, NSNWs will not be necessarily indispensable for either deterring these elements or destroying them if Russia develops a robust high-precision conventional arsenal and/or continues to hone capabilities of its ballistic missiles to penetrate missile defenses. Such an arsenal would also, of course, help to devalue the overall deterrence and equalizing roles played by Russian nuclear weapons in general.

Of the roles specifically envisioned for NSNWs by Russian strategists, only the following wartime role, which was outlined in a 1998 Defense Ministry publication, appears credible to me, and only under certain scenarios.

De-escalating aggression by disrupting command of the aggression, eliminating the threat of defeat and changing the balance of forces. An article by Russian military strategists in the Defense Ministry’s official publication argues that non-strategic nuclear weapons can be used to de-escalate aggression without triggering an all-out nuclear war.⁴⁸ The article outlined the following six “stages of escalation of use” of non-strategic nuclear weapons, of which the first four can de-escalate an aggression:

- First stage: “demonstration,” which is “single strikes” against unpopulated territories (waters) and/or “secondary military facilities that have either little or no personnel.”
- Second stage: “intimidation-demonstration,” which is “single strikes” against “selected elements” of the enemy’s grouping of forces, transportation facilities and other local facilities to disrupt command of the aggression while avoiding heavy casualties of the enemy.
- Third stage: “intimidation,” which is “group strikes” against “the enemy’s main group of forces” to “change the balance of power along one operational direction” to “liquidate the enemy breakthrough.”
- Fourth stage: “intimidation-retaliation,” which is “concentrated strikes” against the enemy’s entire forces in the theater to “eliminate the threat of defeat,” “decisively change the balance of forces along one operational direction” and “liquidate the enemy’s breakthrough.” Another

47 Joint Statement by Dmitry A. Medvedev, President of the Russian Federation, and Barack Obama, President of the United States of America, on Missile Defense Issues, Office of the Press Secretary, White House, July 6, 2009.

48 V.I. Levshin, A.V. Nedelin and M.E Sosnovsky, “*O primenenii yadernogo oruzhiya dlya deeskalatsii voyennykh deistviy*” (On Use of Nuclear Weapons for De-escalation of Military Operations), *Voyennaya Mysl*, May 1999.

article in the same Defense Ministry publication also notes the role of non-strategic nuclear weapons in changing the balance of forces in specific operational directions. “The presence of non-strategic nuclear means in the nuclear forces of Russia allows [us] to compensate for the absence of balance in general-purpose forces while their use during the course of military operations would nullify the enemy’s superiority along particular operational directions,” according to the article published by Defense Ministry strategists.⁴⁹

- Fifth stage: “retaliation-intimidation,” which is “massive strikes” against the enemy’s grouping of forces in the theater “to annihilate it and drastically change the military situation in our favor.” This stage is characterized by escalation of the war into a large-scale nuclear war.⁵⁰
- Sixth stage: “retaliation,” which is “massive strikes against the enemy within the entire theater with maximized use of means and forces, coordinated with the strategic nuclear forces if the latter are used.” The advent of this stage means that the mission of de-escalating military operations had not been accomplished.⁵¹

We should, of course, bear in mind that the same demonstration strike can be carried out by nuclear armed cruise missiles launched from strategic bombers. In fact, the Russian military has repeatedly gamed out use of strategic bombers to carry out such a demonstration nuclear strike during a number of wargames, including the Zapad (West) exercise, which is held annually to simulate a war with NATO.⁵²

However, I would argue that NSNWs may still be a better choice for de-escalating than SNWs, as employment of the air force component of the strategic nuclear triad for such a purpose may be interpreted by the foe as crossing the threshold into an all out nuclear war.

49 S.A. Ivasik, S.A. Pisyakov and A.L. Khryapin, “*Yadernoye oruzhie i voyennaya bezopasnost Rossii*” (Nuclear Weapons and Russian Military Security), *Voyennaya Mysl*, July 1999. The article also underscores the role of non-strategic nuclear weapons as an equalizer for the weakness of Russia’s conventional forces.

50 V.I. Levshin, A.V. Nedelin and M.E. Sosnovsky, “*O primeneni yadernogo oruzhiya dlya deeskalatsii voyennykh deistviy*” (On Use of Nuclear Weapons for De-escalation of Military Operations), *Voyennaya Mysl*, May 1999.

51 V.I. Levshin, A.V. Nedelin and M.E. Sosnovsky, “*O primeneni yadernogo oruzhiya dlya deeskalatsii voyennykh deistviy*” (On Use of Nuclear Weapons for De-escalation of Military Operations), *Voyennaya Mysl*, May 1999.

52 An unprovoked Western attack on Kaliningrad was the central scenario in Zapad-99. Having failed to stop the enemy’s advance by conventional means, the command of the defending side ordered Russian strategic aviation to send one bomber to simulate the firing of an air-to-surface cruise missile on the battlefield. Sergey Sokut, “*Balkansky variant ne proshel*” (The Balkan Variant Didn’t Work), *Nezavisimaya Gazeta*, June 24, 1999. Ten years later at the Zapad-2009 exercise Russian strategic bombers would still be employed to launch strikes on a hypothetical aggressor’s forces advancing from the West. “*Zavershilis rossiisko-belorusskie uchenia ‘Zapad-2009’*” (Russian-Belarusian Exercise West-2009 Are Over), Vesti news program, Rossiya television channel, September 29, 2009. Zapad-2009 saw Russian troops not only stop aggression, but also counter-attack. The Russian air force practiced using weapons from its nuclear arsenal, while in the Russian enclave of Kaliningrad, which neighbors Poland, the Russian forces also stormed a “Polish” beach and attacked a gas pipeline. Matthew Day, “Russia ‘simulates’ nuclear attack on Poland,” *Daily Telegraph*, November 1, 2009.

