

Foreign Policy
at BROOKINGS

NATO, NUCLEAR WEAPONS AND ARMS CONTROL

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Paper 7 • July 2011

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1. INTRODUCTION AND EXECUTIVE SUMMARY

NUCLEAR QUESTIONS

The United States and NATO are currently weighing what to do about non-strategic nuclear weapons in the context of a major Alliance deterrence and defense policy review and the possibility of future U.S.-Russian nuclear arms reduction talks. This paper examines NATO's nuclear background, lays out a number of questions the Alliance must consider as it thinks about its future nuclear posture, and outlines the range of arms control approaches for dealing with non-strategic nuclear weapons. It concludes with policy recommendations for Washington and NATO.

In his April 2009 speech in Prague, President Barack Obama articulated the goal of a world free of nuclear weapons while also stating that the United States would maintain an effective nuclear deterrent as long as nuclear weapons exist. His speech and the U.S.-Russian negotiation that culminated in the New Strategic Arms Reduction Treaty (New START) spurred talk in Europe of the contribution NATO might make to the nuclear disarmament process. Meeting in Lisbon in November 2010, NATO leaders issued a new Strategic Concept for the Alliance and mandated a comprehensive Deterrence and Defense Posture Review (DDPR) that will address, among other things, NATO's nuclear posture. The review is taking place as the U.S. government considers how it might deal with non-strategic nuclear weapons in the context of a possible next round of U.S.-Russian arms reduction negotiations.

When signing the New START Treaty, Obama stated that further negotiations should include non-

strategic (also referred to as tactical or sub-strategic) nuclear weapons, and a negotiation covering non-strategic nuclear weapons would presumably include U.S. nuclear bombs deployed in Europe.¹ But Russia—which has a significant numerical advantage in non-strategic weapons—so far shows little enthusiasm for new negotiations on *any* further nuclear cuts beyond New START.

NATO, since the mid-1950s, has attached importance to nuclear weapons in deterring—and, if necessary, defending against—an attack on the Alliance. NATO policy has evolved over 55 years and has increasingly stressed that the circumstances in which the Alliance might have to consider resorting to nuclear weapons are exceedingly remote. The number of U.S. non-strategic nuclear weapons in Europe has declined dramatically, from a peak of more than 7,000 in the 1970s to some 200 today. Yet, as NATO leaders stated in their 2010 Strategic Concept, “as long as there are nuclear weapons in the world, NATO will remain a nuclear alliance.” The concept also commits the Alliance to “seek to create the conditions for further reductions” of the “number of nuclear weapons stationed in Europe” and of the “reliance on nuclear weapons in NATO’s strategy.” What this means in practice remains to be seen; it is one of the questions being addressed in the DDPR, and allies hold differing views.

ISSUES FOR CONSIDERATION

In considering NATO's future nuclear posture, a number of questions arise:

- Given the sweeping changes in the European region over the past 20 years, what purpose do nuclear weapons in Europe serve? What threats does NATO seek to deter?
- NATO nuclear doctrine and declaratory policy have evolved considerably over the past four decades, reflecting the end of the Cold War and collapse of the Soviet Union. Might NATO now further amend its declaratory policy?
- Many U.S. and NATO officials see little or no added military value to the weapons in Europe, though they have political value as symbols of the U.S. commitment to European security. How many U.S. non-strategic nuclear weapons does NATO need in order to maintain an effective deterrent? Could those weapons be consolidated at fewer locations? Does NATO still require a U.S. nuclear presence in Europe?
- What is the future of “dual-capable” aircraft—capable of delivering conventional and nuclear munitions—in Europe? The German government plans that the successor to the Tornado, the Eurofighter, will not be nuclear-capable. That could affect other countries’ decisions about their dual-capable aircraft.
- How might developments in the field of missile defense and conventional forces affect NATO’s need for nuclear weapons in Europe, i.e., what is the appropriate mix of nuclear, conventional and missile defense forces?
- Can NATO maintain nuclear risk- and burden-sharing if it reduces or eliminates U.S. nuclear weapons in Europe?

Answers to these and related questions will shape the conclusions in the DDPR, which is due to be completed by NATO’s 2012 summit. Those conclusions might also be affected by expectations of what could come from arms reduction negotiations with Russia.

ARMS CONTROL OPTIONS

The U.S. government has said that it would like to negotiate on non-strategic nuclear weapons, and the U.S. interagency process has begun weighing possible approaches, which will have to be linked up with a consultation process with the allies. A range of possible approaches to non-strategic nuclear weapons presents itself:

- ***Transparency and other confidence-building measures:*** the United States and Russia might be more transparent regarding the numbers, types and locations of their non-strategic nuclear weapons, as well as their doctrine regarding those weapons. They might also agree to draw weapons back from borders, consolidate them at storage locations, and/or maintain them separate from delivery systems.
- ***Unilateral actions:*** the United States and Russia might adopt unilateral steps, perhaps in parallel, not to increase the number of their non-strategic weapons or to reduce them, as was done by Washington and Moscow in the early 1990s.
- ***Arms control negotiations:*** the United States and Russia might negotiate limits on their non-strategic nuclear weapons, either together with deployed and non-deployed strategic nuclear weapons or under a discrete limit on non-strategic nuclear warheads. A less-likely alternative would be to address non-strategic weapons, perhaps along with conventional arms, in a NATO-Russia or broader all-European dialogue.

If there are negotiations, U.S.-Russian bilateral negotiations appear to be the most logical venue. Principles for the U.S. approach to such negotiations could include: limits on nuclear warheads rather than on delivery systems, as most delivery systems have important conventional roles; global rather than regional limits (given the transportability of non-strategic nuclear warheads); and limits that result in *de jure*

equality. Any negotiation would require asymmetric reductions, given the large Russian numerical advantage. The Russian advantage, combined with the Russian view that such weapons offset what they perceive to be conventional force disadvantages vis-à-vis NATO and China, would complicate any negotiation, and it may prove difficult to engage Moscow in negotiations in the first place.

RECOMMENDATIONS

NATO currently is on a path of disarmament by default as regards its non-strategic nuclear weapons. If the Alliance does not handle the nuclear issue carefully, it will find that U.S. nuclear weapons in Europe are reduced or eliminated while NATO gains nothing in terms of reductions of Russian non-strategic nuclear warheads or in terms of political credit for a unilateral decision to end the U.S. nuclear presence.

The default decision is driven primarily by the future of NATO's dual-capable aircraft. The coming denuclearization of the German air force, which is probably irreversible (though it may not happen until 2020 or a bit later), will likely influence the Dutch and Belgians to give up their nuclear capabilities as well. This in turn will put political pressure on Rome and Ankara. There is a high probability that the result will be a cascade of national decisions leading to the withdrawal of U.S. nuclear weapons from Europe. It is questionable whether political leadership on either side of the Atlantic will engage to change this course. NATO may be able to kick this can down the road but at some point could well find itself facing dramatic, unavoidable and possibly irreversible changes in its nuclear posture.

Recommendations for the Alliance. As NATO examines its broader deterrence and defense posture between now and the 2012 NATO summit, it should weigh how non-nuclear elements of Alliance military forces can assume a greater share of the burden, in particular in assuring member states in the Baltic region and Central Europe. Missile defense can take on part of the burden. Budget pressures mean that NATO member states will have difficulties maintaining current conventional force capabilities, let alone

adding new ones, so NATO must be smarter about how it allocates defense resources.

Assurance of allies is not just a matter of capability; it is also a matter of confidence. NATO leaders should increase their bilateral interactions with member-state leaders in the Baltic region and Central Europe in ways that would reassure them more broadly. Declining defense budgets will likely be an increasingly constraining factor, but to the extent that those members have greater confidence in the Article 5 security guarantee, it may become easier to find common ground within the Alliance on nuclear posture questions.

Finding consensus on specific DDPR conclusions will not prove simple. The most likely outcome, barring a major surprise, is some evolutionary development of current NATO policy, perhaps papering over differences and/or relegating unresolved questions to further review. But NATO should think through carefully the implications of likely future dual-capable aircraft developments, including the impact of NATO allies giving up dual-capable aircraft. For purposes of U.S.-Russian nuclear arms reduction efforts, the DDPR should lay out a range of outcomes, in which the NATO need for nuclear weapons forward-deployed in Europe would decline were Russia prepared to reduce its non-strategic nuclear weapons and take other measures, such as relocating those weapons away from NATO borders. (This would link U.S. and Russian non-strategic nuclear weapons, whereas U.S. weapons in Europe are intended in part to assure allies against the full range of possible threats. Hence the need, noted above, for NATO to develop other ways to assure allies.)

Recommendations for Arms Control. Arms control should focus on the U.S.-Russian bilateral channel. At the same time, European leaders should make clear to Moscow their concern about the large number of Russian non-strategic nuclear weapons.

While seeking negotiations, Washington should press Moscow for greater transparency regarding non-strategic nuclear weapons. It might even consider making public more information on its non-strategic nuclear

forces unilaterally, as it did in 2010 when announcing the total size of the U.S. nuclear stockpile. The United States should explore other confidence-building measures with Russia, while recognizing that agreeing on such measures may be difficult, as they will tend to fall more heavily on the Russian side. One measure could be agreement by Washington and Moscow that they will store their non-strategic nuclear warheads away from the NATO-Russia border (but without pushing Russian weapons into Asia).

The best long-term approach to addressing non-strategic nuclear weapons is to reduce and limit them as the result of a legally-binding U.S.-Russian agreement with verification measures. Washington should seek to engage Moscow in consultations, followed shortly by full negotiations, on further reductions in their nuclear arsenals. In those negotiations, the United States should propose a single limit covering deployed strategic warheads, non-deployed strategic warheads and non-strategic nuclear warheads, i.e., all U.S. and Russian nuclear warheads except for those that have been retired and are in the queue for dismantlement (these would be covered separately). In addition, the U.S. proposal should include a sublimit applied to deployed strategic warheads. A specific position could be a limit of no more than 2,500 total nuclear warheads on each side, with a sublimit of no more than 1,000 deployed strategic warheads each.

Under such an agreement, Russia would likely opt to deploy a greater number of non-strategic nuclear

warheads, while the United States chose a greater number of non-deployed strategic warheads. The result would be significant reductions in Russian non-strategic nuclear warheads and in U.S. non-deployed strategic warheads. In the context of these limits on U.S. and Russian nuclear warheads, and assuming that the other provisions of the agreement were acceptable, the United States and NATO should consider accepting the likely Russian position that all nuclear weapons be based on national territory, which would require the withdrawal of U.S. nuclear weapons from Europe.

The benefit of such a treaty would be a significant reduction in the Russian nuclear arsenal, including for the first time negotiated reductions in and limits on Russian non-strategic nuclear weapons. Were Moscow prepared to reduce its nuclear weapons sufficiently—including the number of non-strategic nuclear warheads—this approach would entail acceptance of a “basing on national territory” provision that would require withdrawal of U.S. nuclear weapons from Europe. The Alliance would have to adjust its overall posture accordingly, look for new ways to assure those member states with continuing security concerns about Russia, and consider how it would deter non-Russian nuclear threats such as Iran. The treaty outlined above, however, offers significant advantages in terms of shrinking the nuclear threat, and it provides a much preferable outcome than NATO’s current course—non-strategic nuclear disarmament by default.

2. NATO'S NUCLEAR HISTORY

FIRST U.S. NUCLEAR DEPLOYMENTS IN EUROPE

President Dwight Eisenhower took office in January 1953 facing a dilemma: how could the United States maintain armed forces to deter and defend against the Soviet threat while keeping defense expenditures in check and balancing the federal budget? The administration's studies led to announcement in January 1954 of a policy of "massive retaliation." Secretary of State John Foster Dulles described a central plank of the policy as "a great capacity to retaliate, instantly, by means and at places of our own choosing."² The policy placed a premium on reliance on nuclear weapons, which were significantly less costly than maintaining large conventional forces.

General Alfred Gruenther, Supreme Allied Commander Europe, launched a study in early 1954 to consider NATO posture in light of Washington's new policy. At the end of the year, the North Atlantic Council authorized "NATO military commanders to use nuclear weapons against the Warsaw Pact irrespective of whether the Pact used them."³ By the end of the 1950s, the U.S. military had deployed some 2,900 nuclear weapons in Europe, including aircraft bombs, artillery shells, atomic demolition munitions (mines) and warheads for short-range missiles such as the Honest John and for longer-range missiles such as the Thor (with a range of 3,200 kilometers).⁴ Beginning in 1959, some of these warheads fell under "programs of cooperation"—often referred to as "dual-key" systems—in which U.S. forces controlled the warheads but in wartime could make them available for delivery by allied forces.

As President John Kennedy took office in 1961, the United States expanded its strategic nuclear forces to include large numbers of intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs). Secretary of Defense Robert McNamara introduced the term "assured destruction" as the basis for U.S. policy in 1964. His strategy included a mix of counterforce (aimed at Soviet nuclear systems) and assured destruction. His assumption was that the ability to destroy 20-33 percent of the Soviet population and 50-75 percent of the USSR's industrial capacity would suffice to deter a Soviet attack on the United States.⁵ McNamara accepted that the Soviet Union would at some point acquire the capability to inflict similar amounts of destruction upon the United States; hence, the term "mutual assured destruction" or MAD.

The secretary examined ways to increase the flexibility of U.S. nuclear forces and also considered the challenge of extended deterrence. While the threat of retaliation with U.S. nuclear forces in response to a major Soviet attack on the American homeland provided a very credible deterrent, the credibility of an American nuclear response to a Soviet attack on NATO Europe was more difficult to establish. As the Soviets expanded the number of their strategic missiles and bombers that could strike the United States, would Moscow come to doubt that American nuclear weapons might be used in response to a Soviet attack on NATO? Was an American president prepared to risk Chicago for Hamburg? The other part of the extended deterrence equation was assurance: persuading allies, as well as Moscow, that the U.S. commitment to their security was firm and credible.

By the time of the Kennedy administration, the United States was not the only NATO nuclear power. Britain had reestablished nuclear cooperation with the United States after demonstrating its own thermonuclear capability. In 1960, France tested a nuclear weapon and proceeded to develop an independent nuclear force, motivated in part by its doubts about the reliability of the American extended deterrent as Russian strategic forces increased.

In order to ensure a credible nuclear umbrella that would cover all of NATO, Washington explored the idea of a multilateral nuclear force (MLF) in the early 1960s. Under this proposal, U.S. SLBMs armed with nuclear warheads would be placed on surface ships or submarines with NATO multinational crews, constituting a NATO nuclear force. By allowing NATO countries some access to control over nuclear weapons, those countries would be less inclined to seek their own independent nuclear capabilities. The MLF idea died relatively quickly, however:

“The proposed force would add little to the programmed nuclear capability of the West; furthermore, it threatened to violate the requirement for a centrally controllable, unified strategic nuclear arsenal, which became the hallmark of the McNamara approach to strategic planning. Finally, McNamara was convinced that when the Europeans, who were supposedly clamoring for the MLF, realized that the United States would not relinquish a veto over launch and that the financial burden of creating, operating and maintaining the force would be shared among all the participants, they would quickly lose their enthusiasm.”⁶

Washington subsequently sought to persuade its European allies to increase their defense spending in order that NATO might strengthen its conventional forces and capability to resist a Soviet attack without resorting to nuclear weapons. The European allies, however, showed little interest in a major conventional build-up. Memories of World War II and the immense destruction of modern conventional

warfare remained fresh. Most European allies preferred instead to rely on the nuclear deterrent threat.

