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Four Emerging Issues in Arms Control, Disarmament, and Nonproliferation: Opportunities for German Leadership

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Prepared for the Policy Planning Staff
Foreign Office
Federal Republic of Germany

THE JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES

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FOREWORD

At the request of the Policy Planning staff of the Foreign Office of the Federal Republic of Germany, in the late spring and early summer of 2009, a team of specialists from the James Martin Center for Nonproliferation Studies (CNS) undertook a series of analyses of selected emerging issues in the fields of arms control, disarmament, and nonproliferation.

Each study was assigned to a leading CNS specialist, or in the case of the work on missile defenses to several leading specialists, who were to serve as lead authors. The work of the lead authors was supported by other CNS experts. While the recommendations presented represent the consensus of those working on each project, they should not be taken as institutional positions of CNS or its parent, the Monterey Institute of International Studies.

The Center's product from this endeavor is presented in this report, which includes an overview of the authors' findings and four substantive studies.

The James Martin Center for Nonproliferation Studies wishes to express its appreciation to the Foreign Office of the Federal Republic of Germany for its support of this effort.

Leonard S. Spector
Deputy Director
James Martin Center for Nonproliferation Studies

July 14, 2009

Four Emerging Issues in Arms Control, Disarmament, and Nonproliferation: Opportunities for German Leadership

Overview and Highlights of Recommendations

In late April 2009, the Policy Planning Staff of the Foreign Ministry of the Federal Republic of Germany requested that the James Martin Center for Nonproliferation Studies (CNS) undertake studies on four emerging issues in the fields of arms control, disarmament, and nonproliferation, to be completed by June 15, 2009. The four issues were:

- The need to address the interrelationship between nuclear and conventional arms reduction, if the United States wants to entice others to go along the path to Global Zero. The world after drastic nuclear arms reductions, including the fear of U.S. conventional superiority/global strike capabilities;
- The need (and promising areas) to make (nuclear) arms control and disarmament a strong component of NATO's new strategic concept;
- Missile Defense, also covering a possible threat from others than Iran and the need to bring missile defense into the NATO-Russia Council; and
- Substrategic nuclear weapons, with a description of a way to achieve mutual transparency, reduction, and elimination in Europe.

The four papers accompanying this overview analyze these issues and propose strategies that the government of Germany might pursue to reduce nuclear dangers in each of these areas. Some strategies encourage intervention in the immediate future, for example, within the councils of NATO and the EU, or in dialogue with the United States; others take a longer term perspective, proposing, for example, that efforts be launched now to prepare the way for later stages of the disarmament process. In each case, the authors have tried to give attention to and build upon relevant attributes of Germany's unique geopolitical status as prominent member of the EU and NATO, non-nuclear weapon state, provider of enriched uranium and nuclear equipment, and leading economic power.

Although their specific topics differ, several of the analyses share a common perspective in seeking to promote an international environment conducive to nonproliferation and reductions in nuclear weapon stockpiles, while ensuring the protection of Western security interests. The reports also highlight certain difficult trade-offs that may lie ahead. Unrivaled U.S. military power, for example, is essential to support U.S. security guarantees to friends and allies around the globe, guarantees that, in turn, will reduce incentives for nuclear proliferation as the use of nuclear power expands. But this very military prowess may encourage Russia to

retain its tactical nuclear weapons and China to expand its nuclear forces. Finally, the studies indicate that there is a very substantial menu of opportunities for Germany to pursue in the areas of arms control, disarmament, and nonproliferation, but in doing so, it will have to make difficult choices as to which objectives should receive priority. The order in which initiatives are pursued also matters: progress on the Conventional Forces in Europe treaty or on missile defense deployments in Eastern Europe, for example, could facilitate progress on the issue of theater nuclear weapons, but approaching the last issue as the initial subject for engagement with Russia may prove less successful.