I would argue that de-escalation by selective limited use of NSNWs could be theoretically attainable in a conflict with NATO, which may sue for peace out of concern that the conflict may escalate into all-out nuclear war with both sides using their strategic nuclear arsenals. The alliance may also end a conflict once a Russian NSNW is used, given that NATO countries would be generally concerned about casualties and the destruction of valuable assets. The potential use of NSNWs by Russia in a hypothetical conflict with China is also possible, given the superiority of Chinese conventional forces in the region as well as the relatively low concentrations of population and vital infrastructure in the Russian Far East.

However, while looking more credible than others, this NSNW role is far from being indisputable. First of all, the foe may also choose to retaliate with nuclear weapons rather than sue for peace. As the aforementioned article by Russian military strategists in the Defense Ministry's official publication admits, if either selective "single" or "group" or "concentrated" strikes by NSNWs fail to de-escalate a conflict, then "massive strikes" will follow, ultimately escalating the conflict into a large-scale nuclear war.⁵³ I would argue, however, that Russia's nuclear foe may choose to retaliate even before massive NSNW strikes and after selective single or group strikes by Russian NSNWs. The risk of such retaliation would be even higher if Russia decided to de-escalate a conflict with China by using NSNWs. Even the selective first use of NSNWs by Russia may prompt Beijing to respond by launching its ICBMs out of concern that Russia's nuclear strike may destroy most of its nuclear arsenal.

In fact, one of Russia's own strategic documents warns that nuclear arms can escalate the conflict rather than de-escalate it. The 2003 Urgent Tasks of the Development of the Armed Forces of the Russian Federation warns that a conventional regional war may escalate to the use of nuclear weapons if either of the warring sides has such weapons.⁵⁴ I would argue that the risks of escalation would, of course, rise exponentially if the Russian military employs NSNWs for selective strikes to prevent aggression, as Zaritsky suggests in his 2003 interview, if the enemy has nuclear arms too.

I would estimate that Russia would need only a fraction of the NSNWs it has now for this de-escalation role. It is beyond my competence to try to gauge the survivability of NSNWs in worse-

53 V.I. Levshin, A.V. Nedelin and M.E. Sosnovsky, "O primeneni yadernogo oruzhiya dlya deeskalatsii voyennykh deistviy" (On Use of Nuclear Weapons for De-escalation of Military Operations), *Voyennaya Mysl*, May 1999.

54 Defense Ministry, "Aktualnye zadachi razvitiya vooruzhennykh sil rossiiskoi federatsii" (Urgent Goals for the Development of the Armed Forces of the Russian Federation), *Krasnaya Zvezda*, October 11, 2003.

case scenarios of multiple contingencies, such as when a potential foe conducts a first surprise conventional strike while Russia is already fighting another conventional conflict. But I would still argue that a level of NSNWs in the low hundreds, which includes several dozen deployed NSNWs, should be enough to survive the first and second phases of even two conventional conflicts fought simultaneously⁵⁵ in order to carry out the aforementioned single strikes while also maintaining robust deterrence jointly with SNWs on other theaters. If the selective use of several dozen or less NSNWs fails to de-escalate the conflict(s), then such a conflict(s) would escalate into an all-out nuclear war, in which the current strength of Russian SNWs would be more than enough to destroy any enemy in all multiple contingencies that one can realistically expect.

Russia will 'need' even fewer NSNWs if the security environment around Russia undergoes a sustainable change for the better and/or if its conventional forces are strengthened to match those of potential foes.

Should Russian-NATO relations undergo a sustainable improvement, Russia would feel more secure to store away, if not reduce outright, a number of NSNWs deployed. This could be accomplished if, for instance, the West embraces Russia's idea for a new pan-European security architecture, in which Moscow will have a say and which it hopes will resolve conflicts without the use of force. Such developments will decrease the value of NSNWs in the eyes of the Russian military-political leadership. They will also be devalued if a number of other conditions, which include the withdrawal of US NSNWs from Europe, the replacement of START and the consent of other nuclear states to reduce their own arsenals are met.

Of course, the opposite can also be true. Russia's reliance on NSNWs will increase if NATO expands eastward, especially given the fact that the adapted Treaty on Conventional Forces in Europe (CFE), designed to give the signatories advance warning of troop movements, is currently not functioning.

55 Defense Minister Serdyukov said in December 2008 that he wants the Russian armed forces ideally to be able to fight in three local or regional conflicts simultaneously. Shamil Baigin, "Russia, spurred by Georgia war, plans arms upgrade," *Reuters*, December 22, 2008. However, I would argue such a contingency is rather unrealistic and, even if it occurs, SNWs would factor in.

IV. RISKS AND COSTS INCURRED BY RUSSIA'S NON-STRATEGIC NUCLEAR WEAPONS

While envisioned to play the aforementioned roles, Russian non-strategic nuclear weapons in their current configuration and outside international arms control regimes also generate a number of formidable costs and risks, including the following:

1. More Likely To Be Used Than SNWs in Wartime: In his 2003 interview Zaritsky of RViA underscores that it is the political leadership's "competence" to decide "how probable preventive nuclear strikes are" in a certain situations and squarely puts responsibility for ordering use of nuclear weapons with the Commander-in-Chief.⁵⁶ An article by Russian military strategists in the Defense Ministry's official publication also suggests that "initial use" of non-strategic nuclear weapons can occur only "on the basis of the decision of the Commander-in-Chief and only in accordance with his separate order."⁵⁷ However, subsequent use of non-strategic weapons can be ordered by commanders of operational units or of operational-strategic units designated by the Commander-in-Chief, according to the aforementioned article.⁵⁸ And if the conflict escalates to what the article defines as the "retaliation" stage, when SNWs can also be used, the decision to use non-strategic weapons can be delegated to even lower-level commanders as long as they obtain authorization from commanders of operational-tactical units, the article claims.⁵⁹ NSNWs' lower-yield also makes it less difficult for commanders to authorize their use. Hence, while assigned the role of de-escalating a conflict, NSNWs can actually trigger an escalation of a conventional conflict into an all-out nuclear war.