FLEXIBLE RESPONSE

Early in his tenure, McNamara began to develop a U.S. strategy of flexible response that would rely on a continuum of conventional, non-strategic nuclear and strategic nuclear forces. He used a May 1962 NATO ministerial meeting to outline U.S. thinking on this. NATO allies were slow to accept the new strategy. Trans-Atlantic discussions nevertheless continued over the succeeding several years. By 1967, NATO had formally embraced a Military Committee document known as MC 14/3, embodying the flexible response strategy.⁷

MC 14/3 spelled out guidance to NATO military commanders “to provide for the employment as appropriate of one or more of direct defense, deliberate escalation and general nuclear response, thus confronting the enemy with a credible threat of escalation in response to any type of aggression below the level of major nuclear attack.”⁸ The idea was to give the Alliance a range of credible response options, with the ever present threat of escalation to use of nuclear weapons serving to raise the risks and costs in any Soviet calculation of use of military force—conventional or nuclear—against NATO.

During the same time period, the Alliance also moved to establish the Nuclear Planning Group. It created a formal venue for consultations on nuclear forces and doctrine issues. In particular, it created a forum in which the United States could regularly brief allies on its thinking regarding nuclear weapons issues and collect their feedback.

Meanwhile, the U.S. build-up of nuclear weapons in Europe continued, as did the expansion of programs of cooperation that would make those weapons available to allied military forces in time of war. The number of U.S. nuclear warheads in Europe peaked in the early 1970s at just over 7,300, of which some 2,800 were designated for allied use under programs of cooperation.⁹ This spread the risks and burden of nuclear weapons among a number of allies.

NATO'S DUAL-TRACK DECISION

Soviet nuclear developments in the second half of the 1970s led NATO to a new look at the requirements of extended deterrence. The United States and Soviet Union were making progress on a new Strategic Arms Limitation Treaty—SALT II—which was eventually signed in 1979. That agreement codified strategic nuclear parity between the two nuclear superpowers. At the same time, the Soviet Union and Warsaw Pact maintained their advantages in conventional armed forces, and the Mutual and Balanced Force Reduction talks between NATO and the Warsaw Pact showed little sign of progress, despite the “nuclear sweetener” of a NATO offer to withdraw 1,000 nuclear warheads to incentivize Soviet conventional force reductions. In 1976, the Soviets began deploying the SS-20 ballistic missile. Mounted on a large, mobile transporter-erector-launcher vehicle, the SS-20 had a range of 5,000 kilometers (just under the range that would have made it subject to SALT II) and could carry three independently targetable warheads. It could strike targets anywhere in Europe and represented a substantial improvement over the older Soviet SS-4 and SS-5 missiles that it was intended to replace.

European allies expressed concern at the implications. If the Soviet Union and Warsaw Pact maintained their conventional force advantages while the Soviets achieved parity in strategic nuclear forces and deployed new SS-20 missiles for which there was no NATO counterbalance, would that not undermine NATO's deterrence strategy? Would a NATO threat to escalate to nuclear weapons in the event that conventional defense began to fail be credible to the Soviets, when they dominated in longer-range theater nuclear missiles? Two years of trans-Atlantic consultations produced the “dual-track” decision on long-range theater nuclear forces, adopted by NATO foreign and defense ministers in December 1979.

The “dual-track” decision provided that the United States would deploy nuclear-armed ground-launched cruise missiles (GLCMs) and Pershing II ballistic missiles in five allied basing countries in Europe. The missiles would have sufficient range to

hold targets in the Soviet Union at risk and would begin deployment and achieve initial operational capability by the end of 1983. This deployment track would be accompanied by a negotiating track aimed at securing equal limitations on U.S. and Soviet longer-range theater nuclear forces, hopefully with reductions in the latter.

Formal negotiations on intermediate-range nuclear forces (INF)—a term adopted in place of theater nuclear forces—began in late 1981.¹⁰ President Ronald Reagan proposed the “zero/zero” outcome: the United States would not deploy GLCMs and Pershing IIs if the Soviet Union scrapped its SS-20s, SS-4s and SS-5s. The Soviets showed no interest in such an outcome, and over two years the negotiations made little progress. When the first GLCMs and Pershing IIs were deployed to Britain and West Germany in November 1983, the Soviets walked out of the negotiations.

The potential deployment of new U.S. nuclear missiles in Europe proved hugely controversial, with anti-nuclear movements growing and conducting mass protest rallies in each of the five designated basing countries. By all appearances, Moscow hoped that domestic political opposition and public protests would cause the deployment track to unravel—without the Soviets having to limit or reduce any of their missiles. It was a near thing in the end, but the basing country governments maintained their political resolve and went forward with the deployments as agreed. Interestingly, the protests seemed to subside following the Soviet walk-out.

Less than a year after leaving the talks, Moscow signaled interest in resuming the INF negotiations and parallel Strategic Arms Reduction Treaty (START) talks, which they had also suspended in November 1983. Secretary of State George Shultz and Foreign Minister Andrey Gromyko agreed in January 1985 to resume the two negotiations, as well as conduct a third on defense and space issues.

Mikhail Gorbachev's rise to the head of the Soviet Communist Party provoked a major reassessment in Moscow of the value of nuclear arms. To the surprise

of many in the West, the Soviets in 1986-87 moved toward the U.S. position and ultimately accepted the “zero/zero” outcome. Gorbachev and Reagan signed a treaty in December 1987 banning all U.S. and Soviet land-based INF missiles. The treaty entered into force in June 1988. By the time that its reductions had been implemented three years later, the United States had eliminated 846 INF missiles, while the Soviets had destroyed 1,846.¹¹

While widely welcomed as the first arms control treaty to ban a major class of nuclear weapon systems, some analysts on both sides of the Atlantic questioned the wisdom of the outcome: if the Soviet Union and Warsaw Pact continued to maintain their conventional superiority, didn't the United States and NATO require a European-based nuclear capability to hold Soviet targets at risk for the Alliance's deterrent strategy to remain credible? The point soon became moot. The Conventional Armed Forces in Europe (CFE) Treaty was signed in 1990, setting equal limits on key categories of NATO and Warsaw Pact conventional equipment, such as main battle tanks. The CFE Treaty required major asymmetrical reductions by the Soviet Union and Warsaw Pact. The following year, the Warsaw Pact dissolved itself, and by the end of 1991 the Soviet Union had collapsed.

NATO NUCLEAR POLICY AFTER THE COLD WAR

During their July 1990 summit in London, NATO leaders mandated the preparation of a new Strategic Concept for the Alliance to take account of the rapidly changing circumstances in Europe. When they gathered in November 1991 in Rome—just a month before the end of the USSR—they approved the new concept, which reflected the very different situation that NATO faced with the end of the Cold War.

The 1991 Strategic Concept devoted three paragraphs to nuclear weapons. The paragraphs reaffirmed that the “fundamental purpose of the nuclear forces of the allies is political: to preserve peace and prevent coercion and any kind of war ... by ensuring uncertainty in the mind of any aggressor about the

nature of the allies' response to military aggression.” The concept further stated:

“A credible Alliance nuclear posture and the demonstration of Alliance solidarity and common commitment to war prevention continue to require widespread participation by European allies involved in collective defense planning in nuclear roles, in peacetime basing of nuclear forces on their territory and in command, control and consultation arrangements. Nuclear forces based in Europe and committed to NATO provide an essential political and military link between the European and the North American members of the Alliance. The Alliance will therefore maintain adequate nuclear forces in Europe.”¹²

The Strategic Concept was virtually silent on declaratory policy and offered little clarity as to the circumstances under which NATO might resort to nuclear weapons, other than stating that such circumstances had become even more remote. It noted that the allies could “significantly reduce their sub-strategic nuclear forces” which would “consist solely of dual-capable aircraft which could, if necessary, be supplemented by offshore systems.” The concept added that “There is no requirement for nuclear artillery or ground-launched short-range nuclear missiles and they will be eliminated.”¹³ (Shortly before the Strategic Concept was issued, President George H. W. Bush had announced that, as part of what came to be referred to as the “presidential nuclear initiatives,” the United States would destroy all its ground-launched short-range nuclear weapons and no longer deploy tactical nuclear weapons on U.S. naval vessels.) Between 1991 and 1993, the United States removed some 3,000 nuclear weapons from Europe, bringing the total forward-deployed there to well under 1,000.¹⁴ In the 1990s, Britain removed from Germany its dual-capable Tornados and their accompanying nuclear bombs (and then withdrew those systems from active service entirely).

When NATO leaders met in April 1999 in Washington, they issued a revised Strategic Concept to take

account of the changes over the preceding eight years. The language regarding nuclear forces closely followed that in the 1991 Strategic Concept, with a few changes. Noting the reductions that had been made in NATO non-strategic nuclear forces since 1991, the new concept added that the Alliance had significantly relaxed the readiness criteria for its forces with nuclear roles (dual-capable aircraft) and that NATO nuclear forces “no longer target any country.”¹⁵ NATO fact

sheets subsequently stated that the Alliance “does not follow either a first-use or no-first use policy. The Alliance does not determine in advance how it would react to aggression. It leaves this question open.”¹⁶ Between 2000 and 2010, the United States quietly withdrew more nuclear weapons and moved to consolidate the number of bases at which they were stored, including removing its nuclear weapons entirely from Greece and Britain.

3. THE 2010 STRATEGIC CONCEPT AND DETERRENCE AND DEFENSE POSTURE REVIEW

EUROPE'S INTEREST IN NUCLEAR REDUCTIONS

Speaking in Prague on April 5, 2009, President Barack Obama laid out a vision for a nuclear-free world: “So today, I state clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons. I’m not naive. This goal will not be reached quickly—perhaps not in my lifetime. It will take patience and persistence.” He called for reducing the role and number of nuclear weapons and for a negotiation with Russia on reducing strategic nuclear arms but added that “as long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies...”¹⁷

Obama’s speech resonated in many European countries. Just four months before, four German elder statesmen—Helmut Schmidt, Richard von Weizsacker, Egon Bahr and Hans-Dietrich Genscher—had released a statement with a call for a nuclear weapons-free world, for a treaty on “no first use” of nuclear weapons, and for the removal of U.S. nuclear arms deployed in Germany.¹⁸ In October 2009, the new German foreign minister, Guido Westerwelle, said “we will take President Obama at his word and enter talks with our allies so that the last of the nuclear weapons stationed in Germany, the relics of the Cold War, can finally be removed ... Germany must be free of nuclear weapons.” This became part of the coalition agreement between the Free Democratic Party headed by Westerwelle and Christian Democratic Union led by Chancellor Angela Merkel.¹⁹

The German position attracted attention elsewhere. Legislation was introduced in the Belgian parliament—which had previously called for steps to remove nuclear arms from the country and from Europe—to ban storage or possession of nuclear weapons.²⁰ That December, four former Dutch ministers—Ruud Lubbers, Max von der Stoel, Hans van Mierlo and Frits Korthals Altes—endorsed the goal of a nuclear weapons-free world and called on the Dutch government to seek removal of U.S. nuclear weapons from the non-nuclear weapons states that belonged to NATO.²¹ Other European statesmen joined the “Global Zero” movement to abolish nuclear weapons.

Some questioned whether there was still a rationale for maintaining U.S. non-strategic nuclear weapons in Europe. NATO regarded such weapons in the 1970s and early 1980s as offsetting Soviet and Warsaw Pact conventional force advantages that ranged in key categories from two- or three-to-one. For example, one 1973 assessment showed the Warsaw Pact with 21,200 main battle tanks compared to 8,100 for NATO.²² However, in 2007—by which time most former Warsaw Pact members had joined NATO—Russia’s last data declaration before it suspended observance of the CFE Treaty showed 5,063 main battle tanks; NATO in January 2009 declared 12,486 main battle tanks.²³

The debate picked up steam in early 2010 with calls for a serious examination by NATO of its nuclear posture and the need for U.S. nuclear weapons in Europe. Others, particularly in the Central European states that had joined NATO from 1999 on, pushed

back, arguing that the nuclear weapons remained important for Alliance security. (Indeed, for many of the Central European members located closer to—and still uncertain about the intentions of—Russia, NATO’s nuclear umbrella, made concrete by U.S. nuclear weapons in Europe, was a principal reason for joining the Alliance.) Some criticized the German government for adopting a position calling for withdrawal of U.S. nuclear weapons. Former NATO Secretary General George Robertson, joined by former U.S. officials Franklin Miller and Kori Schake, took the Germans to task for not being willing to share the nuclear burden while enjoying the benefits of the American nuclear umbrella. They criticized the Germans for leaving other states that hosted U.S. nuclear bombs politically exposed, for causing new concerns in Turkey about the possibility of a nuclear Iran, and for raising worries in Central Europe about the credibility of NATO’s Article 5 security guarantee.²⁴

In April 2010, the Obama administration released its Nuclear Posture Review report. It called for reducing the role and number of U.S. nuclear weapons while maintaining a credible deterrent that would assure U.S. allies and partners. It declared that the United States would seek to create conditions in which the “sole purpose” of nuclear weapons would be to deter nuclear attack on the United States, its allies and partners, and it adopted a new negative security assurance: the United States would not use or threaten to use nuclear weapons against any non-nuclear weapons state that was a party to and in full compliance with its obligations under the Non-Proliferation Treaty. While stating that the United States would maintain the capability to deploy forward nuclear weapons on fighter-bombers (including F-35s in the future) and heavy bombers, and would proceed with a life extension program for the B61 nuclear bomb, the Nuclear Posture Review deferred on issues related to NATO’s nuclear posture. It noted: “The role of nuclear weapons in defending Alliance members will be discussed this year in connection with NATO’s revision of its Strategic Concept. Any changes in NATO nuclear posture should only be taken after a thorough review within—and decision by—the Alliance.”²⁵

THE 2010 STRATEGIC CONCEPT

Preparatory work for a new Strategic Concept for consideration by NATO leaders at the November 2010 summit in Lisbon was well underway in spring 2010. NATO foreign ministers held an informal ministerial in Tallinn in late April 2010 and discussed how the concept might address nuclear issues. Secretary of State Hillary Clinton put forward five principles for nuclear weapons and arms control:

- “As long as nuclear weapons exist, NATO will remain a nuclear alliance;
- “As a nuclear alliance, widely sharing nuclear risks and responsibilities is fundamental;
- “The broader goal of the alliance must be to reduce the number and role of nuclear weapons and recognize that NATO has already dramatically reduced its reliance on nuclear weapons;
- “The alliance must broaden deterrence against 21st century threats, including missile defense, strengthen Article 5 training and exercises, and draft additional contingency plans to counter new threats; and
- “In any future reductions NATO’s aim ‘should be to seek Russian agreement to increase transparency on non-strategic nuclear weapons in Europe, relocate these weapons away from the territory of NATO members, and include non-strategic nuclear weapons in the next round of U.S.-Russian arms control discussions alongside strategic and non-deployed nuclear weapons.’”²⁶

These principles largely set the bounds for subsequent NATO debate, and allies agreed that decisions on Alliance nuclear posture would be taken by consensus. In May 2010, just a month after the Tallinn meeting, a group of experts appointed by the NATO secretary general and led by former Secretary of State Madeleine Albright released its report on recommendations for the new Strategic Concept. With regard to nuclear weapons, the report stated that “under current security conditions, the retention of some U.S. forward-based systems on European soil

reinforces the principle of extended nuclear deterrence and collective defense,” noted that “the broad participation of non-nuclear allies is an essential sign of transatlantic solidarity and risk-sharing,” called for an ongoing dialogue with Russia aimed at reducing and even eliminating all non-strategic nuclear weapons, and recommended that “as long as nuclear weapons exist, NATO should continue to maintain secure and reliable nuclear forces, with widely shared responsibility of deployment and operational support, at the minimum level required by the prevailing security environment.”²⁷

The Tallinn ministerial meeting and Albright experts group report appeared to reassure many Central Europeans. The U.S. objectives in the run-up to the Lisbon summit focused on encouraging an outcome regarding nuclear questions in the Strategic Concept somewhere in the broad spectrum defined by the Tallinn principles and on avoiding a major intra-Alliance fight over nuclear weapons. The poles of the debate within NATO during autumn 2010 were defined by Germany and France. Germany sought language for the Strategic Concept that would put greater emphasis on arms control and disarmament, while the French took a more conservative approach, insisting on the continuing strategic logic of nuclear deterrence. In the days before the Lisbon summit, the sides agreed on compromise language, leaving difficult issues such as the Alliance’s nuclear posture to a Deterrence and Defense Posture Review (DDPR).

NATO leaders blessed and issued the new Strategic Concept in Lisbon in late November. It noted that the circumstances in which the Alliance might consider using nuclear weapons were “extremely remote” and added that “as long as nuclear weapons exist, NATO will remain a nuclear alliance.” The concept termed strategic nuclear forces—particularly U.S. strategic nuclear forces—the “supreme guarantee” of Alliance security (which has long been the case). The concept called for NATO to maintain “an appropriate mix of nuclear and conventional forces”

and to “ensure the broadest possible participation of Allies in collective defense planning on nuclear roles, in peacetime basing of nuclear forces, and in command, control and consultation arrangements.” As for arms control, the concept said the Alliance desired “to create the conditions for a world without nuclear weapons,” sought “to create the conditions for further reductions [of nuclear weapons stationed in Europe] in the future,” and aimed in any future reductions “to seek Russian agreement to increase transparency on its nuclear weapons in Europe and relocate these weapons away from the territory of NATO members.” The concept also noted that “national decisions on arms control and disarmament may have an impact on the security of all Alliance members” and expressed NATO leaders’ commitment to “appropriate consultations among Allies on these issues.”²⁸

The new concept did not contain language from its predecessors that cited U.S. nuclear weapons in Europe as providing “an essential political and military link between the European and the North American members of the Alliance.” Some experts thus believe that the new concept places significantly less emphasis on non-strategic nuclear weapons than did its predecessors. Others discounted that absence, noting that the new concept called for “broadest possible participation . . . in peacetime basing of nuclear forces,” which they felt made essentially the same point.

On the second day of the Lisbon summit, Alliance leaders issued a summit declaration that noted “NATO will maintain an appropriate mix of conventional, nuclear and missile defense forces.” The declaration stated that North Atlantic Council had been tasked to “continue to review NATO’s overall posture in deterring and defending against the full range of threats to the Alliance,” with that review to be undertaken “on the basis of the deterrence and defense principles agreed in the Strategic Concept.”²⁹ In follow-up, NATO began the DDPR in early 2011.

4. U.S. AND RUSSIAN NON-STRATEGIC NUCLEAR WEAPONS

U.S. NON-STRATEGIC NUCLEAR WEAPONS

The United States long maintained a variety of non-strategic or tactical nuclear weapons. It has over the years, however, reduced both the total number and types of non-strategic weapons. The 2010 Nuclear Posture Review announced the decision to retire nuclear warheads for sea-launched cruise missiles. Once the 260 W80 warheads for the sea-launched cruise missiles are retired, the U.S. non-strategic nuclear arsenal will consist of some 500 B61 gravity bombs.³⁰ (For purposes of the remainder of this paper, it is assumed that the W80 will soon be retired and out of the inventory.)

Currently, the United States is believed to deploy some 200 B61 nuclear gravity bombs at six locations in five European countries. B61 bombs are reportedly maintained at Kleine Broegel Air Base in Belgium, Buechel Air Base in Germany, Ghedi Torre Air Base in Italy and Volkel Air Base in the Netherlands for potential use by the Belgian, German, Italian and Dutch air forces. B61 bombs are also said to be stored at Aviano Air Base in Italy and Incirlik Air Base in Turkey for potential use by American aircraft. The Belgian, German, Italian and Dutch air forces have dual-capable F-16s or Tornados that can deliver the B61 bombs; the status of Turkish F-16s is unclear.³¹ Other B61 bombs are believed to be stored at Kirtland Air Force Base and Nellis Air Force Base in the continental United States.³²

The United States plans to conduct a life extension program for the B61 bombs over the next seven years. The U.S. military currently maintains four types of

B61 bombs in its arsenal: the “non-strategic” variants B61-3, B61-4 and B61-10 plus the “strategic” variant B61-7. As a result of the life extension program, these four variants will be consolidated into a single variant, the B61-12. It will be used to arm both strategic bombers, such as the B-2, and non-strategic dual-capable fighter-bombers, such as the F-15E and F-35. This life extension program thus could erode the distinction between “strategic” and “non-strategic” nuclear weapons, which could in turn have implications for how these weapons are dealt with in arms control negotiations.³³

RUSSIAN NON-STRATEGIC NUCLEAR WEAPONS

The Russian non-strategic nuclear arsenal is both larger and contains a wider variety of weapons types than its U.S. counterpart. It is believed to comprise some 3,700-5,400 nuclear warheads for use on a variety of delivery systems, including cruise missiles, tactical aircraft, anti-ballistic missile defense systems and air defense systems. The Russian inventory may also contain warheads for use on short-range ballistic missiles, as well as for naval use (torpedoes and depth charges). Many of these weapons, however, may not be readily usable; one estimate is that the “nominal load” of Russian non-strategic delivery systems is some 2,000 non-strategic warheads, and that many of the remaining weapons are old and could be dismantled over the next ten years, leading to a reduction of perhaps 50 percent of the Russian non-strategic inventory.³⁴

The Russians say that all of their non-strategic nuclear warheads have been removed—or “demated”—

from delivery platforms or delivery systems and are stored in “central storage” sites (some analysts question whether all non-strategic warheads have been demated, though virtually all analysts agree that most Russian non-strategic warheads have been removed from their delivery systems). The term “central storage” does not appear to have a formal definition but seems to refer to storage by the 12th Main Directorate of the Ministry of Defense (12th GUMO, which has responsibility for nuclear weapons) rather than by the Russian air force or navy, i.e., it is an organizational term rather than having a geographic connotation. The 12th GUMO operates storage facilities that are at or near air and naval bases as well as special, large facilities—referred to as “S sites”—that are usually at some distance from bases where delivery systems are deployed.³⁵ (By contrast, U.S. nuclear weapons in Europe reportedly are stored in warhead vaults located in hangars that can accommodate dual-capable aircraft.)

The Russians have reduced their non-strategic nuclear stockpile considerably over the past 20 years. In 2010, the Russian government said it had cut its non-strategic nuclear weapons by 75 percent since the presidential nuclear initiatives in 1991-92. Given estimates that, before its collapse, the Soviet non-strategic arsenal numbered 15,000-21,700 warheads, this meant that the Russians had eliminated some 11,000-16,000 warheads.³⁶ (All Soviet non-strategic nuclear warheads were withdrawn to Russian territory by mid-1992.) Concerns have been expressed in the United States, however, as to whether Russia fully implemented its initiatives, and the Russians have declined to provide details that might clarify the concerns.³⁷

In addition to the differences in number and types between the U.S. and Russian arsenals, NATO and Russia appear to differ in how they view non-strategic nuclear weapons. NATO nuclear policy attaches primarily political value to U.S. non-strategic nuclear weapons deployed in Europe, as a symbol of the U.S. security commitment to Europe. For their part, Russian military planners appear to attach greater military significance to such weapons. They believe that Russia faces conventional force imbalances

vis-à-vis NATO and—perhaps more importantly in the future—China. Given Russian demographics (the draft pool shrinks each year) and the difficulties the Russian military has had with instituting reforms and procuring modern weapons, Moscow is unsure when it will be able to improve its relative position in conventional forces. Russian military planners also worry that Moscow has no counterpart to the power projection and long-range conventional strike capabilities of the U.S. military. Thus, for the foreseeable future, they will likely regard nuclear weapons as a force equalizer.

Russia issued a new military doctrine in early 2010. The doctrine states that “the Russian Federation reserves the right to utilize nuclear weapons in response to the utilization of nuclear and other types of weapons of mass destruction against it and (or) its allies, and also in the event of aggression against the Russian Federation involving the use of conventional weapons when the very existence of the state is under threat.”³⁸ The doctrine does not distinguish between strategic and non-strategic nuclear weapons but instead refers to nuclear weapons generically. The doctrine appears to narrow the circumstances in which nuclear weapons might be used: the 2000 version allowed for use of nuclear weapons “in situations critical for the national security” of Russia, rather than when the state’s existence was at stake. The doctrine, however, offers nothing in the way of specifics regarding the roles of non-strategic nuclear arms.³⁹ It also contains a classified annex about which little is publicly known.

Some analysts attribute the large number of Russian non-strategic nuclear weapons to bureaucratic politics in Moscow, e.g., the Russian navy’s belief that it could only compete with its American counterpart with nuclear weapons. Others attribute the number to the continuation of “correlation of forces” thinking in Russian strategy (large numbers of nuclear weapons would stabilize and inhibit possible aggressive Western behavior). Russian military planners might argue that, given the differences between their geopolitical situation and that of the United States, Russia has a greater need for non-strategic nuclear weapons. That argument may have merit—in security

terms, Canada is a less challenging neighbor than China—but it remains difficult to understand the Russian rationale for so many non-strategic nuclear weapons. Even if one discounts the older weapons and considers just the 2,000 deliverable non-strategic weapons in the inventory, how many tactical nuclear weapons would the Russian military employ

against an invading army on Russian territory before escalating to strategic nuclear strikes against the adversary's homeland? That number would seem to be significantly below 2,000. Moscow should make a realistic assessment of its nuclear requirements and prepare to reduce its arsenal accordingly.

5. UNDERSTANDING THE ISSUES FOR DDPR CONSIDERATION

KEY QUESTIONS

The Deterrence and Defense Posture Review has been charged with taking an overall look at the Alliance's military posture and recommending a mix of nuclear, conventional and missile defense forces appropriate for NATO in the current strategic environment. Although the DDPR will not look solely at NATO nuclear policy and posture, those issues are high on the agenda. NATO bodies have been tasked to present a conceptual outline by autumn and more definitive conclusions by the next NATO summit, to be held in the United States in May 2012.

Among the key nuclear issues that the DDPR should consider are the rationale for nuclear weapons, Alliance declaratory policy, the number of nuclear weapons needed in Europe, the issue of dual-capable aircraft and nuclear risk- and burden-sharing. Decisions that NATO takes on these and related issues will influence the approach that the United States takes to any negotiation with Russia that addresses non-strategic nuclear weapons.

THE NATURE OF THE THREAT

One issue for the allies to consider is the purpose of NATO nuclear weapons, specifically, what threat are they intended to deter or defend against? Although the Soviet Union was the focus of NATO nuclear deterrence, relations between NATO and Russia have changed significantly since the end of the Cold War. Many NATO members no longer regard Russia as a threat and see it increasingly as a partner. France has agreed to sell Russia up to four

Mistral-class helicopter assault ships, and Germany has offered to provide the Russian army equipment to improve its training. The conventional military balance, moreover, has shifted in NATO's favor in many key areas of equipment, and Russia appears to be having trouble modernizing and reforming its armed forces. Proponents of significant change in NATO nuclear posture cite the decline of the Russian threat, a diminished need for nuclear weapons, and an opportunity to contribute to the nuclear arms reduction process to justify their position. Moreover, in the new circumstances, some question whether a NATO nuclear threat would be credible, predicting that in a crisis the Alliance would be unable to find consensus on the question.

Not all NATO members, however, regard Russia as no longer posing a threat, if not of classical military invasion then of politico-military intimidation and harassment. The Baltic states and other Central European countries retain doubts. Russian actions—such as Russian General Staff threats in 2008 to target Poland with nuclear weapons if Poland deployed a U.S. missile defense site, the 2008 Russia-Georgia conflict and the 2009 Zapad military exercise, which appeared aimed at intimidating the Baltic states and Poland and which reportedly concluded with simulated nuclear strikes—fuel these doubts. These countries see NATO's nuclear component as an integral part of the Article 5 security guarantee.

The Baltic states and some Central European states appear to have broader doubts about the credibility of Article 5. They do not expect military conflict with Russia but, unlike other NATO members, they

do not rule it out. Although the steady decline of Russian conventional forces over the past 20 years means that NATO now has overall advantages, Russia has local advantages in conventional forces in the Baltic area. Many in the Baltic states and Central Europe question whether NATO conventional forces have the ability to deploy rapidly to their defense, something that has not been exercised since they became Alliance members (although NATO now has developed contingency plans for their defense). Assurance of these allies is an important U.S. objective.

Russia is not the only external factor shaping NATO nuclear posture. The prospect of an Iran with nuclear weapons raises the question of maintaining U.S. forward-deployed nuclear weapons—particularly in Turkey—as a deterrent against Tehran. (Some analysts also suggest that forward-deployed U.S. weapons reassure Ankara and obviate any Turkish consideration of an independent nuclear weapons capability, though other Turkish analysts discount this concern.) Others note that NATO cannot know today what nuclear threats it might have to face in the future if nuclear proliferation continues and other states acquire nuclear weapons capabilities. They thus argue that the Alliance should take care regarding changes in its nuclear posture that might leave it unable to present an adequate deterrent to possible future nuclear threats.⁴⁰

NATO DECLARATORY POLICY

NATO's declaratory policy may not directly affect the U.S. negotiating approach. It could, however, affect the context for any negotiation and will prove of interest to European elites and publics. As talk of a NATO contribution to nuclear disarmament grew in 2009, some Europeans suggested that NATO move to adopt a position of “no first use” of nuclear weapons, i.e., the Alliance would declare that it would resort to nuclear weapons *only* in retaliation for a nuclear attack on NATO members or NATO military forces.