The approach taken in the four analyses has been adapted to their respective subjects. The first paper, focused on the issue of **Managing U.S. Conventional Military Superiority** so that this does not impede global reductions in nuclear forces and their possible elimination, is a subject of “first impression” that has rarely if ever been addressed in the disarmament literature. For this reason, and because the topic is so oriented toward the future, this paper is more conceptual than the others in the series, attempting to establish an analytical framework that can be the basis for future work in the field. It begins, however, with three current examples where threats posed by specific U.S. or NATO conventional capabilities are already threatening nuclear arms control, disarmament, or stability goals. The three current examples are: the impact of planned U.S. missile defenses in Eastern Europe on the START follow-on treaty negotiations, the impact of U.S. and NATO conventional military power on Russian decisions regarding its theater nuclear forces, and the impact of possible U.S. deployment of conventionally armed Trident II/D-5 missiles on the stability of nuclear relations with Russia (and China).

Turning to the development of a broader analytical framework, the paper focuses on using established tools, such as voluntary restraints, numerical limitations, keep-out zones, and restrictions on technical specifications, to shape U.S. strategic goals, military doctrine, force deployments, military capabilities/acquisitions, and secrecy to make them less threatening. The process would begin with specific near-term issues but, it is hoped, would evolve into a style of analysis and decision-making in the United States that, over time, would reduce perceptions of the threat posed by U.S. conventional forces, helping to create a greater readiness, especially in Moscow and Beijing, to consider nuclear reductions and eventual disarmament.

The second paper on **Germany, Nuclear Disarmament, Nonproliferation, and NATO** builds on the extensive recent history of German interventions in the area of arms control and disarmament. It examines the state of play in five areas—the Nuclear Nonproliferation Treaty (NPT), the Comprehensive Nuclear Test Ban Treaty (CTBT), the Fissile Material Cut-Off Treaty (FMCT), overall nuclear disarmament initiatives, and the Middle East Nuclear-Weapon-Free Zone (NWFZ)—and then explores German initiatives with respect to each as an independent actor, through the EU, and through NATO. Detailed recommendations based on these analyses are presented at the conclusion of the paper for each of the five treaties or initiatives,

ranked according to how rapidly they could be implemented and how difficult they might be to achieve. Key recommendations for nearer term action are:

- For the NPT, the study proposes that Germany take immediate steps, in addition to the role that it plays within the EU and within the Western Europe and Others Group, to work more as part of collaborative, like-minded groups, such as the NATO-7, the Vienna-10, or the New Agenda Coalition (NAC).
- For the CTBT, the study strongly urges Germany to work with others in NATO during the examination of a New Strategic Concept to re-cement the CTBT in NATO statements. This action could be vitally important in the upcoming U.S. Senate debate on the treaty, which is expected to closely scrutinize, among other issues, the potential impact of U.S. ratification of the CTBT on the credibility of U.S. nuclear guarantees to its NATO partners.
- For the FMCT, the study recommends that Germany take the initiative, playing to its technical strengths, and hold an international meeting or conference of experts on the verification of the FMCT following the UN General Assembly First Committee in fall 2009. This would serve the purpose of helping sustain momentum in the Conference on Disarmament (CD) and provide a much-needed spur to technical discussions. The study also would encourage Germany to continue to push (along with Canada, Japan, and Norway) for a Group of Scientific Experts (GSE) in the CD to support the FMCT negotiations and, through NATO to work with Partnership for Peace countries and through the NATO-Russia Council to promote a dialogue with Russia on technical and political aspects of the treaty.
- For nuclear disarmament, the study proposes, in the mid-term, that Germany build on its 1993 proposal for a nuclear weapons register, to act as a baseline for measuring progress on nuclear disarmament.
- Finally, for the Middle East NWFZ, encouraged by the new role being played by Germany in the Middle East, the study recommends that the FRG build on this success and the trust engendered to work quietly behind the scene on creating the conditions for establishment of the zone.

The third paper on **the U.S.-Russia controversy over missile defenses** concludes that as serious as the issue may be, it probably will not prevent agreement on an immediate follow-on to the START Treaty, but, if not effectively resolved, will certainly impede progress toward further nuclear reductions. The paper proposes a series of measures to move forward, including approaches to developing a U.S.-Russian consensus on the seriousness of the Iranian missile threat and involving Russia in tackling the cruise missile threat by expanding both the Cooperative Airspace Initiative, along the border between Russia and NATO, and the Air Sovereignty Operation Centers, in Eastern Europe. The paper then proposes specific means for engaging Russia on ballistic missile defenses, including a resumption of NATO-Russia cooperation on theater missile defenses, an exploration of the expansion of this effort to the strategic level, a renewed discussion of Vladimir