2. Ambiguity Destabilizing in Times of Crisis: While ambiguity surrounding NSNWs might seem beneficial to some for peacetime deterrence, it will most probably prove detrimental in times of crisis. While the START treaty's accounting and verification procedures has allowed both sides to have a more or less clear idea about the strength and composition of each other's strategic forces, there are no such procedures in place for NSNW (and it would be challenging to establish them as I note below). Hence, both sides know that either side can try to re-deploy NSNWs in times of crisis and that means of intelligence may fail to ascertain such deployments. "Absence of any degree of transparency with regards to warheads that are stored adjacent to delivery vehicles fosters crisis instability because each party could expand its nuclear arsenal on short notice with-

56 Interview with Colonel General Vladimir Zaritsky in Oleg Falichev, "Bog voyny v zapas ne ukhodit" (The God of War Doesn't Retire into Reserve), *Voyenno-Promyshlennyi Kuryer*, November 19-25, 2003.

57 V.I. Levshin, A.V. Nedelin and M.E Sosnovsky, "O primeneni yadernogo oruzhiya dlya deeskalatsii voyennykh deistviy" (On Use of Nuclear Weapons for De-escalation of Military Operations), *Voyennaya Mysl*, May 1999.

58 *Ibid.*

59 *Ibid.*

out the knowledge of the other,” argued a recent authoritative paper on the subject.⁶⁰ Given that both sides have much more powerful SNW arsenals, such a deployment may or may not cause significant crisis instability, which theorists of strategic stability have defined as a situation when either side may be prompted to use nuclear weapons in a preemptive strike, if only out of the fear of losing their own nuclear weapons if they delayed in taking action. Still, the lack of verifiable information on the opponent’s NSNW actions will most definitely worsen instability in times of crisis.

3. Entrench Russia and NATO in a Military Stand-Off: The presence of U.S. non-strategic nuclear weapons in Europe and Russia’s own tactical nuclear arsenal “materially solidify” the military stand-off between NATO and Russia as these arsenals are clearly designed for use against each other, according to renowned arms control expert Arbatov.⁶¹ No declaration of strategic partnership and other similar vows by NATO and Russia can end this stand-off until both U.S. and Russian tactical weapons become a subject of negotiations and subsequent elimination, Arbatov argues.⁶² The same goes for U.S.-Russian relations.

4. Give Other States An Excuse, If Not A Reason, To Seek Nuclear Weapons: Signatories to the Non-Proliferation Treaty have already agreed that the agenda of the 2010 NPT Review Conference will include a review of nuclear disarmament commitments made by the U.S., Britain, France, China and Russia.⁶³ In anticipation of the 2010 conference, Russia and the U.S. have recently taken some steps towards honoring their NPT commitments. Presidents Obama and Medvedev signed two joint statements at their April 2009 summit to commit their countries to the long-term pursuit of a nuclear-free world, as well as to negotiate new arsenal cuts below the level of the SORT treaty. However, the cuts that the two leaders agreed on for the START Follow-On Treaty at their July 2009 summit turned out to be minimal. I would argue that Russia and the U.S., which together account for some 95 percent of the world’s nuclear weapons, should not indulge themselves with illusions that they can indefinitely avoid honoring their NPT commitments while keeping other nations convinced that they should honor theirs. If anything, the failure by the official nuclear states to reduce their nuclear arsenals gives proliferators, such as North Korea, and their clients an excuse with which to justify their actions. And once countries such as Iran acquire nuclear weapons, some of the other regional players, such as Saudi Arabia and Egypt, may try to follow suit in what would make multilateral deterrence configurations complex and unstable.

60 Miles Pomper, William Potter and Nikolai Sokov, “Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe,” James Martin Center for Nonproliferation Studies, December 2009.

61 Alexei Arbatov, preface to A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshchev, “*Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrashcheniya*,” (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

62 *Ibid.*

63 The NPT delegates managed to agree on the agenda because Obama revoked the Bush administration’s objections to an examination of nuclear powers’ disarmament by the NPT 2010 review committee. “Nuclear talks get first breakthrough in 10 years,” *Reuters*, May 6, 2009.

Even if full-fledged efforts on the part of the U.S. and Russia to meet their NPT commitments do not ‘awaken the conscience’ of proliferators and ‘shame them into stopping’, nonetheless without such efforts it will be more difficult to win the support of the international community in trying to stop them.

5. Threat of Unauthorized Use: In the past, renowned Russian nuclear arms experts, such as Arbatov and Oleg Bukharin, have stated that they believe that the requirements and practices of transporting NSNWs make them an attractive target for terrorist groups.⁶⁴ There have also been concerns about whether all of these weapons are accounted for. It was dozens of NSNWs, namely, Atomic Demolition Devices, that then-secretary of the Russian Security Council Alexander Lebed claimed to have gone missing from Russian arsenals in the 1990s. Lebed didn’t back his allegations with any publicly available evidence and his claims were refuted as groundless by Russian authorities time and again. U.S. government officials, including U.S. Secretary of Defense Robert Gates, have also expressed concern about whether Russian non-strategic nuclear weapons are accounted for and safely locked away.⁶⁵ The Russian Foreign Ministry dismissed Gates’ remarks as groundless “insinuations.”⁶⁶ I would argue that in the turbulent 1990s it was necessary to factor in such challenges to the security of Russian NSNWs, due to lax security, personnel problems⁶⁷ and the overfilling of storage facilities. These problems have decreased substantially as security at Russian nuclear weapons facilities has improved markedly thanks to Russia’s own efforts and to U.S-funded programs. Russian NSNWs are now believed to have been concentrated at far fewer facilities.⁶⁸ In the past Russian NSNWs were also more vulnerable to unauthorized access than SNWs due to their less sophisticated protection systems. In the 1990s, the NSNW protection systems that were built before the early 1980s lacked the safety locks known as permissive action links PALs, according to Bruce Blair, renowned expert on Russian nuclear weapons.⁶⁹ Technical safeguards found on Russia’s gravity bombs and cruise missiles deployed in the Russian air force were then the weakest of all Russian NSNWs at that time, according to Blair.⁷⁰ As of 2003 there was still “no direct

64 Alexei Arbatov’s preface to A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshchev, “*Nestrategicheskoye Yadernoye Oruzhie. Problemy Kontrolya I Sokrashcheniya*,” (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology. 2004. See also, Oleg Bukharin, “Technical Aspects of Proliferation and Non-proliferation,” in George Quester, ed., *The Nuclear Challenges in Russia and the New States of Eurasia* (Armonk, NY: M.E. Sharpe, 1995), p. 46.