While U.S. officials and NATO members expect a discussion on declaratory policy as part of the DDPR, the odds of agreement on something radically new appear low. There is little chance of the Alli-

ance adopting “no first use,” as the United States and France (and probably Britain) would oppose it. During its Nuclear Posture Review, the U.S. government discarded “no first use” relatively early, because there is one circumstance in which the United States would consider first use of nuclear weapons: if Washington had compelling evidence that a nuclear weapons state was on the verge of striking the United States with nuclear weapons, U.S. military planners would want the option of a preemptive nuclear strike. For its part, France believes the deterrent value of its nuclear forces is maximized by ambiguity as to the circumstances in which Paris would use them; “no first use” would undercut that ambiguity.

The U.S. government seeks *to create the conditions* in which the “sole purpose” of nuclear weapons would be to deter a nuclear attack on the United States, allies or partners. (This differs subtly but significantly from “no first use.”) Washington certainly does not want NATO to adopt a contradictory policy. Some U.S. officials believe it would be useful were the Alliance to adopt a similar policy, since the principal nuclear guarantor of Alliance security is the United States. However, France would oppose this for the same reason that it opposes “no first use,” and there is no enthusiasm in Washington for a fight with the French over this question. The Alliance's third nuclear power, the United Kingdom, also might be reluctant to move toward a “sole purpose” policy; London needs to be more cautious, as the British military does not have the wide range of conventional force options maintained by the United States.⁴¹ Finally, Baltic and Central European allies may see the nuclear deterrent as useful for dissuading Russia from non-nuclear threats.

Washington articulated in the Nuclear Posture Review an adjusted negative security assurance linked to compliance with the Non-Proliferation Treaty. Britain has adopted a similar assurance, and the group of experts led by Albright proposed that NATO follow suit. The French, however, oppose an Alliance negative security assurance; as one French diplomat wrote, “there can be no question of NATO committing itself on the issue of negative security assurances, which are unilateral legal acts adopted

by nuclear-weapon states.”⁴² The United States and Britain have shared this view in the past, and U.S. officials continue to question whether it would be appropriate for NATO to offer a negative security assurance. Having a collective negative security assurance might also prove problematic in that it would raise a prospect that NATO allies could have to come to a consensus view as to whether or not a state was in compliance with its Non-Proliferation Treaty obligations.

Given differences among NATO’s three nuclear powers—to say nothing about a wide diversity of views among the other Alliance members—it is unrealistic to expect the DDPR to produce a radically new declaratory policy regarding NATO nuclear arms. One might expect something similar to language in previous Strategic Concepts. That will mean a reiteration of the important deterrent function of nuclear weapons but virtual silence as to the circumstances in which NATO might consider using them.

DOES NATO NEED NUCLEAR WEAPONS IN EUROPE?

Officials in Germany and several other NATO have suggested that U.S. non-strategic nuclear weapons could be withdrawn from Europe. They believe that the nuclear deterrent could then be provided by U.S. and British strategic nuclear forces, just as U.S. strategic nuclear forces—and tactical aircraft that could be deployed forward—provide the extended deterrent for U.S. allies in Asia. (While it is true that U.S. strategic forces have been the main provider of the nuclear umbrella for Japan, South Korea and Australia since the early 1990s, the situations in East Asia and Europe may not be strictly comparable. Nuclear weapons have played a larger, more formalized and more visible role in the U.S. security guarantee to NATO; for example, the United States never had programs of cooperation that would allow allies in Asia access to U.S. nuclear weapons.)

The DDPR thus will likely examine the question of whether the United States needs to maintain its B61 nuclear bombs in Europe and, if so, how many. Senior U.S. military officials see those weapons as

having virtually no added military utility. In April 2010 at a Council of Foreign Relations meeting, Vice Chairman of the Joint Chiefs of Staff James Cartwright was asked if he saw “a military mission performed by these aircraft-delivered weapons that cannot be performed by either U.S. strategic forces or U.S. conventional forces”; he replied “no.”⁴³ Other senior U.S. military officers have expressed a similar view that there no longer is a military requirement for U.S. nuclear weapons in Europe. They believe NATO conventional capabilities would suffice to defend the Alliance against a Russian attack that they consider highly implausible.⁴⁴ Gary Samore, National Security Council Coordinator for Arms Control and Weapons of Mass Destruction Terrorism, said in April that the principal value of these weapons “is symbolic and political, because whatever military mission they serve could of course also be accomplished by the use of systems that are not tactical systems based in Europe.”⁴⁵

These senior U.S. officials see the primary justification for keeping B61 bombs in Europe as for bargaining with Russia on nuclear weapon reductions or political reasons. Indeed, political reasons—to demonstrate the commitment of U.S. military forces and, ultimately, strategic nuclear forces, to the defense of NATO Europe and thereby assure allies—have long been the main rationale for deploying American nuclear weapons in Europe. That political rationale may still pertain, even if the weapons are seen to have no or virtually no military utility. This is influenced in part by the fact that forward-deployed nuclear weapons have been central to NATO’s deterrent policy for such a long time; as one NATO member-state diplomat observed, “if there were no U.S. nuclear weapons in Europe today, NATO would not want to move them in, but moving them out is difficult due to the nuclear legacy.”⁴⁶

Those NATO member-state officials who believe U.S. nuclear weapons could be withdrawn do so in large part because they see the Alliance’s security situation as dramatically different from the Cold War. Some simply do not regard Russia as posing a security threat any longer. To some extent, Washington may incline toward this view: U.S. officials note that

they see no requirement for the DDPR to seek to strengthen deterrence vis-à-vis Russia.⁴⁷ A variety of other arguments for removing nuclear weapons from Europe have been made. They include: to delegitimize nuclear weapons; to demonstrate NATO's commitment to the Non-Proliferation Treaty in order to bolster the commitment to the treaty of other non-nuclear weapons states; and to set an example that might inspire Russia to reduce its holdings of non-strategic nuclear weapons. Some also argue that European states hosting U.S. nuclear weapons on their territory (and, in some cases, providing dual-capable aircraft that could deliver the U.S. weapons) is inconsistent with the Non-Proliferation Treaty.⁴⁸ (That said, the United States, NATO members and even the Soviet Union accepted the nuclear-sharing arrangements as consistent with the Non-Proliferation Treaty when they signed it.) Other arguments for withdrawing U.S. nuclear warheads include freeing up resources for conventional forces and operations. And others doubt whether there could ever be Alliance consensus in a crisis to begin preparing dual-capable aircraft for nuclear signaling purposes.

Other allies, particularly among those who joined NATO after 1997, such as the Baltic states, continue to see a need for U.S. nuclear weapons in Europe. This likely reflects a broader anxiety about allies' commitment to their defense: with allies to the west regarding Russia more as a partner than a threat and NATO conventional force capabilities in decline, they may see the nuclear guarantee as more necessary. States in the Baltic region and Central Europe that favor a continued U.S. nuclear presence in Europe do not do so solely, or even primarily, out of concern about the Russian nuclear arsenal. Their concern reflects deep-rooted historical experience and focuses on Russian intimidation and perhaps small land-grabs. Some states might see a need for some U.S. nuclear weapons in Europe even if Russia dramatically reduced its non-strategic nuclear weapons.

France appears to share the view that U.S. nuclear weapons should remain in Europe.⁴⁹ That position may be driven in part by French concern that, were U.S. weapons withdrawn, attention would turn to the French and British nuclear arsenals.

Still others worry about possible new nuclear threats to NATO in an uncertain world. They fear that, were NATO now to radically reduce its nuclear posture—even in the context of a U.S.-Russian arms control agreement—the Alliance might find itself unable to restore a more robust posture were a new threat to emerge.

As for the United States, the interagency process on non-strategic nuclear forces—which combines both the U.S. government's arms control and NATO communities—itself reflects a spectrum of views. Some U.S. officials believe that U.S. nuclear weapons should remain in Europe. Others believe that they should be used as bargaining chips with the Russians, and that decisions on withdrawing U.S. nuclear weapons from Europe should be made once it is clear what the Russians are prepared to do with their non-strategic nuclear stockpile. Still others argue that Washington should not too closely tie its view on non-strategic weapons to the Russian level, believing that the United States ought to retain the freedom to adjust the level of nuclear forces to what it believes is necessary for effective deterrence, regardless of the size of other countries' nuclear forces. Many U.S. officials believe the removal of all U.S. nuclear weapons *could* be an outcome of U.S.-Russian negotiations, but that would be condition-dependent—i.e., what the other elements of the treaty provided for—and would require careful consultations with the allies.⁵⁰

In the autumn 2010 run-up to the Lisbon summit and issuance of the new Strategic Concept, one could detect a spectrum of NATO views on nuclear weapons. On one side, favoring a more dramatic look at NATO's nuclear posture and the possible removal of U.S. B61 bombs, were Germany, Belgium, Denmark, Luxembourg, the Netherlands and Norway. On the other end of the spectrum, taking a more conservative position, were the Baltic states, Poland, Hungary and France. Between these two poles, Spain, Portugal and Greece sided closer to the German view, while Turkey and Italy tended more toward the opposite pole, as did the British.⁵¹ Other allies held no particularly strong view.

Seven months later, U.S. officials believed that the differences within NATO had lessened, that the balance within the Alliance had shifted somewhat toward the more conservative pole, and that a number of allies who previously had maintained silence had begun to question changing NATO's nuclear posture and eliminating nuclear-sharing. This may be partially attributable to the Obama administration's successful press to secure New START ratification and its declared readiness to engage in further nuclear arms reduction negotiations with Russia, which assured allies of the U.S. commitment to nuclear reductions and made it harder to argue for unilateral cuts. Part of this may reflect the Libya experience and questions about the ability of NATO's conventional power to achieve a successful resolution there. The shifts in allied views were not uniform; some analysts sensed that the Polish position on nuclear weapons was becoming more flexible, given the broader Polish rapprochement with Russia over the past year.

Perhaps reflective of a consolidation of views within the Alliance, in April ten NATO permanent representatives wrote to the secretary general to express their support for a paper submitted by the Polish, Norwegian, German and Dutch foreign ministers. The paper called for increased reciprocal transparency regarding "numbers, types, locations, command arrangements, operational status and level of operational security" on tactical nuclear weapons in Europe. It noted that transparency and confidence-building steps were "crucial for paving the way to concrete reductions," which "should not be pursued unilaterally or be allowed to weaken the trans-Atlantic link."⁵²

CONSIDERATIONS REGARDING THE NUMBER OF WEAPONS

If the Alliance concludes that its deterrence and defense posture requires maintaining some level of U.S. nuclear weapons in Europe, the question will be whether that level can be reduced below the current number of some 200 B61 bombs. The fact that the primary rationale for forward-deployed nuclear weapons is political suggests that there may be

flexibility for further cuts (though the Strategic Concept would put this in the context of Russian reductions or some measures regarding Russian non-strategic weapons).

U.S. officials and many allies, including some who argue that U.S. nuclear weapons should remain forward deployed in Europe, believe that the number of weapons could be reduced. As one Central European diplomat at NATO put it, the specific number—whether it was 200 or 100—really did not matter as long as some nuclear weapons remained. Another NATO member diplomat facetiously suggested in a private conversation that NATO could reduce to five (one in each country currently hosting U.S. B61 bombs).⁵³ There presumably is some lower bound for a European-based U.S. nuclear capability to be credible, and were NATO to decide to reduce the number of weapons but retain a U.S. nuclear presence, it would want to choose the number with care so as not to get on a slippery slope to zero. But that number could be well below the current level, particularly if the main purpose of the weapons in a conflict would be to fire a nuclear "warning shot," opening the possibility of a nuclear conflict that would involve central strategic nuclear systems. NATO public statements to date do not indicate a bottom line and appear to leave open the possibility—in the context of Russian non-strategic nuclear weapon reductions—of going to zero.

While many allies see the possibility to reduce the number of nuclear weapons, most are cautious about the idea of consolidating the locations at which B61 bombs are stored. Removing nuclear weapons from one northern tier country, e.g., Germany, could trigger domestic political pressures in the other two that would lead to the withdrawal of weapons from those countries as well.⁵⁴ If consolidation resulted in the removal of nuclear weapons from Belgium, Germany and the Netherlands, that would leave just Italy and Turkey.

Some analysts have suggested that consolidation of B61 bombs and dual-capable aircraft at bases in Italy and Turkey might be a sensible step, at least on an interim basis.⁵⁵ Those countries may be better

able politically to continue basing nuclear weapons, and Iran's nuclear effort and instability on the Alliance's southern flank might offer a rationale. Rome, however, would be concerned about an outcome in which only Italy and Turkey served as basing countries.⁵⁶ As for Ankara, "if Turkey is likely to be left as the only country, or one of only two countries, where U.S. nuclear weapons are still deployed ... and no other NATO country is willing to assume the burden of hosting nuclear weapons, Turkey may very well insist that the weapons be sent back to the United States."⁵⁷

Consolidation thus would likely mean reducing the number of states deploying U.S. nuclear weapons not from five to four, but could trigger a cascade effect from five to two—and perhaps to one or zero. (Some would argue that this potential cascade effect calls into question how essential these weapons are seen to be within NATO.)

THE FUTURE OF DUAL-CAPABLE AIRCRAFT

A critical question concerns dual-capable aircraft in Europe. The credibility of the U.S. nuclear presence depends in part on militarily viable delivery systems. Weapons that can only sit in storage vaults do not make for an effective deterrent. NATO in the early 1990s decided to retain dual-capable aircraft as its sole delivery system for non-strategic nuclear warheads, given that such aircraft are flexible and provide a clearly visible symbol of the Alliance's nuclear resolve, e.g., their alert rate could be raised in a crisis.

Some analysts today question whether dual-capable aircraft remain credible delivery systems, saying their range is limited and noting the challenge of penetrating modern air defense systems. Others believe that those aircraft remain credible; they point out that F-16 and Tornado aircraft with refueling are executing round-trip missions over Libya of more than 3,000 nautical miles. Moreover, accompanied by defense suppression and other escort aircraft—which provide an opportunity for additional European allies to participate in the nuclear mission, one which is periodically exercised—dual-

capable fighter-bombers would raise the possibility in an adversary's mind that they could execute their nuclear mission.

In any event, the German air force plans to replace its dual-capable Tornado fighter-bombers with Eurofighters that will not be wired or certified for nuclear weapons. The German air force reportedly has a plan to extend the life of some Tornados, which had been slated for retirement around 2015; the plan could keep dual-capable Tornados flying until 2020 and perhaps beyond. At some point in the next 10-15 years, however, Germany will presumably retire those aircraft. Merkel and her Christian Democratic Party agreed to call for removal of American nuclear weapons from Germany as part of the 2009 coalition agreement with the Free Democratic Party. While German conservatives may not be anxious to press this, it is very difficult to see any German government and parliament, now or in the future, changing course and agreeing to make the Eurofighter dual-capable. The German air force's loss of the capability to delivery nuclear weapons will remove the rationale for the B61 bombs deployed in Germany.

The German decision, moreover, is likely to have a major—if not decisive—impact on Dutch and Belgian decisions about replacing their dual-capable F-16 aircraft. The Dutch tentatively plan to purchase the F-35 Joint Strike Fighter to replace their F-16s, but the Dutch parliament has yet to make a final decision on the purchase and on whether its Joint Strike Fighters will be wired for nuclear weapons. According to Dutch diplomats, securing a Dutch parliamentary decision to wire the Joint Strike Fighters for nuclear weapons would be virtually impossible if it is clear that the German air force is getting out of the nuclear business.⁵⁸ That would eliminate the rationale for B61 bombs in the Netherlands. The Belgian government is less far along in its thinking on a successor for its F-16s; some question whether Belgium will purchase a replacement. It is very difficult to see Belgium opting for dual-capable aircraft if both Germany and the Netherlands decide not to purchase dual-capable successors to the Tornado and F-16.

Thus, unless there is a significant change in direction, the dual-capable aircraft issue now appears headed toward the denuclearization of the three northern tier NATO countries.⁵⁹ That could impact decisions in Italy and Turkey about their nuclear futures.

One idea considered earlier within NATO was for the Alliance to procure and operate a squadron of dual-capable aircraft, much as NATO maintains an Alliance squadron of airborne warning and control aircraft. This idea raised a number of questions. Where would it be based? Would the squadron be based only in one country? Where would the B61 bombs for potential use by the squadron be based? Given the substantial investment in aircraft to carry out a mission that they hopefully and almost certainly would never carry out, what other roles might the aircraft fulfill, and how would that be managed? While discussion of a NATO squadron may be on pause pending the DDPR's outcome, enthusiasm for the idea appears to have waned.

THE MIX OF NUCLEAR, CONVENTIONAL AND MISSILE DEFENSE FORCES

The DDPR is to consider the “appropriate mix” of nuclear, conventional and missile defense forces. U.S. officials hope that the DDPR will increase the contribution of non-nuclear elements, given the U.S. goal of reducing the role of nuclear weapons. The Department of Defense's 2010 Quadrennial Defense Review specified the goal of developing new regional deterrence architectures, including missile defenses, which will enable a reduced role for nuclear weapons.⁶⁰

Although conventional and missile defense forces do not pose the same deterrent threat of catastrophic destruction as do nuclear weapons, U.S. and NATO officials believe they can contribute to deterrence (the British in particular see value to broadening the basis for the Alliance's deterrent). Effective missile defenses could deny an aggressor's war aims by frustrating a ballistic missile attack. Long-range, accurate conventional strike weapons (e.g., conventionally-armed sea-launched cruise missiles) could likewise help deny an opponent's military goals and

inflict a degree of punishment, albeit not at the same level as nuclear weapons. However, a mix of nuclear, conventional and missile defense forces that reduced the nuclear component might be seen as posing a lesser threat of catastrophic retaliation and thus a less imposing deterrent.

With Alliance leaders having agreed at Lisbon to adopt the mission of territorial defense of NATO against a limited ballistic missile attack and supporting the U.S. “Phased Adaptive Approach” for deploying a missile defense system in Europe, it is logical to expect that the role of missile defense in NATO's deterrence and defense posture will increase. The contribution of conventional forces would appear to pose a tougher question. The United States has long-range conventional strike systems—such as cruise missiles and precision-guided bombs—that can attack targets at significant distances with great accuracy. The planned increase in U.S. drone aircraft, which could be armed, might offer new conventional capabilities for Europe. But as for more traditional conventional capabilities, NATO member defense budgets are coming under heavy fiscal pressures. Defense spending for nine NATO members has fallen to less than one percent of gross domestic product, and only five members meet the NATO goal of two percent. If anything, the Alliance will be shedding conventional capabilities rather than adding them. NATO should consider whether it could adjust its defense spending in ways that produce greater conventional capability for more limited expenditures.

One other factor is relevant here. During the Cold War, West Germany and Turkey were the primary “front-line” states bordering Warsaw Pact states and the Soviet Union (Norway also shared a small border with the Soviet Union above the Arctic Circle). West Germany and Turkey throughout the Cold War maintained large standing conventional armies. Today the NATO members most concerned about Russian intentions tend to be smaller states with relatively small militaries. They would, in any hypothetical conflict with Russia, have to depend immediately on conventional forces provided by allies, and they worry that those allies are cutting defense budgets and capabilities.

NUCLEAR RISK- AND BURDEN-SHARING

The idea that allies share the risks and burdens of NATO's nuclear arsenal has long been a key tenet of Alliance nuclear policy. Nuclear weapons are based on the territory of certain non-nuclear NATO allies—they were once based more widely—and some allies have aircraft that can deliver nuclear weapons if need be. Changes to this posture should not be undertaken lightly, given the important political role that nuclear weapons have played in Alliance security. If NATO decides to reduce or eliminate non-strategic nuclear weapons in Europe, it will have to carefully consider how the Alliance would otherwise carry out the assurance, sharing and binding functions that those weapons have served.

If NATO nuclear weapons are consolidated at fewer locations in, or removed completely from, Europe, that would mean that an even smaller number of NATO members share the burden than at present. Some thus have suggested that the Alliance seek new ways of burden-sharing. For example, if the northern tier NATO basing countries do not replace their dual-capable aircraft with fighter-bombers that are nuclear-wired, might NATO decide that German, Dutch, Belgian or even Polish pilots could be assigned to fly with Italian or U.S. air force units equipped with dual-capable aircraft based in the southern tier, thereby spreading the burden? Alternatively, if B61 bombs are withdrawn from some or all European bases, could those basing countries be asked to maintain the aircraft shelters, nuclear weapon storage vaults and other infrastructure that would technically allow redeployment of B61 bombs to those bases? Dual-capable aircraft might periodically exercise nuclear missions from those bases. (Whether or not a redeployment of B61 bombs would be feasible politically is another question.)

Another possibility is nuclear-sharing without a requirement for forward-basing of U.S. B61 bombs in Europe. NATO could move toward the Asian precedent, under which U.S.-based strategic nuclear forces and forward-deployable tactical aircraft provide the extended deterrent. Nuclear-sharing would consist of the Alliance sharing information on nuclear

issues; consulting in the Nuclear Planning Group or a different body on nuclear weapons questions; and taking part in U.S. planning for nuclear operations. NATO could also prepare for common execution of nuclear missions, e.g., by training in which NATO aircraft provide escort and other support functions for U.S. strategic bombers.⁶¹ (A number of NATO allies which do not host U.S. nuclear weapons or provide dual-capable aircraft participate in NATO nuclear air exercises under the SNOWCAT—Support of Nuclear Operations With Conventional Air Tactics—program.)

While these kinds of burden-sharing are less significant than current burden-sharing arrangements, the Alliance should explore them carefully. The likely course of developments regarding dual-capable aircraft suggests that the current burden-sharing arrangements—in which five allies provide dual-capable aircraft for nuclear delivery and/or host U.S. nuclear weapons on their territory—will be unsustainable.

Others are more skeptical that burden-sharing could be preserved if the B61 bombs were removed from most or all basing countries and express concern about the consequences. Nuclear consultations would focus on U.S. and British strategic nuclear forces (France is not a member of the Nuclear Planning Group and has never agreed to consult within NATO on its nuclear forces). The Nuclear Planning Group consultations would take on a very different character than at present, when a number of allies at the table are basing countries for nuclear weapons and/or providers of dual-capable aircraft. The shared nuclear culture within the Alliance could weaken.

Some analysts worry further that, in such a situation, there could be a backlash: would the United States (and Britain) be prepared to consult much with allies who wanted a say in U.S. (and British) nuclear policy but were unwilling to share the risks of nuclear weapons? Moreover, would support for NATO in Washington, particularly in Congress, decline if allies appeared to be leaving the bulk of the nuclear burden to the United States? Allies will need to weigh these questions as they consider the Alliance's future nuclear posture. They might

consider this also in the context of the June 10 warning by former Secretary of Defense Robert Gates that current trends regarding allied defense spending could prompt a fundamental recalculation in Washington as to whether the benefits of the U.S. investment in NATO justify the costs.

THE EAST ASIA AND MIDDLE EAST FACTORS

While most NATO countries will understandably focus on the Alliance's nuclear posture in Europe, global commitments mean that the United States must take a broader perspective. Washington needs to consider how NATO nuclear policy might affect U.S. alliance commitments in East Asia and other commitments in the Middle East, as well as the impact on perceptions of the credibility of those commitments.

In the DDPR, this will affect how Washington looks at the importance of forward-deployed nuclear forces in Europe. Strategic nuclear forces and forward-deployable non-strategic systems (U.S. dual-capable fighter-bombers) currently provide the basis for the U.S. nuclear umbrella in East Asia, though the trend will likely be toward greater reliance on strategic systems as the number of U.S.-based fighter-bombers with nuclear missions declines. Department of Defense officials believe the credibility of *forward-deployable* non-strategic weapons for East Asia is bolstered by the fact of *forward-deployed* weapons in Europe, which demonstrate that forward-deployable systems can in fact become forward-deployed. Were the latter to be withdrawn, would that affect the credibility of the U.S. commitment in East Asia? This is not necessarily a decisive factor, but it will weigh on U.S. thinking.

Washington also must factor in developments in the Middle East. Were Tehran to obtain nuclear weapons, the United States would have to consider how best to deter and contain Iran while assuring regional allies such as Saudi Arabia and the United Arab Emirates. The United States is already discussing cooperative missile defenses in the region, can deploy strategic bombers to Diego Garcia, and could consider periodic deployments of dual-capable fighter-

bombers to the Persian Gulf. But Washington will want to weigh how a change in NATO's nuclear posture might affect its ability to deter Iran and assure partners in the Middle East.

PUBLIC SUSTAINABILITY

One other issue that NATO allies should consider is the public sustainability of the Alliance's nuclear posture, i.e., will elite and public opinion in NATO member states support it? And will NATO member governments be prepared to lead on the issue in building and maintaining public support? Nuclear weapons issues at present appear to have little public salience; the debate of the past two years has taken place within limited elite circles. Surprisingly few polls have been conducted recently on the issue of basing U.S. nuclear weapons in Europe. Analysts believe, however, that public opinion, particularly in the northern tier basing countries, would overwhelmingly favor removal. A 2006 survey showed the percent of respondents in the five basing countries expressing themselves to be very or somewhat concerned about the presence of nuclear arms on their territory as ranging from 59 percent (the Netherlands) to 77 percent (Turkey); the percentage of respondents calling for a Europe free of nuclear weapons ranged from 63 percent (the Netherlands) to 88 percent (Turkey).⁶² Seventy-six percent of German respondents in a 2005 survey conducted by *Der Spiegel* supported withdrawal of non-strategic nuclear weapons from Germany.⁶³ The German reaction to the March 2011 Fukushima nuclear incident suggests that the nuclear allergy remains strong in Germany. A 2007 poll by the Flemish Peace Institute showed three-quarters of Belgians supporting removal of U.S. nuclear weapons from Europe.⁶⁴

Attitudes in more geographically exposed allies may differ, but with many European publics, such as in Germany, the withdrawal of U.S. nuclear weapons has broad appeal. There is no reason to expect the DDPR to produce the public drama that accompanied INF missile deployments in Europe 30 years ago, but NATO should seek a nuclear posture that can be articulated in a way that maximizes the prospect of sustaining elite and public support. Given

the end of the Cold War and the view in many NATO member states that Russia no longer constitutes a security threat, finding a persuasive rationale for retaining a U.S. nuclear presence in Europe will be far more difficult than it was in the past.

How NATO resolves these questions will decide how nuclear policy and posture are handled in the DDR. That process will also be an important factor for U.S. arms reduction efforts regarding non-strategic nuclear weapons.

6. U.S. AND RUSSIAN THINKING ON ARMS CONTROL

THE UNITED STATES

Obama stated that non-strategic nuclear weapons, as well as non-deployed strategic warheads, should be addressed in the next round of U.S.-Russian nuclear arms reductions at the time he signed the New START Treaty in April 2010. The December 2010 Senate resolution of ratification for New START, moreover, asks the administration to “seek to initiate, following consultations with NATO allies” negotiations with Russia within one year of the treaty’s entry into force in order “to address the disparity” in non-strategic nuclear weapons numbers between the United States and Russia.

With the U.S. interagency process only having begun to examine the non-strategic nuclear weapons issue in February 2011, Washington has come to no firm decisions on how to deal with these weapons other than that stated by National Security Advisor Tom Donilon on March 29: reciprocal transparency “on the numbers, locations and types of non-strategic forces in Europe” should be a first step to prepare for eventual negotiations.⁶⁵

Non-strategic nuclear weapons could be addressed in a discrete channel by themselves or folded into a larger negotiation with strategic nuclear warheads, perhaps with the goal of negotiating a single limit covering all nuclear warheads. Many U.S. officials favor the latter approach. Other ideas have been floated short of a full negotiation (or for use while negotiations are being conducted). They include relocation of non-strategic nuclear weapons away from NATO-Russian borders and parallel unilateral

reductions, such as the 1991 presidential nuclear initiatives, perhaps equal percentage reductions. U.S. officials will need to consider the consequences of the B61 life extension program, which will result in a single B61 variant for both strategic and non-strategic use: how would the B61-12 be treated in arms control negotiations?

U.S. officials recognize that limiting non-strategic nuclear weapons will pose new verification challenges. Monitoring any limits on the warheads themselves would likely mean measures such as inspections of warhead storage sites, since most, if not all, U.S. and Russian non-strategic nuclear warheads are not deployed on delivery systems. The U.S. interagency process thus stood up a working group in February to explore the verification challenges.

RUSSIA

Persuading Russia to negotiate on reducing non-strategic nuclear weapons could prove a challenge. Russian President Dmitry Medvedev has accepted the idea of a step-by-step process of reducing nuclear weapons with the ultimate goal of a world free of nuclear arms, but Russia thus far has shown no willingness to engage in negotiations on non-strategic nuclear weapons or, for that matter, on any further nuclear reductions beyond New START. Russian officials state that a variety of issues must be addressed either in conjunction with or prior to a next round of nuclear arms reduction negotiations. These include missile defense, where Moscow remains concerned that future U.S. missile defenses might degrade its strategic deterrent; long-range conventional strike

weapons, which some Russian analysts fear might be capable of attacking Russian strategic forces, such as ICBMs in silos; the “weaponization” of outer space; and conventional forces in Europe, where Moscow has expressed concern that NATO enjoys significant advantages and where Russia has suspended its implementation of the CFE Treaty (Russia does not appear to have exceeded the CFE limits on conventional weapons).