65 Walter Pincus, “Gates Suggests New Arms Deal With Russia,” *Washington Post*, October 29, 2008.

66 Associated Press, “Russia Insists ‘No Leaks’ Of Nuclear Weapons,” October 31, 2008.

67 For a sample of such manifestations of the insider threat in Russia, see Simon Saradzhyan, “Russia: Grasping Reality of Nuclear Terror,” *The Annals of the American Academy of Political and Social Science*, 607 (2006), pp. 64-77.

68 Experts estimate that most of Russia’s NSNW deployments are largely on the Kola Peninsula and around Vladivostok and most are in reserve. Catherine M. Kelleher and Scott L. Warren, “Getting to Zero Starts Here: Tactical Nuclear Weapons,” *Arms Control Today*, October 2009.

69 Statement of Bruce Blair, Senior Fellow of the Brookings Institute at Hearings of the Military Research and Development Subcommittee of the House National Security Committee, March 13, 1997.

70 Bruce G. Blair, “Russian Control of Nuclear Weapons,” in George Quester, ed., *The Nuclear Challenges in Russia and the New States of Eurasia* (Armonk, NY: M.E. Sharpe, 1995), p. 56.

evidence to suggest that Russia NSNW systems have ever been fitted with any PAL-type devices,” according to an authoritative paper on Russian NSNWs.⁷¹ Since the 1990s, however, many of the older NSNWs must have been retired since Russian nuclear warheads have a shelf lifetime of approximately eight to twelve years.⁷² Others, as said above, have been concentrated at a few facilities as part of Russia’s commitments to eliminate and withdraw tactical nuclear weapons.⁷³ However, I would argue that a threat of unauthorized access to Russian NSNWs remains. Terrorist networks based in the North Caucasus have eased transportation of nuclear weapons. They have also plotted to hijack a nuclear submarine, sought to acquire biological and chemical weapons and have attempted to put pressure on the Russian leadership by planting a container with radioactive materials in Moscow and threatening to detonate it.⁷⁴ These well-organized groups, which have vast experience in terrorism, suicide bombers in their ranks and ties to al Qaeda, can pose a serious threat to Russian nuclear weapons, including NSNWs, especially if they recruit insiders to facilitate their access to these weapons during their transportation, when they are more vulnerable. And while states may be counted on to act rationally and not use nuclear weapons against Russia out of fear of retaliation, well-organized terrorist groups are not so easily deterred, especially if these groups are willing to sacrifice their members and inflict massive damage to achieve their means as they did during hostage-taking raids on the North Ossetian city of Beslan and Moscow’s Dubrovka theater.⁷⁵ The fewer nuclear weapons and nuclear weapons facilities, including NSNWs, that Russia has, the lower the probability that these groups will be able to acquire them.

71 Gunnar Arbman and Charles Thornton, “Russia’s Non-strategic nuclear weapons. Part II: Technical Issues and Policy Recommendations,” Swedish Defense Research Agency, February 2005.

72 *Ibid.*

73 Catherine M. Kelleher and Scott L. Warren, “Getting to Zero Starts Here: Tactical Nuclear Weapons,” *Arms Control Today*, October 2009.

74 For a detailed analysis of Chechen-based terrorist groups’ nuclear ambitions, see Simon Saradzhyan, “Russia: Grasping Reality of Nuclear Terror,” *The Annals of the American Academy of Political and Social Science* 607, (2006), pp. 64-77.

75 *Ibid.*

V. CONDITIONS AND OBSTACLES ON THE WAY TOWARDS NEGOTIATION AND IMPLEMENTATION OF A VERIFIABLE NSNW REDUCTION AND ACCOUNTING AGREEMENT WITH RUSSIA:

1. Russian Conditions.

Senior Russian officials insist that the issue of control and reduction of tactical nuclear arms must be bundled with other defense and security issues.

For instance, the Russian delegation's statement at a 2003 meeting of the NPT Preparatory Committee called for such a bundling. "The Russian side's position is that consideration of issues related to tactical nuclear weapons cannot be carried out separately from other types of weapons. This is why Russia's unilateral initiatives in the sphere of disarmament ... are of a complex nature and, in addition to non-strategic nuclear weapons, touch upon other important issues which have a serious impact on strategic stability."⁷⁶

When asked in April 2009 if tactical nuclear weapons would be discussed as part of the talks on the replacement of START, Russian ambassador to the U.S. Sergei Kislyak said that Washington and Moscow "have enough work to do now to focus on things that are doable, because when you go to sub-strategic [arms], there will be a lot of other things that need to be entered into the play."⁷⁷

One such issue hinted at by Russian officials is that Moscow may want to bundle a NSNW deal with the future of the adapted Conventional Forces in Europe treaty, in which Russia has suspended its participation to protest the failure of a number of NATO countries ratify it. When answering a question about the possibility of negotiating a tactical nuclear weapons deal with the U.S., Kislyak brought up CFE: "I think we need to be aware that nuclear weapons do not exist in isolation." "At the same time, when you come, say to the European situation, we see a lot of imbalances in conventional weapons. We see a very disappointing situation with the CFE Treaty," he said.⁷⁸ When asked in the same interview whether Russia's position on consolidating, reducing, or eliminating its tactical nuclear weapons would change if the U.S. was willing to withdraw NSNWs from Europe, Kislyak said the following: "It would certainly be a serious factor, but would it be enough? I think we need to have a little bit more complex discussion between us and the United States and between us and NATO on the security environment in Europe."⁷⁹

76 Statement by Russian Delegation at the Second Session of Preparatory Committee (PrepCom) for the 2005 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Geneva, Switzerland, April 28, 2003.

77 Nicholas Kralev, "Battlefield Nukes Left out of Arms Talks," *The Washington Times*, April 16, 2009.

78 "Interview with Sergey Kislyak, Russian Ambassador to the United States. A Fresh Start?" Arms Control Association, November 14, 2008.

79 *Ibid.*

The issues, with which Russian officials have explicitly stated they would like to bundle U.S.-Russian negotiations on non-strategic nuclear weapons, include:

a) Replacement of START. As noted above, Ambassador Kislyak made it clear in his April 2009 statement that Russia wants to negotiate a replacement for START before it considers whether to hold talks on non-strategic nuclear weapons. Foreign Ministry spokesman Andrei Nesterenko reiterated this condition in October 2009. “It would be logical to create a replacement for START first. Depending on the efficiency of this work, it will be possible to spread the dialog onto tactical nuclear armaments,” he said.⁸⁰ Russia would like the START Follow-on Treaty to not only reduce the number of strategic delivery systems and nuclear warheads associated with them, but also introduce constraints on U.S. ballistic missile defense in spite of the Obama administration’s decision to cancel deployments in Poland and Czech Republic.⁸¹ The two sides had failed to reach a deal before START expired on December 5, 2009 as they remained bogged down by differences on transparency and verification measures as well as on whether the new treaty should constrain U.S. missile defense plans. As of January 2010, U.S. and Russian diplomats were upbeat that the U.S. and Russia can sign the follow-on treaty sometime early this year.

b) Consent of other nuclear states to reduce their own arsenals. Head of the Defense Ministry’s 12th Main Directorate Verkhovtsev conditioned Moscow’s consent to negotiate U.S.-Russian cuts in tactical nuclear arsenals on guarantees that other countries, particularly France and Britain, would also cut their own nuclear arsenals. “We are ready for such negotiations, but only if we include other countries into this process, foremostly France and Great Britain,” Verkhovtsev said.⁸² Britain has already stated its readiness to cut its nuclear arsenal if U.S. and Russian nuclear arms cuts go deep.⁸³

c) Withdrawal of U.S. non-strategic nuclear weapons from Europe. While all Russian NSNWs are on the Russian soil, a total of six bases in Belgium, Germany, Italy, the Netherlands and Turkey are believed to house roughly 200 U.S. gravity bombs.⁸⁴ A recent study put the number of U.S.

80 Interfax, “Moscow ready to discuss tactical nuke arms reduction when new START comes into effect,” October 8, 2009.

81 Thom Shanker and Peter Baker, “U.S. Seeks to Keep Watching Russia’s Weapons,” *New York Times*, October 19, 2009.

82 Vzgl'yad, “*Rossiya zovyot Yevropu obsudit s SShA sokraschenie yaderngo oruzhia*” (Russia is Urging Europe to Discuss Nuclear Arms Reduction with U.S.), September 3, 2007.

83 Reuters, “UK Says Could Cut Warheads if U.S., Russia Go Further,” July 17, 2009.

84 Hans M. Kristensen, “Germany and NATO’s Nuclear Dilemma,” FAS Strategic Security Blog, Federation of American Scientists, October 29, 2009. Also in Julian Borger, “Germans press for removal of US nuclear weapons in Europe,” *The Guardian*, November 6, 2009.

non-strategic warheads in Europe at some 150-200.⁸⁵ As part of the NATO nuclear strike mission, Germany, Belgium, Italy, and the Netherlands continue to train their air forces to deliver U.S. nuclear weapons, while Greece and Turkey opted out in 2001.⁸⁶ Russian officials have referred to the presence of American tactical weapons in Europe as not only an obstacle to NSNW talks, but also as a reason why the Russian leadership may decide to re-deploy nuclear weapons in western Russia. General Baluevsky, then first deputy chief of the General Staff, made the following observation in May 2002: “When some American colleagues and military politicians tell us that they are worried by tactical nuclear weapons, we say, let’s make it clear who should be worried more by it. You have your tactical nuclear weapons in Europe and these weapons can be used against our strategic nuclear weapons or other facilities, whether strategic or economic, in our country. So, let’s make it clear who should be worried by the presence of tactical nuclear weapons more?”⁸⁷

Similarly, chairman of the Duma’s defense committee Zavarzin said, when making an argument for why Russian authorities can deploy nuclear weapons in Kaliningrad: “Why are there U.S. tactical weapons in Europe, for instance, in Belgium?”⁸⁸ Verkhovtsev also pointed out that “in spite of the fact that Russia has complied with its obligations, the USA still keeps its tactical nuclear weapons in several European countries.”⁸⁹ When commenting on the possibility of U.S.-Russian NSNW reductions, General Verkhovtsev noted that the U.S. continues to maintain a tactical nuclear arsenal in Europe in what creates “conditions under which further steps by Russia towards reduction of nuclear weapons would have a direct impact on its nuclear security.”⁹⁰ U.S. refusal to withdraw NSNWs has prompted a number of Russian experts to speculate that these U.S. non-strategic nuclear weapons are kept in Europe with only one possible scenario in mind—the war with Russia—as there is simply no other scenario that would entail use of European-based U.S. NSNWs.⁹¹ U.S. nuclear weapons were initially deployed in Europe to counter the threat of Soviet military onslaught, but in the post-Cold War Europe that threat is gone. Yet, the U.S. has so far refused to limit deployment of all of its nuclear weapons to its own territory, asserting that

85 Miles Pomper, William Potter and Nikolai Sokov, “Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe,” James Martin Center for Nonproliferation Studies, December 2009.

86 Hans M. Kristensen, “Germany and NATO’s Nuclear Dilemma,” FAS Strategic Security Blog, Federation of American Scientists, October 29, 2009.