Senior Russian officials say that they want to observe how New START is implemented before deciding next steps on nuclear reductions. Some indicate that Moscow also wants to see the outcome of the U.S. presidential election in 2012 before taking new actions on nuclear reductions. There is, moreover, a presidential election in Russia in 2012. While the winner of that vote will likely be decided by a conversation in the second half of 2011 between Prime Minister Vladimir Putin and Medvedev rather than at the ballot box, the Russian bureaucracy does not yet know who will be the “establishment candidate.” That discourages new thinking. More broadly, many circles in Moscow—particularly the military and nuclear arms industry—simply may not be interested in negotiating on non-strategic nuclear weapons at all, given perceived conventional military disadvantages vis-à-vis NATO and China.⁶⁶

The only specific—but very major—point made by Russian officials is that non-strategic nuclear weapons should be withdrawn to national territory as a precondition for negotiations on such weapons. In

January 2011, Foreign Minister Sergey Lavrov reiterated this precondition.

Non-official Russian experts have offered some ideas on how to treat non-strategic nuclear arms. These focus mainly on transparency measures and consolidation of non-strategic nuclear weapons at “centralized” storage sites. Alexei Arbatov has suggested that limiting non-strategic nuclear weapons with accompanying verification measures would simply be too difficult for U.S. and Russian negotiators at this stage. He thus proposes that the sides agree merely to confine non-strategic nuclear warheads to “centralized” storage sites on national territory. He adds that those storage sites should be separate from air or naval bases so that the weapons could not be quickly combined with delivery systems. The sides could monitor the sites to ensure that nuclear weapons did not leave but would not necessarily know—and have no measures to verify—how many warheads were at the sites. There might also be agreed challenge inspection measures to confirm the absence of non-strategic nuclear weapons at air and naval bases.⁶⁷

Another Russian expert, Anatoliy Diakov, agrees with Arbatov that negotiating limits on non-strategic nuclear weapons would be too difficult. He suggests that the United States and Russia focus on detailed transparency measures and data exchanges, including visits to non-strategic nuclear weapons storage facilities to confirm the number of weapons at individual sites is consistent with the number declared to be there.⁶⁸

7. POSSIBLE ARMS CONTROL APPROACHES

A RANGE OF OPTIONS

The range of options for dealing with non-strategic nuclear weapons includes confidence-building measures (greater transparency would be one), unilateral measures and arms reduction negotiations.⁶⁹ Some of the options could be pursued in parallel. For example, the United States might seek to engage Russia in the near term on confidence-building measures, such as greater transparency, and perhaps even unilateral measures while preparing the ground for later negotiations.

Washington has stated that it seeks to persuade Russia to move forward to negotiations. In anticipation of a possible new round, the U.S. government's interagency process set up a working group on non-strategic nuclear weapons in February 2011.

FACTORS TO CONSIDER

Several factors should be considered regarding arms control approaches. First, while New START limits both deployed strategic warheads and deployed strategic delivery vehicles such as ICBMs, constraints regarding non-strategic nuclear weapons are likely to focus on the warheads and bombs, not the delivery systems (one exception might be transparency measures). Most delivery systems for non-strategic nuclear warheads, such as tactical fighter aircraft, have primarily conventional roles. Neither the U.S. nor Russian military is likely to favor limiting primarily conventional systems as part of a nuclear arms reduction treaty or as part of a unilateral measure related to non-strategic nuclear warheads.

Second, non-strategic nuclear warheads are easily transportable and could be readily moved and mated with their delivery systems, many of which are also mobile. This would undercut the value of a regional limit, e.g., one that covered Europe from the Atlantic to the Urals. Gravity bombs deployed in the Asian part of Russia—or in the United States, for that matter—could readily be moved into Europe (though moving U.S. weapons to Europe could prove difficult politically). The transportability of these weapons argues that any limits on U.S. and Russian non-strategic nuclear warheads should be applied on a global basis, although some confidence-building measures might be applied regionally.

A related factor is that Japan and other U.S. allies in Asia would strongly object to any regional limitation that had the effect of “pushing” Russian nuclear weapons out of Europe to locations east of the Urals and thereby increased the nuclear threat in their region (China would object as well). During the 1980s negotiations on intermediate-range nuclear forces, Japan urged Washington to ensure that the treaty not only not increase the number of Soviet INF missiles in Asia, but that it reduce or eliminate them along with reducing or eliminating missiles in the European portion of the USSR. Japanese diplomats have already raised this issue with Washington and have made the point at NATO headquarters in Brussels as well.

Third, the United States will undoubtedly seek *de jure* equal limits in any treaty. The Senate would be unlikely to accept anything else. Any treaty would require asymmetric Russian reductions. A limit of

500 non-strategic nuclear warheads would require dramatic reductions by Russia but none by the United States, something that would be hard for Russia to accept. A limit set above 500 would still require reductions by Russia only; given that the United States is unlikely to build up the number of its non-strategic B61 gravity bombs, that limit would result in a *de facto* Russian advantage, though Moscow would have no guarantee that the United States might not choose to add to its non-strategic stockpile. That might raise questions for Moscow.

The disparity in weapons numbers and types is relevant for a number of possible confidence-building and unilateral measures as well. As Russia deploys more types and a much larger number of non-strategic nuclear weapons, many measures would fall more heavily on the Russian side. That could well make them more difficult to work out with Moscow.

A fourth factor is verification. The U.S. intelligence community and military have high confidence that they could detect a militarily significant violation of the New START limit on deployed strategic warheads for ICBMs and SLBMs, in part because those warheads are associated with ICBMs and SLBMs in their launchers. The launchers and missiles are easier to locate with national technical means of verification such as imagery satellites. The verification challenges of monitoring limits on non-strategic nuclear warheads will prove more daunting because most, if not all, such warheads are not on delivery systems.

This means that, in any negotiation addressing non-strategic nuclear warheads, the sides will have to explore monitoring measures more intrusive than those developed to date. For example, U.S. and Russian negotiators may have to consider on-site inspections inside of weapons storage bunkers to verify declared counts of nuclear warheads. As a nuclear bomb may outwardly appear little different from a conventional bomb, inspections may need equipment that could confirm that a bomb or other warhead contains an amount of plutonium and/or highly-enriched uranium consistent with that which would be in a nuclear weapon. At the same time, both sides would want to ensure that such equipment did not reveal sensitive

internal design details. These verification challenges are not insurmountable—the United States and Russia have come a long way over the past 25 years in accepting intrusive verification measures—but monitoring limits on non-strategic nuclear warheads will require the development of new inspection modalities and technologies. This will take time and negotiation. (Similar modalities and technologies will be required to monitor limits on non-deployed strategic warheads.)

Strong and effective verification measures will be essential for any future U.S.-Russian treaty. Some verification or transparency measures could also be useful for confidence-building steps or unilateral actions, which absent such measures would likely have to be taken on faith. While the presidential nuclear initiatives announced in the early 1990s eliminated thousands of U.S. and Russian non-strategic nuclear warheads, assertions that Russia did not fully implement its initiatives, and the inability to confirm whether those initiatives had indeed been fully implemented, meant that they did not contribute as much to confidence-building as they might have.

CONFIDENCE-BUILDING MEASURES

Possible confidence-building measures include steps to increase transparency, to codify the separation—or “demating”—of warheads from delivery systems, to relocate or consolidate warheads, and to increase their security.

Transparency. Neither the United States nor Russia has publicly disclosed the number of non-strategic nuclear warheads in its arsenal. (The U.S. government said that in September 2009 it had 5,113 total nuclear warheads in its arsenal and informed Congress that at the end of 2009 it had 1,968 warheads deployed on its ICBMs and SLBMs and located at air bases for use by nuclear-capable bombers, but it has not disclosed non-strategic nuclear warhead numbers except for some earlier historical data.⁷⁰) A first step, as suggested by Donilon, would be for the United States and Russia to apply greater transparency to the “numbers, locations and types of their non-strategic forces in Europe.” This could

include information on the numbers and types of non-deployed strategic nuclear warheads and perhaps parallel information on the associated delivery systems. More revealing information would include the locations of non-strategic nuclear warheads. The sides likely know a great deal about the locations at which the other stores nuclear warheads from their national technical means and other sources. The paper submitted to the NATO Secretary General by ten NATO representatives in April suggested an even broader range of transparency steps, including transparency regarding command arrangements and operational status.⁷¹

Transparency about numbers, types and locations would provide the United States and Russia with data that could be checked against their own existing all-source data bases. It would provide a starting point for the sides in considering the negotiated limits on non-strategic nuclear warheads that they might propose, and for a formal data exchange that would likely be an element of any formal treaty. Short of a new treaty, greater transparency on numbers could also be useful in helping the sides assess the implementation of other confidence-building measures or unilateral steps.

In addition to providing information on current non-strategic arsenals, the sides might exchange detailed data on how they implemented the unilateral reductions each announced in the early 1990s.⁷² This would help inform the sides' understanding of the other's non-strategic stockpile changes and could help them to confirm the accuracy of data provided on current numbers of non-strategic weapons.

It would be useful for the sides to be more transparent with one another regarding the doctrines that govern their numbers and deployments of non-strategic nuclear weapons. Western analysts do not understand why the Russian military maintains so many.

If Washington and Moscow agreed to exchange data on their non-strategic nuclear warheads (numbers, types and/or locations), they would need to agree on how that information could be shared with others. NATO allies would certainly want to be briefed

on the Russian-provided data, and there might be significant public interest as well. New START permits the sides to make public the aggregate numbers of deployed strategic warheads, deployed delivery vehicles, and deployed and non-deployed missile launchers and nuclear-capable bombers, but requires agreement of both sides to make public the more specific data the treaty requires them to provide one another. The Russian government traditionally has proven less willing to make this kind of information public, but the U.S. government has shown reluctance as well: it has been long-standing U.S. policy neither to confirm nor deny the presence of nuclear weapons at any particular location. Both Washington and NATO allies might have some reticence about publicly disclosing the suspected—but not officially confirmed—presence of U.S. B61 bombs at particular air bases in European countries. Indeed, some worry that greater transparency regarding U.S. nuclear weapons in Europe, particularly on a unilateral basis, might cause increased public pressure on governments to do something about those weapons without securing anything in return from Russia.

“Demating.” The U.S. Air Force does not maintain B61 bombs on aircraft, though in Europe they are kept in warhead storage vaults located below the floors of hangars that can also accommodate aircraft.⁷³ The Russian government asserts that it has separated or “demated” all non-strategic nuclear warheads from their delivery systems, and in the Russian case many of the warheads are stored at some distance from their delivery systems. One confidence-building measure would be for Washington and Moscow to codify this by each stating it had demated all of its non-strategic nuclear warheads from delivery systems and that, as a matter of policy, it would not mate non-strategic nuclear warheads to delivery systems in the future.

Such a measure, if it simply captured current operational practices on both sides, would appear to be relatively straightforward to adopt. Assuming that it was fully implemented, the separation of warheads and delivery systems would at least marginally increase the time it would take to make the weapons usable for combat. (NATO already states that

it would need at least weeks in order to have dual-capable aircraft deliver nuclear weapons, though this relates to factors other than where the B61 bombs are stored.) Such a step could be a useful political measure, but the practical impact might be limited. Many Russian non-strategic warheads are believed to be maintained at storage sites relatively close to bases where their delivery systems are deployed. U.S. B61 bombs in their European warhead storage vaults may be located within meters of their delivery aircraft.

Consolidation/Relocation of Warheads. In conjunction with the demating of non-strategic warheads from their delivery systems, the Russians are believed to have consolidated theirs in storage sites operated by the 12th GUMO. The U.S. military has no counterpart to the 12th GUMO; U.S. Air Force munitions units have responsibility for the B61 bombs in Europe and in the active inventory in storage facilities in the United States.

One possible confidence-building measure would be for the United States and Russia to consolidate the weapons at fewer storage sites. This could enhance security by reducing the number of locations where nuclear weapons were present. In conjunction with reductions being implemented in accordance with a treaty—or just as it reduces the number of its non-strategic nuclear warheads (a process which some analysts believe is underway)—Russia might consolidate its warheads at a smaller number of locations, preferably at sites away from NATO-Russian borders.

Russia currently is believed to maintain several nuclear weapons storage sites that are located near the Baltic states and Norway. If Russia were to reduce its non-strategic warheads, a process of consolidating them at storage sites away from the Baltic states could prove a useful confidence-building measure. It would also be a positive step were Russia to move its nuclear warheads from the northern Kola Peninsula (close to Norwegian territory); that could be problematic, however, as those storage sites support Russia's Northern Fleet, and there do not appear to be viable alternative locations.

This type of confidence-building measure which relocates weapons away from the NATO-Russian

border would likely fall more heavily on the Russian side than on the American. The site for U.S. non-strategic warheads closest to Russian territory is Incirlik Air Base in Turkey, some 800 kilometers from Russian territory. Some Russian sites are much closer to NATO states. (NATO members in the Baltic region and Central Europe would likely be pleased were 800 kilometers to become a criterion for relocation of nuclear warheads away from NATO-Russian borders.)

Consolidation, however, would appear to be a difficult concept for the United States and NATO. A consolidation that removed nuclear warheads from, say, Germany would run the risk of triggering a cascade of dominos, as other basing countries sought withdrawal of the weapons on their territory.

An alternative consolidation option suggested by some European analysts would be to withdraw from Europe those B61 bombs that are designated for delivery by Belgian, Dutch, German and Italian aircraft, leaving in place those bombs earmarked for use by American fighter-bombers. Those advocating this option argue that it would be more consistent with the Non-Proliferation Treaty by removing nuclear weapons from the potential hands of third countries while still permitting a U.S. nuclear presence in Europe. This would have significant implications for nuclear burden-sharing, and the practical effect would be to leave U.S. nuclear weapons in just Italy and Turkey, which could prove difficult politically for Rome and Ankara.

Warhead Security. Many analysts believe that non-strategic warheads, particularly as most if not all are demated from their delivery systems, are more vulnerable to theft than strategic warheads. As a result of the Nunn-Lugar Cooperative Threat Reduction Program, the United States and Russia have worked together for nearly 20 years to upgrade the security at Russian nuclear sites. The sides might consult on the risks to stored non-strategic warheads, including by conducting joint reciprocal security assessments at one storage site of the other to identify potential problems. (This would require readiness to allow access to those sites, which—if it involved U.S. weapons

sites in Europe—would require concurrence of the NATO partner on whose territory the site was located.) Such consultations and assessments might lead to suggestions for security upgrades. The sides might also consult on measures they could take jointly were there to be theft or loss of a nuclear weapon.