87 Yuri Baluevsky, “Press Conference with First Deputy Chief of the Armed Forces General Staff on Arms Control,” Official Kremlin International News Broadcast, Federal News Service, May 24, 2002. Cited in Gunnar Arbman and Charles Thornton, “Russia’s Non-strategic nuclear weapons. Part I: Background and Policy Issues,” Swedish Defense Research Agency, November 2003.

88 Gazeta.ru, “*Yadernaya Osen*” (Nuclear Fall), September 4, 2008.

89 Pravda.ru, “Russia Determined To Keep Tactical Nuclear Arms For Potential Aggressors,” October 31, 2007.

90 Vzglyad, “*Rossiya zovyot Yevropu obsudit s SShA sokraschenie yadernogo oruzhia*” (Russia is Urging Europe to Discuss Nuclear Arms Reduction with U.S.), September 3, 2007.

91 A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshchev, “*Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrascheniya*,” (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

these nuclear weapons are needed to honor U.S. extended deterrence commitments to its allies. American NSNWs in Europe are possibly being used as a means to prevent individual members, such as Turkey, from seeking nuclear weapons of their own.

Russian officials have also pointed out that NATO's doctrine, which allows the use of NATO launch systems, such as tactical bombers, that belong to the air forces of non-nuclear powers to launch U.S. tactical nuclear warheads in Europe, is in violation of the NPT because this treaty bars non-nuclear powers from acquiring control of nuclear weapons from nuclear weapons states.⁹² Such U.S. experts as Hans M. Kristensen of the Federation of American Scientists concur. He describes the aforementioned NATO nuclear strike mission as "highly controversial because these countries as signatories to the nuclear Non-Proliferation Treaty (NPT) have all pledged not to receive nuclear weapons."⁹³

Germany is essentially seeking to end this mission. With the support of Belgium and the Netherlands, Germany has asked the U.S. to withdraw NSNWs⁹⁴ and NATO has already pledged to discuss Germany's proposal.⁹⁵ Perhaps factoring in the increased support for such a withdrawal, a recent authoritative paper on the subject suggests that one way to prompt Russia to negotiate a NSNW arms control deal with the U.S. is to carry out unilateral withdrawal of U.S. NSNWs from Europe.⁹⁶ However, I would argue that there is a significant risk that Russia will merely pocket this concession. Such a concession would also seem unnecessary if the U.S. and Russia were indeed already negotiating a new nuclear arms deal, which would target both SNWs and NSWS, as *New York Times* reported in December 2009.⁹⁷

2. Obstacles:

a) Opposition by military and industry. The Russian armed forces, as any organization of that kind, are characterized by organizational inertia. So even if there may be no concrete operational

92 A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshev, "Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrashchenia," (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

93 Hans M. Kristensen, "Germany and NATO's Nuclear Dilemma," FAS Strategic Security Blog, Federation of American Scientists, October 29, 2009.

94 Julian Borger, "Germans press for removal of US nuclear weapons in Europe," *The Guardian*, November 6, 2009.

95 NATO will discuss Germany's ambition to rid the country of all U.S. nuclear weapons, said the alliance's Secretary General Anders Fogh Rasmussen. As of November 2009 Germany's ruling coalition planned to call for U.S. nuclear weapons to be removed from the country's territory, according to a document seen by Agence France Presse. "We will ask the (Atlantic) Alliance and our American allies to withdraw American nuclear weapons from Germany," a copy of the document said. AFP, "NATO chief urges Germany to discuss plan to remove US nukes," November 3, 2009.

96 Miles Pomper, William Potter and Nikolai Sokov, "Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe," James Martin Center for Nonproliferation Studies, December 2009.

97 New York Times, "START and Beyond," December 19, 2009.

plans developed for NSNWs, top Russian brass continue to include NSNWs in their overall strategy. Also, commanders of the defense ministry branches, which either operate or service non-strategic nuclear weapons, might oppose NSNW cuts due to their own parochial interests. In addition to prizing nuclear weapons as an important instrument in their policy tool kits, Russian commanders also have a personal stake in resisting deep cuts to the nuclear triad, which gives them weight within the military-political hierarchy and provides jobs to thousands of their officers and soldiers.⁹⁸ Industry leaders involved in developing, producing and servicing nuclear weapons and their launch systems can also be assumed to oppose further reductions of nuclear arms, including NSNWs, which would reduce their financing. But while the weapons sectors of the nuclear industry could be assumed to oppose drastic cuts and elimination of these arms, such measures might be welcomed by those parts of the civilian nuclear industry that have benefited from government programs to dispose of nuclear weapons and weapons materials, such as the U.S.-Russia Highly Enriched Uranium Purchase Agreement. This agreement, which gives Russia access to the U.S. nuclear fuel market, had generated some \$3.5 billion in revenue for Russia by 2003⁹⁹ and the Russian companies involved in such programs would, of course, welcome a NSNWs reduction treaty if it entails the destruction, rather than storage, of warheads. A recent paper by authoritative experts argues, however, that Russian industry's lack of capacity for weapons dismantlement is an obstacle on the way towards the reduction of NSNWs.¹⁰⁰

b) Difficulties in establishing effective accounting and verification procedures for NSNW control agreements. A verifiable NSNW agreement is difficult to develop and implement as tactical nuclear warheads are more compact and easier to relocate and conceal when compared to deployed strategic warheads. It would also be difficult to define and distinguish tactical and strategic nuclear weapons. For instance, certain types of bombs could pose a challenge for those trying to

98 Some of the officers have already demonstrated that they are prepared to join political protests to resist the downsizing of the Russian military by Defense Minister Anatoly Serdyukov. In 2009 active servicemen of the Main Intelligence Directorate of the General Staff's elite Berdsk brigade took part in a protest against the reform. Several officers of this commando brigade, which is to be disbanded as part of the reform, took part in the 200-strong protest whose participants demanded Serdyukov's resignation on March 8, 2009. That active duty officers would publicly protest the Kremlin's military policy and demand the defense minister's resignation is unprecedented for Putin's and Medvedev's Russia. Charles Clover and Isabel Gorst, "Russian defence reform stirs disquiet," *Financial Times*, March 18, 2009. The military has also shown their willingness to resist the planned reforms. In spring 2009, the Defense Ministry suspended its plan to relocate the Russian Navy's headquarters from Moscow to St. Petersburg due to a lack of funds and opposition by some of the top admirals. The relocation is estimated to cost more than \$1 billion. Some 80 percent of the headquarters' admirals and senior officers have refused to relocate to St. Petersburg. *Gazeta.ru*, "Perezhd shtaba VMF v Peterburg priostanovlen" (Re-location of the Naval Headquarters to St. Petersburg Suspended), April 21, 2009.

99 Matthew Bunn, "Reducing Excess Stockpiles, U.S.-Russian HEU Purchase Agreement," web site of the Nuclear Threat Initiative. Last updated on March 5, 2003.

100 Miles Pomper, William Potter and Nikolai Sokov, "Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe," James Martin Center for Nonproliferation Studies, December 2009.

classify them as either tactical or strategic, according to an authoritative Russian 2004 paper on the issue.¹⁰¹ Therefore, to be effective, a hypothetical tactical arms control agreement would have to include measures for accounting for all of these types of nuclear weapons, further complicating the situation. In general, issues related to accounting and control of these nuclear weapons, including their transportation and storage, are “so sensitive” from the point of view of national security that they could make such an agreement “extremely difficult” to reach, the paper warns.¹⁰²

c) Asymmetry in numbers, types and ranges. A recent study by U.S. arms control experts estimates that Russia has some 5,390 tactical nuclear warheads, of which only one-third is operational while the rest is awaiting dismantling or is in reserve. The study estimates that Russia retains no ground-forces tactical warheads; 1,120 missile- and air-defense tactical warheads; 2,000 air force tactical warheads; and 2,270 naval tactical warheads, according to the Bulletin of the Atomic Scientists.¹⁰³ The study estimates that nearly 700 of the more than 2,000 remaining naval warheads are operational for delivery by approximately 280 submarines, surface ships and naval aircraft. It also estimates that nearly 650 of the 2,000 non-strategic warheads available for delivery by aircraft are operational.¹⁰⁴

By comparison, as of 2009, the U.S military had some 1,100 non-strategic nuclear weapons, according to another study published by the Bulletin of the Atomic Scientists. The study estimated that the U.S. tactical nuclear arsenal includes 500 operational warheads and another 600 in “the inactive stockpile.”¹⁰⁵

Another recent study estimated that the total number of Russian non-strategic warheads, including those operational and those in storage or awaiting dismantlement, had decreased to below 5,000 warheads by 2007. The same study put the total number of U.S. non-strategic warheads at fewer than 1,100 warheads, including some 150-200 in Europe.¹⁰⁶ Obviously, such asymmetries makes it more difficult to convince the Russian side to cut its numbers to the same level with the U.S., without granting Russia concessions in other arms control spheres.

101 A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshchev, “*Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrashcheniya*,” (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

102 *Ibid.*

103 Robert S. Noris and Hans M. Kristensen, “Nuclear Notebook: Russian nuclear forces, 2009,” *Bulletin of the Atomic Scientists*, May 2009.

104 *Ibid.*

105 Robert S. Noris and Hans M. Kristensen, “Nuclear Notebook: U.S. nuclear forces, 2009,” *Bulletin of the Atomic Scientists*, March/April 2009.

106 Miles Pomper, William Potter and Nikolai Sokov, “Reducing and Regulating Tactical (Nonstrategic) Nuclear Weapons in Europe,” James Martin Center for Nonproliferation Studies, December 2009.

d) Lack of a common definition of tactical weapons: As noted above, Russian strategic documents neither give a definition of NSNWs nor mention them. Neither have Russian and U.S. negotiators agreed on a definition for non-strategic nuclear weapons, even though they could have done so by opting for a method of exclusion, which would define SNWs as all nuclear weapons not covered by the START treaty, for instance. One reason that there has been no definitional consensus is that any definition used would entail the reduction or elimination of a certain category of weapons that either one country or the other currently considers as important for its strategic plans. One sign of how far-reaching the consequences of agreeing on a definition could be is the fact that Russian commanders and diplomats keep insisting that the U.S. nuclear warheads that are deployed in Europe and designed to be launched by tactical bombers are in fact strategic weapons because their range covers a significant part of European Russia. One should take into account that one can gain certain unilateral advantages even by working out a definition (of tactical weapons) and implanting it into minds of experts,” according to one of Russia’s most in-depth recent studies of NSNWs.¹⁰⁷ Moreover, there is not even a definition that all Russian officials and experts agree upon and it is also absent from Russian strategic documents. Some documents refer to these weapons as tactical or operational-tactical, while others call them non-strategic. In the 1990s Gorbachev and Yeltsin and head of the Russian Academy of Military Sciences Rtd. Army General Makhmut Gareev referred to them as tactical. Former chief of the General Staff Baluevsky, current chief of the General Staff Makarov, head of the Defense Ministry’s 12th main directorate Verkhovtsev, deputy chief of the Naval Staff Burtsev and Foreign Ministry spokesman Yakovenko have also referred to these weapons as tactical. At the same time, in 1999, Putin, then Secretary of the Security Council, referred to NSNWs as “non-strategic nuclear weapons” and in 2000, when already president, as “so-called non-strategic nuclear weapons.”¹⁰⁸ An article by Russian military strategists in the Defense Ministry’s official publication defines NSNWs by exclusion as “non-strategic” and says such weapons include operational-strategic, operational-tactical and non-strategic nuclear weapons. The article says the “tactical” definition is not comprehensive because it relies on range only.¹⁰⁹ The authors of one of Russia’s most in-depth recent studies of NSNWs also refer to these weapons as non-strategic.¹¹⁰

107 A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshev, “Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrashchenia,” (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

108 Vladimir Putin, speech at the State Duma on START-II and ABM treaties, April 14, 2005, official web site of the Russian president. Search of the official Kremlin site produced no statements by President Dmitry Medvedev on these weapons.