UNILATERAL MEASURES

Although U.S. officials do not appear to have ruled out unilateral measures, the political context in Washington could affect the administration's decisions. Congressional Republicans in May offered legislation that would prohibit the administration from taking unilateral steps to reduce U.S. nuclear weapons, unless certain conditions were met. The administration opposed this and threatened a presidential veto should the legislation pass the Senate. The U.S. government nevertheless will be more interested in unilateral steps that can be taken in parallel, i.e., where a U.S. action can be linked to a reciprocal step by Russia.

Unilateral Withdrawal. One action that the United States and NATO might take would be the unilateral withdrawal—without any reciprocal action by Russia—of all U.S. B61 bombs from Europe. This would gain the Alliance political credit with those supporting an end to the U.S. nuclear presence in Europe. Some arms control supporters assert such a step would prompt Moscow to respond by reducing its non-strategic nuclear arsenal. Others doubt that unilateral NATO action would lead to a meaningful Russian response. Moscow has said nothing to suggest that such a move would prompt Russian reductions, only that withdrawal of U.S. nuclear weapons to national territory should be a precondition for negotiations on non-strategic nuclear forces.

No-Increase Commitment. A straightforward unilateral measure that the United States and Russia could take would be for each to declare that, as a matter of policy, it would not increase the total number of its non-strategic nuclear warheads globally. The United States does not plan to increase the number of B61 tactical bombs, though it does intend to put those bombs through a life extension program and deploy

the B61-12 to Europe in 2017-2018. Such a no-increase commitment might not be difficult for Washington. Given the large size of its current non-strategic arsenal, it is difficult to see any legitimate Russian need to increase the total number of its non-strategic warheads, and the arsenal appears likely to decrease over the next decade as older weapons are retired. (Moscow might want to replace older warheads with newer ones.) So a no-increase commitment would not appear problematic for Moscow either.

Such a commitment would have limited practical impact, especially given the large number of Russian non-strategic nuclear weapons. Some suggest it might be combined with a commitment not to modernize some or all non-strategic nuclear warheads. A commitment not to modernize, however, would raise a number of difficult questions. Does the life extension program for the B61 constitute modernization? How would one ensure that, as Russia built new warheads to replace older weapons being retired, it did not modernize their capabilities?

Parallel Unilateral Reductions. Short of a full treaty, the sides could in parallel adopt unilateral reductions as matters of policy, just as they did in 1991. Washington might consider whether there is room for a reduction in its B61 tactical bombs. If Russia is on its own drawing down the number of its non-strategic nuclear weapons, it might consider announcing those reductions. Likewise, if Moscow planned to eliminate a class of non-strategic weapons, it might announce that as well (the United States does not have that option, as it retains only the B61 in its non-strategic inventory following the decision to retire the W80 warheads for sea-launched cruise missiles).

Unilateral reductions would be more meaningful if the side(s) announcing the reductions were also to provide transparent numbers, e.g., the number of weapons to be reduced and/or the number of weapons before and after the reduction is to be implemented. The greater the transparency on the numbers, the more likely the other side would be able to gauge whether the reduction had been implemented. Short of a full negotiation—which would aim for a

treaty and associated verification measures—Washington and Moscow might explore the idea of parallel reductions, under which each would reduce its non-strategic nuclear warheads by a certain (perhaps equal) percentage or by a set number of warheads (this could not be the same for both sides, given the disparity in numbers). The outcome would be unequal in terms of residual non-strategic nuclear warheads, so this kind of measure would be inappropriate for a treaty, which should contain equal limits. It might, however, be acceptable as an interim measure and might provide a politically palatable NATO solution which could accommodate the desire of several Alliance members to contribute to the nuclear reductions process. Absent more detailed transparency or other measures, however, the sides might lack confidence that the other had implemented its announced cuts.

NEGOTIATED LIMITS AND REDUCTIONS

There might first be transparency or other confidence-building measures, but Washington would prefer to bring non-strategic nuclear weapons into the next round of nuclear arms reductions negotiations with Russia and conclude a new legally-binding agreement. Getting Moscow to agree to negotiations could prove a challenge. If negotiations are held, there are several possible approaches.

Discrete Limit. One approach would seek to negotiate a limit that applied only to U.S. and Russian non-strategic nuclear warheads. In this case, the next U.S.-Russian nuclear arms treaty might have separate limits on deployed strategic warheads and non-strategic nuclear warheads (and possibly a third on non-deployed strategic warheads). As noted previously, however, negotiating an equal limit on U.S. and Russian non-strategic nuclear warheads would be difficult, primarily due to the disparity in numbers.

Single Limit. As an alternative, the United States and Russia might seek to negotiate a single limit covering all nuclear warheads—deployed strategic, non-deployed strategic and non-strategic, i.e., everything other than those warheads that have been retired and are in the dismantlement queue.⁷⁴ U.S.

officials reportedly lean strongly toward this approach for a next negotiation with Russia, as it may prove more easily negotiable than a discrete limit on non-strategic nuclear weapons. Such an approach might also include a sublimit on deployed strategic warheads (at a level below the 1,550 limit in New START).

U.S. officials believe this approach may be more easily negotiable because New START will leave the United States with an advantage in non-deployed strategic warheads, as the U.S. military intends to “download” or remove some warheads from its Minuteman III ICBMs and Trident D-5 SLBMs and put the downloaded warheads into storage. All Minuteman III ICBMs will carry a single warhead (in contrast to their capacity of three), and Trident D-5 SLBMs will each likely carry significantly fewer than their capacity of eight warheads. This gives the United States the potential, should Russia withdraw from or violate the treaty, to add or “upload” warheads back on to its ICBMs and SLBMs, expanding the total number of deployed warheads from 1,550 to perhaps 2,700-2,900. The Russians will not have a similar capability, as they appear to be reducing by eliminating missiles, but the missiles they keep are believed to have full warhead sets and hence no empty spaces on which to place additional warheads. Moscow thus may be interested in constraining U.S. upload capability by applying a limit that would constrain the number of non-deployed strategic warheads available to be uploaded. This could provide leverage for persuading Russia to reduce its non-strategic warheads.⁷⁵

A single, equal limit on all warheads would allow the sides to offset their respective numerical advantages. The Russians might reduce but still maintain more non-strategic nuclear warheads, while the United States would reduce but maintain more non-deployed strategic warheads.

Limit to Declared Storage Sites. Some Russian analysts suggest negotiating an agreement restricting non-strategic warheads to declared storage sites. There could be some monitoring measures regarding storage sites, to provide confidence that the weapons

were not being moved out, but not with the intrusiveness that would be needed were there to be a requirement to confirm the number of warheads at a particular site. This kind of approach might simply codify current operational practices of the two sides. By keeping Russian warheads separate from delivery systems, it would increase the time needed to make warheads ready for use (this would be less true in the case of B61 bombs at European air bases). The sides' national technical means of verification would provide a possibility that they could detect non-strategic warheads located outside of declared storage sites, though realistically the probability of detection would not be high. Still, the risk and political costs of detection could deter cheating.

While this kind of limit would restrict non-strategic warheads to locations separate from delivery systems, the warheads themselves would continue to exist and are readily transportable. This would mean a latent capacity, which could be exercised with little or no warning and fairly quickly, to augment a side's deployed strategic warheads.

Limit Warheads to National Territory. Lavrov has stated that all non-strategic nuclear warheads should be returned to national territory as a precondition for any negotiation on such weapons. The United States will not accept such a demand as a precondition for a negotiation. U.S. officials, however, believe the removal of U.S. nuclear weapons from Europe *could* be an outcome of a U.S.-Russian agreement that covered non-strategic nuclear warheads. It would heavily depend on the other terms of the treaty.

Such an outcome would require careful consultations within NATO. While some allies would welcome the withdrawal of U.S. nuclear weapons from Europe and see it as strengthening the Non-Proliferation Treaty by requiring that warheads not be deployed outside of national territory, others would likely oppose such a step as removing an important element of the U.S. commitment to NATO's security. The acceptability of withdrawal within NATO would depend in part on other elements of the treaty, in particular on the depth of the Russian non-strategic nuclear warhead reductions and possibly on

other steps, such as Russian readiness to pull non-strategic weapons back from the NATO-Russian border.⁷⁶ It would also likely depend on Alliance discussions and decisions about assurance and deterrence of non-Russian threats.

Were the United States (and NATO, which would be consulted on the issue) to consider accepting a requirement that all nuclear warheads be based on national territory as part of an otherwise acceptable treaty, Washington might seek to negotiate a provision allowing for temporary deployment of non-strategic nuclear warheads outside of national territory. There is a precedent: New START requires that strategic delivery vehicles be based on national territory but allows for the temporary deployment, with notification, of nuclear-capable bombers to overseas bases. Washington might consider seeking a similar provision for non-strategic nuclear weapons, which would provide the possibility of returning the B61 bombs to European bases (assuming that the bases maintained the necessary infrastructure to support the weapons). Since the single plausible scenario in which the United States would consider such a step would be to send a political message regarding its resolve to defend Europe, a requirement to notify the movement would not appear problematic. Skeptics of this idea, however, believe it would be unrealistic politically. They argue that, in a crisis, it would be impossible for NATO to reach consensus on returning U.S. nuclear weapons to Europe and that most current basing countries would not support the weapons' return, even if they had kept the supporting infrastructure. It is clearly impossible to know what might be feasible in a future crisis, but it is equally impossible to assume that the most attractive politico-military options would be available.

A Broader Negotiation. An alternative approach to negotiating limits in a U.S.-Russian venue would be to broaden the negotiation to a NATO-Russia channel or broader all-European dialogue, perhaps linking or merging the negotiation with thus-far unsuccessful efforts to salvage the Conventional Forces in Europe Treaty regime. As the Russians view their non-strategic nuclear weapon needs driven in part by perceived conventional force imbalances,

addressing the two categories together might have some logic. Such an approach, however, would be equally likely to complicate the resolution of both sets of issues and could only produce a regional—as opposed to global—limit on non-strategic nuclear weapons. Moving into a multilateral negotiating format would be more complex than a bilateral U.S.-Russian negotiation. Given the difficulties, there does not appear to be any significant interest in this kind of approach in Washington, NATO or Moscow.

Monitoring Confidence. As noted earlier, monitoring limits on non-strategic nuclear warheads (as well as on non-deployed strategic warheads) would likely require more intrusive verification modalities and technologies. Even with very intrusive inspection regimes at declared warhead storage sites, unless the sides were prepared to accept an “any time, anywhere” challenge inspection regime, they likely would be unable to have high confidence that the other was not deploying non-strategic or non-deployed strategic warheads at locations other than declared storage sites.

An agreement with a single limit on all nuclear warheads and a sublimit on deployed strategic warheads thus could result in a two-tier system of monitoring confidence: the sides could have high confidence in their ability to monitor the sublimit on deployed strategic warheads (just as they now have in monitoring that limit under New START), while they would have less confidence in their ability to monitor limits on non-strategic and non-deployed strategic warheads. Ultimately, the two governments—as well as the Senate and Russian legislative branch—might have to decide whether a regime that provided for some reductions in and limits on non-strategic (and non-deployed strategic) warheads and some verification measures, but less than full confidence in the ability to monitor those warheads, was better than the current regime, in which there are no limits on non-strategic or non-deployed strategic warheads and no verification or transparency measures regarding such weapons.

8. RECOMMENDATIONS

THE ALLIANCE'S CURRENT PATH

Earlier sections of this paper reviewed NATO's nuclear background, described key questions regarding nuclear weapons for the Deterrence and Defense Posture Review, and outlined a range of arms control measures regarding strategic nuclear weapons. This section offers recommendations for the United States and NATO.

As Washington and NATO members weigh the Alliance's nuclear posture as part of the DDPR and consider possible approaches to limiting non-strategic nuclear weapons with Russia, NATO appears to be on a path of disarmament by default as regards non-strategic nuclear warheads. If the Alliance does not handle the nuclear issue carefully, it will find that U.S. nuclear weapons in Europe are reduced or eliminated while NATO gains nothing in terms of reductions of Russian non-strategic nuclear warheads or in terms of political credit for a unilateral decision to withdraw the B61 bombs.

The default decision is driven primarily by the future of NATO's dual-capable aircraft. Although the German Tornados may fly a bit longer than originally planned, it is virtually impossible to see any German government or parliament supporting a proposal to make the Eurofighter capable of delivering nuclear bombs. The Netherlands and Belgium would most likely give up their nuclear delivery capabilities as well. That removes the rationale for maintaining B61 bombs in those three countries.

The denuclearization of the northern tier will put political pressure on Italy and Turkey. One cannot

say with certainty how Rome and Ankara would decide, but support for maintaining nuclear weapons in those countries would undoubtedly erode. There is a high probability that the two governments would also opt for withdrawal of U.S. nuclear weapons. Part of the cost is likely to be consequent resentment by some allies at others' withdrawal from involvement in collective nuclear deterrence and a subsequent loss of confidence in Alliance commitments. NATO may be able to kick this can down the road but at some point could well find itself facing dramatic, unavoidable and possibly irreversible changes in its nuclear posture.

Is this path inevitable? Perhaps not, but it appears very likely. Will there be European leaders who decide, as did Helmut Kohl and Margaret Thatcher, to drive public opinion on NATO nuclear weapons questions? At a time when Europe is preoccupied with fiscal matters, economic problems, immigration and other internal questions, and when many Europeans do not regard Russia or Iran as plausible threats? The NATO members most likely to argue for keeping the nuclear presence are hindered by the fact that they do not participate directly in nuclear burden-sharing (they neither host U.S. nuclear bombs nor provide dual-capable aircraft). Moreover, the 1997 NATO political assurance to Russia—that allies had “no intention, no plan and no reason to deploy nuclear weapons on the territory of new members and no reason to change any aspect of NATO's nuclear posture or nuclear policy and do not foresee any future need to do so”—would appear to rule out relocating nuclear weapons to member states that joined the Alliance subsequently. Given where European leadership and elite opinion will

likely be, would an American president—either the incumbent or a successor—choose to elevate nuclear weapons issues to the top of the trans-Atlantic dialogue and attempt to persuade Europeans to keep nuclear arms that most do not want?

Washington and NATO thus should consider the likely possibility that over the coming decade the U.S. nuclear presence in Europe will diminish significantly, if not be eliminated altogether.

RECOMMENDATIONS FOR THE ALLIANCE

As NATO examines its broader deterrence and defense posture between now and the 2012 NATO summit, it should weigh how non-nuclear elements of Alliance military forces can assume a greater share of the burden, in particular in assuring member states in the Baltic region and Central Europe. Missile defense can take on part of the burden. Regardless of whether one believes in the theoretical contribution of missile defense to deterrence or not, the presence of U.S. military personnel and SM-3 missile defense interceptors in Romania and Poland will provide a degree of assurance to those countries and to the region as a whole. That could make up in part for a reduced nuclear posture.