109 V.I. Levshin, A.V. Nedelin and M.E. Sosnovsky, “O primeneni yadernogo oruzhiya dlya deeskalatsii voyennykh deistviy” (On Use of Nuclear Weapons for De-escalation of Military Operations), *Voyennaya Mysl*, May 1999.

110 A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshev, “Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrashchenia,” (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

e) Ambiguity of dual-use delivery systems. Another reason why the U.S. and Russia have not agreed on a definition is that many of their launch vehicles, such as missiles and aircraft, are dual-use, being designed to carry both conventional and nuclear warheads. And the history of U.S.-Russian negotiations on arms control has proved that it is very difficult to reach a consensus on measures to control such dual-use systems and create the verification regimes for them, according to the aforementioned paper on Russian NSNWs.¹¹¹ A treaty on the limitation and reduction of tactical nuclear weapons looks “absolutely unrealistic,” according to Vladimir Dvorkin, former head of the Russian Defense Ministry’s 4th Research Institute. “Unlike strategic offensive weapons, all carriers of tactical nuclear weapons are of dual use. The former have quite limited deployment sites. The latter are not tied to any particular deployment sites, and it is virtually impossible to control them, at least based on the experience we have on the reduction and limitation of strategic offensive weapons,” said Dvorkin.¹¹²

111 A.S. Dyakov, Y.V. Myasnikov and T.T. Kadyshchev, “*Nestrategicheskoye yadernoye oruzhie problemy kontrolya i sokrashcheniya*,” (Non-strategic Nuclear Weapons: Problems of Control and Reduction), Center for Arms Control, Energy and Ecology at the Moscow Institute of Physics and Technology, 2004.

112 Interfax, “Deal on cutting tactical nukes in Russia, Europe virtually impossible – analyst,” June 10, 2009.

VI. WHY RUSSIA COULD AND SHOULD PURSUE NSNW REDUCTION

Russian political leaders and commanders should acknowledge that Russia's current NSNW posture incurs substantial risks and costs.

Ignoring these dangers or pretending that they do not exist for the sake of unrealistic roles assigned to these weapons or out of parochial interests or inertia won't make these risks go away. Hopefully, Russian commanders do not need their own version of the incident at the U.S. Air Force's Minot base to realize this.¹¹³

As outlined above, NSNWs are more likely than strategic nuclear weapons to be used in an initially conventional conflict in what would not only break an important taboo, but also increase the likelihood of an all-out nuclear war. Arguably, they could also be vulnerable to unauthorized access, especially during transportation.

Moreover, the failure on the part of Russia and other nuclear states to honor their NPT commitments gives other states an excuse, if not a reason, to pursue nuclear weapons. As importantly, this failure makes it more difficult to win the international community's support for enacting additional measures to prevent proliferation, as evidenced by the lack of universal support for the proposed to establish an international nuclear fuel bank, which would be sponsored by the International Atomic Energy Agency (IAEA), or for the Additional Protocol to Nuclear Safeguards Agreements with this agency.

Russian leaders should also realize that the nation's current NSNW arsenal is excessive for the role which such weapons can realistically play in the post-Cold War world. As stated above, Russia's NSNW arsenal can safely be in the low hundreds and still play this more realistic role, in my opinion.

Therefore, Russia should join the U.S. in negotiating reductions in NSNWs with the subsequent involvement of other nuclear states in the process if overall U.S.-Russian nuclear arms cuts go deep. The responsible countries should pursue a dialogue concerning not only reductions in the actual number of these weapons, but also in ensuring greater transparency through accounting and verification regimes.

113 In August 2007, airmen at U.S. Air Force's Minot base "lost track of six nuclear warheads." All six warheads sat on runways for close to 36 hours—first at Minot and then at Barksdale—without the appropriate nuclear security. Before that "nuclear security there [at the base] had eroded to such a level that instead of using orange cones and multiple official placards to distinguish racks of non-nuclear missiles from nuclear-tipped ones, the 5th Bomb Wing was using 8-by-10-inch sheets of paper placed on the pylons," according to *Air Force Times*. Michael Hoffman, "Nuclear safety slipped for years before Minot," *Air Force Times*, February 26, 2008.

I believe Russia and the U.S. would also do well to assume bilateral commitments to develop no new lower-yield, or any other tactical, nuclear warheads.

The long-term financial savings generated by NSNW reductions could be, perhaps, channeled to pursue the introduction of what renowned nuclear security expert Graham Allison calls a new gold standard of security¹¹⁴ for the remaining arsenals.

As importantly, the reduction of NSNWs would allow Russia to divert some of the funds now spent on NSNWs to build a robust conventional force so that it would be able to effectively counter more imminent threats to its security, such as low-intensity insurgency or local armed conflicts in the south, without risking a nuclear Armageddon.

Russian-U.S. negotiations on NSNWs will not lead to the ultimate elimination of non-strategic nuclear weapons unless, of course, the two countries make considerable progress towards Global Zero in line with the April 2009 statements signed by Obama and Medvedev as well as with Russia's own Strategy of National Security Until Year 2020.

However, even incremental reduction and consolidation of these weapons will enhance both Russian and U.S. security and significantly advance their joint vital interest in preventing the use of nuclear arms by existing nuclear powers and the acquisition of such arms by either non-nuclear nation states or non-state actors.

114 Graham Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (New York: Henry Holt & Company, 2004).



Belfer Center for Science and International Affairs

John F. Kennedy School of Government

Harvard University

79 JFK Street

Cambridge, MA 02138

Fax: (617)495-8963

Email: bcsia_ksg@harvard.edu

Website: <http://belfercenter.org>

Commissioned by the Nuclear Threat Initiative.

Copyright 2010 President and Fellows of Harvard College