Budget pressures mean that NATO member states will have difficulties maintaining current conventional force capabilities, let alone adding new ones. Those NATO allies most interested in reducing the Alliance's nuclear posture should consider whether they can do more so that conventional forces assume a greater share of the burden. More broadly, it is imperative that NATO members make smart decisions regarding how they allocate and pool their resources to maximize the Alliance's conventional defense capabilities. One example is the recent U.S.-Polish agreement to base a small U.S. Air Force maintenance unit in Poland to support periodic, temporary deployments of U.S. F-16s and C-130 cargo aircraft. More exercises, joint training and planning could help.

Assurance is not just a matter of capability; it is also a matter of confidence. The attention that Washington paid to Central Europe in 2010 and 2011 has helped

overcome earlier questions in the region about a lack of U.S. interest and the fallout from the mishandling of the September 2009 roll-out of the decision to reconfigure U.S. missile defense in Europe. Other NATO leaders should increase their bilateral interactions with Baltic and Central European leaders in ways that would reassure them more broadly that their security concerns are taken seriously and that allies are committed to collective defense. To the extent that the new NATO members have greater confidence in Article 5, it may make it easier to find common ground on nuclear posture questions.

Given the many complex nuclear questions that must be examined, which in turn will be part of a broader examination of nuclear, conventional and missile defense forces, finding consensus on DDPR conclusions in 2012 will not prove simple. The likely outcome, barring a major surprise, is some evolutionary development of current NATO policy, perhaps papering over differences and/or relegating unresolved issues to further study. But NATO should now think through carefully the implications of future dual-capable aircraft developments, including the impact of European allies giving up dual-capable fighter-bombers. For purposes of U.S.-Russian arms control negotiations, the DDPR might lay out a range of outcomes, in which the NATO need for nuclear weapons forward-deployed in Europe would decline were Russia prepared to reduce its non-strategic nuclear weapons and take other measures, such as relocating those weapons away from NATO borders. The DDPR could seek to link NATO's non-strategic nuclear weapons to the overall Russian posture and strategic attitude—e.g., were Moscow to provide greater transparency on its conventional forces and halt intimidating military exercises such as Zapad 2009, that would be reassuring to many NATO members. But operationalizing that relationship could be difficult.

RECOMMENDATIONS FOR ARMS CONTROL

Arms control should focus on U.S.-Russian bilateral measures. At the same time, European leaders should make clear to Moscow their concern about the large number of Russian non-strategic nuclear weapons and call on Russia to address those weapons. In doing

so, the United States and NATO should not overplay the issue in a way that leads Moscow to overestimate the leverage it derives from non-strategic nuclear forces and steps it might take regarding them.

While seeking a further round of negotiations, Washington should press Moscow for greater transparency regarding non-strategic nuclear weapons. It should consider making public more information on its non-strategic nuclear forces unilaterally, as it did in 2010 when announcing the total size of the U.S. nuclear stockpile.

The United States should explore other confidence-building measures with Russia, while recognizing that agreeing on such measures would be difficult. A simple measure, though of limited value, would be for the United States and Russia in parallel to adopt no-increase commitments. Another measure could be agreement by Washington and Moscow that they would store their non-strategic nuclear warheads away from the NATO-Russia border (in the Russian case, in storage sites deeper in Russia but still west of the Ural Mountains, not in Asia). U.S. non-strategic weapons are already located well away from Russian borders; Russian reciprocation would be a major confidence-building step. Even if Moscow decided that it could not withdraw nuclear weapons from the Kola Peninsula, removal of the weapons close to the Baltic states would have a positive impact on those NATO members most worried about Russian intentions.

The idea of consolidating nuclear weapons at fewer storage sites away from the NATO-Russia border would be of interest to the United States and NATO in so far as it applied to Russia, but it could be difficult for NATO to implement. Consolidation of U.S. nuclear weapons at fewer sites could trigger a cascade of dominoes. The United States thus should only pursue this if it were comfortable with the full, longer-term implications, including for U.S.-Russian negotiations.

The best long-term approach to addressing non-strategic nuclear weapons would be to reduce and limit them as the result of a legally-binding U.S.-Russian arms agreement with verification measures.

Washington should seek to engage Moscow in consultations, followed shortly by full negotiations, on further reductions in their nuclear arsenals, including deployed strategic warheads, deployed strategic delivery vehicles, non-deployed strategic warheads and non-strategic nuclear warheads. Although both countries are now entering election seasons, with presidential ballots scheduled in 2012, the U.S. goal should be to launch negotiations as soon as possible, bearing in mind that concluding the next agreement will be a lengthy process, requiring at least two-three years of negotiation.

The United States should propose a single limit covering deployed strategic warheads, non-deployed strategic warheads and non-strategic nuclear warheads, i.e., all U.S. and Russian nuclear warheads except for those that have been retired and are in the queue for dismantlement (these would be covered separately). In addition, the U.S. proposal should include a sublimit on deployed strategic warheads. A specific position could be a limit of no more than 2,500 total nuclear warheads on each side, with a sublimit of no more than 1,000 deployed strategic warheads each.⁷⁷ These would be accompanied by limits on deployed strategic delivery vehicles and on deployed and non-deployed strategic launchers, but there would be no constraints on delivery vehicles for non-strategic nuclear warheads, given their primarily conventional roles.

Under such an agreement, the United States and Russia would each likely maintain 1,000 deployed strategic warheads, leaving room under the 2,500 limit for 1,500 additional non-deployed strategic warheads and non-strategic nuclear warheads. (For simplicity's sake, and reflecting what appears to be operational practice, all non-strategic nuclear warheads might be treated as "non-deployed." This would result in two categories of warheads: deployed strategic warheads—warheads on deployed ICBMs and SLBMs—and non-deployed nuclear warheads—warheads for use by, but not deployed on, strategic bombers and non-strategic nuclear delivery systems. All U.S. B61 bombs would fall into the "non-deployed" category, regardless of whether they were for use on B-2s or fighter-bombers.) As to

the 1,500 additional warheads, each side would be free to choose its own mix: Russia would likely opt to deploy a greater number of non-strategic nuclear warheads, while the United States chose a greater number of non-deployed strategic warheads. The result would nevertheless be significant reductions in Russian non-strategic nuclear warheads and in U.S. non-deployed strategic warheads.

One of the most difficult questions that the United States and NATO would face is the likely Russian position that the treaty should require that all nuclear weapons be based on national territory. Washington should make clear that the Russian demand that non-strategic nuclear weapons be returned to national territory prior to negotiations on such weapons is a non-starter, but it should indicate that such an outcome could be possible as the result of an acceptable negotiation. In the context of the limits on U.S. and Russian nuclear warheads outlined above, and assuming that the other provisions of the agreement were acceptable and that intra-Alliance concerns could be managed, the United States and NATO should consider accepting the “basing on national territory” position. This should be part of an agreement that results in significant reductions in Russian non-strategic nuclear warheads, not just in the elimination of older weapons that are not readily deliverable. Russian agreement to confidence-building measures, such as moving non-strategic weapons away from NATO borders, would be useful.

The principal benefit of such a treaty would be a significant reduction in the Russian nuclear arsenal, including for the first time negotiated reductions in

and limits on Russian non-strategic nuclear weapons. A Russian arsenal of 1,000-1,500 non-strategic nuclear warheads (depending on how many non-deployed strategic warheads Moscow decided to maintain) would represent a substantial reduction compared to the current reality. Depending on how many non-deployed strategic warheads Washington chose to maintain, the United States could maintain several hundred non-strategic nuclear weapons.

This approach essentially would tie the number of U.S. non-strategic nuclear warheads and their presence in Europe to Russian nuclear force levels. Were Moscow prepared to reduce its nuclear weapons sufficiently—including the number of non-strategic nuclear warheads—this approach would entail acceptance of a “basing on national territory” provision that would require withdrawal of U.S. nuclear weapons from Europe.

This would have significant implications for NATO. The withdrawal of U.S. B61 bombs from Europe would mean that, for the first time in more than five decades, there would be no U.S. nuclear weapons in Europe to symbolize the U.S. commitment to European security. The Alliance would have to adjust its overall posture accordingly, look for new ways to assure those member states with continuing security concerns about Russia, and consider how it would deter non-Russian nuclear threats such as Iran. The treaty approach outlined above, however, offers significant advantages in terms of shrinking the nuclear threat, and it provides a much preferable outcome to NATO’s current course—non-strategic nuclear disarmament by default.

ENDNOTES

- ¹ For purposes of this paper, “non-strategic nuclear weapons” is meant to include all U.S. and Russian nuclear warheads that are not addressed by the New START Treaty, i.e., everything except for nuclear warheads for intercontinental and submarine-launched ballistic missiles and air-launched cruise missiles and gravity bombs for strategic bombers.
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- ³ David N. Schwartz, *NATO’s Nuclear Dilemmas* (Washington, D.C.: The Brookings Institution, 1983), p. 32.
- ⁴ Robert Standish Norris, “United States Nuclear Weapons Deployments Abroad, 1950-1977,” Carnegie Endowment for International Peace, November 30, 1999.
- ⁵ Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St. Martin’s Press, 1983), p. 87.
- ⁶ *NATO’s Nuclear Dilemmas*, pp. 94-95.
- ⁷ *NATO’s Nuclear Dilemmas*, pp. 156-187.
- ⁸ Harlan Cleveland, *NATO: The Transatlantic Bargain* (New York: Harper & Row, 1970), p. 82.
- ⁹ “United States Nuclear Weapons Deployments Abroad, 1950-1977.”
- ¹⁰ NATO adopted “intermediate-range nuclear forces” in place of “theater nuclear forces” for two reasons. First, the latter term was anathema to the German government, as the connotation in German was “theater of war.” Second, and more importantly, the United States and NATO decided to take a global approach to limiting these missiles, whereas “theater” implied a regional (Europe-only) approach.
- ¹¹ Federation of American Scientists, “Intermediate-Range Nuclear Forces (INF),” <http://www.fas.org/nuke/control/inf/index.html>.
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- ²⁴ Franklin Miller, George Robertson and Kori Schake, “Germany Opens Pandora’s Box,” Centre for European Reform, February 2010.
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- ²⁸ NATO, “Active Engagement, Modern Defense: Strategic Concept for the Defense and Security of the Members of the North Atlantic Treaty Organization, Adopted by Heads of State and Government in Lisbon,” November 19, 2010.
- ²⁹ NATO, Official Text, “Lisbon Summit Declaration Issued by the Heads of State and Government in the Meeting of the North Atlantic Council in Lisbon,” November 20, 2010.
- ³⁰ Exchange with Hans M. Kristensen, June 2011. Note that additional strategic variants of the B61 gravity bomb are maintained for use by B-2s.
- ³¹ “Nuclear Notebook: U.S. Tactical Nuclear Weapons in Europe, 2011.”
- ³² Robert S. Norris and Hans M. Kristensen, “Nuclear Notebook: Worldwide Deployments of Nuclear Weapons, 2009,” *Bulletin of the Atomic Scientists*, vol. 65, no. 6, November/December 2009, p. 93, as updated by exchange with Hans M. Kristensen, June 2011.
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- ⁴⁶ Conversation with Norwegian diplomat at NATO headquarters, November 2010.
- ⁴⁷ Conversation with Department of Defense official, March 2011.
- ⁴⁸ See Tom Sauer and Bob van der Zwaan, "U.S. Tactical Nuclear Weapons after NATO's Lisbon Summit: Why Their Withdrawal is Desirable and Feasible," Belfer Center Discussion Paper Series #2011-05, May 2011 for a fuller discussion of the reasons for withdrawing non-strategic nuclear weapons from Europe.
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- ⁶⁶ Andrei Zagorski, "Russia's Tactical Nuclear Weapons: Posture, Politics and Arms Control," Institut fur Friedenforchung und Sicherheitspolitik, University of Hamburg, February 2011, pp. 31-33.
- ⁶⁷ "Gambit or Endgame: The New State of Arms Control," pp. 31-33.
- ⁶⁸ Anatoliy S. Diakov, "Verified Reductions of Non-Strategic Nuclear Weapons," Center for Arms Control, Energy and Environmental Studies, Moscow Institute for Physics and Technology, February 18, 2011, <http://www.armscontrol.ru/>.
- ⁶⁹ The discussion in this chapter was significantly and usefully informed by the author's participation in the Euro-Atlantic Security Initiative's non-strategic nuclear weapons working group, which met February-April 2011 to discuss and develop possible options for dealing with non-strategic nuclear forces. Other participants in that working group were Robert Legvold, Yevgeniy Buzhinsky, Hans Kristensen, Oliver Meier, Robert Nurick, Paul Schulte, Nikolai Sokov, Detlef Waechter and Isabelle Williams.
- ⁷⁰ See "United States Nuclear Weapons Deployments Abroad, 1950-1977" for historical information on numbers of non-strategic nuclear warheads deployed outside of the United States.
- ⁷¹ Letter of the ambassadors of Poland, Norway, Germany, the Netherlands, Belgium, the Czech Republic, Hungary, Iceland and Luxembourg and charge d' affairs of Slovenia to Secretary General Anders Fogh Rasmussen, April 15, 2011.
- ⁷² See Madeleine Albright and Igor Ivanov, "Moving Ahead on Reducing Nuclear Arms," *New York Times*, April 6, 2011, <http://www.nytimes.com/2011/04/07/opinion/07iht-edalbright07.html>.
- ⁷³ "Nuclear Notebook: U.S. Tactical Nuclear Weapons in Europe, 2011."
- ⁷⁴ There likely would be a separate limit and monitoring regime regarding warheads awaiting dismantlement.
- ⁷⁵ Some Russian analysts discount the importance that Moscow attaches to a direct limit on non-deployed strategic warheads. They suggest that Russia can instead constrain U.S. upload capability by seeking to lower the New START limit on the number of deployed strategic delivery vehicles. Reducing the delivery vehicles would have some effect but, as long as U.S. ballistic missiles are downloaded, there would be the possibility of uploading additional warheads.
- ⁷⁶ It would be important to the United States that any provision on withdrawing Russian non-strategic nuclear warheads away from the NATO-Russian border relocated those warheads to Russian storage sites in European Russia, not to east of the Urals where they would raise concern in Asia.
- ⁷⁷ For a fuller discussion of how strategic weapons might be treated in this kind of limitation regime, see Steven Pifer, "The Next Round: The United States and Nuclear Arms Reductions After New START," Brookings Arms Control Series Paper No. 4, November 2010.

ABOUT THE AUTHOR

STEVEN PIFER is a senior fellow in the Center on the United States and Europe and director of the Arms Control Initiative at the Brookings Institution. A retired Foreign Service officer, he served more than 25 years with the Department of State, including as deputy assistant secretary of state with responsibility for Russia and Ukraine, ambassador to Ukraine, and special assistant to the president and National Security Council senior director for Russia, Ukraine and Eurasia. He also served at the U.S. embassies

in London, Moscow and Warsaw, in addition to assignments in Washington and in Geneva with the U.S. delegation to the negotiation on intermediate-range nuclear forces.

Pifer has authored numerous policy reports, academic articles and opinion pieces on arms control, Ukraine and Russia. He frequently comments on these issues in the media.