Putin's 2007 proposals to use Russian radars as part of a missile defense network, and an investigation of potential boost phase missile defenses, among other options. Finally, the study urges that missile-defenses related arms control constraints and transparency measures under discussion during the George W. Bush administration be resurrected. The study concludes by examining specific opportunities for Germany, stating:

Germany's most important role is likely to be in NATO. On ballistic missiles, Germany can encourage the alliance to pursue the Active Layered Theatre Ballistic Missile Defense system first and to support Obama administration efforts to put off discussion of the longer-range system until later. On cruise missiles, Germany can press for the alliance to pay greater attention to the issue and support the expansion of the Cooperative Airspace Initiative. Germany could follow up on a suggestion made by Representative Ellen Tauscher (Democrat, California) [now U.S. Under Secretary of State for Arms Control and International Security] and encourage NATO to create a counterpart to the Nuclear Planning Group that would coordinate missile defenses within the alliance. And, it could urge that the NATO-Russia Council renew its efforts on missile defense.

Outside of NATO, Germany could continue its efforts to press for greater legal measures to stem the proliferation of missiles worldwide, from strengthening the Missile Technology Control Regime and Hague Code of Conduct to supporting the recent EU proposals for a treaty banning ground-to-ground short- and medium-range missiles.

Finally, Germany might consider a track 1½/track 2 approach to pursuing progress on this issue. For instance, Germany could host a conference of governmental and non-governmental experts from NATO countries and Russia that could examine the threat posed by ballistic missiles and look at the ability of legal mechanisms and missile defenses to counter this trend, as well as at possibilities for NATO-Russian cooperation. Such a conference could also examine how these efforts could jibe with efforts to move toward a world without nuclear weapons.

The final paper, on Tactical (**Substrategic**) **Nuclear Weapons**, extensively explores the scale of U.S. and Russian holdings of these weapons, their historical and current roles in NATO and Russian defense planning, and attitudes towards these systems, as well as divisions within NATO concerning the importance of retaining U.S. TNW in Western Europe. The analysis concludes that today, the value of forward-deployed TNW as an instrument of extended deterrence and as a security link between the United States and NATO appears questionable. Rather the paper says, the reliability of extended deterrence depends, in the end, on the political

commitment of the United States and its ability to intervene when necessary. The paper also acknowledges, however, that TNW based in Europe continue to have important symbolic value for some NATO members, including the states of Eastern Europe, the Baltics, and Turkey.

The paper then identifies the main impediments to a renewed effort to reduce and eventually eliminate TNW, at least in Europe, as:

- Russia's unwillingness to sacrifice all or a large proportion of its TNW stocks in exchange for the withdrawal of the small number of American gravity bombs in Europe;
- U.S. reluctance to completely eliminate its entire stockpile of TNW warheads, primarily because this would entail the elimination of warheads for submarine launched cruise missiles (SLCMs); and
- The Russian Navy's fears that if its own stockpile of SLCM warheads were eliminated, the U.S. Navy, even without nuclear armed SLCMs of its own, would become unchallengeable.

The paper concludes by exploring three "packages" that might lead to successful negotiations: a package that would trade concessions desired by Russia regarding the balance of conventional forces in Europe for concessions by Russia on TNW; a package in which future discussions on reductions in strategic nuclear weapons incorporated negotiations on TNW; and a package focused solely on TNW, where the United States initiates the negotiating process by withdrawing existing TNW warheads from Europe, while retaining the infrastructure for returning them to service if needed.

In sum, the panoply of arms control, disarmament, and nonproliferation issues now in play is very wide-ranging, and significant opportunities exist to advance these agendas, through a diversity of measures. With Germany's geopolitical situation providing it singular credibility with virtually all key players, it is hoped that the recommendations in this study will facilitate Germany's ability to influence developments and advance its objectives in these crucially important fields.

Issue 1

Moving Toward Zero Nuclear Weapons: Managing the Overhang of U.S. Conventional Military Power

Leonard S. Spector, Lead Author

Some states want to compensate for their supposed conventional inferiority with substate nuclear weapons. Therefore, we will only succeed in achieving the sustained disarmament which people want to see if we also make substantial progress in the conventional sphere.

We continue to need a set of effective instruments with which we can avert, or at least minimize, the dangers of regional military conflicts. I therefore believe that disarmament in the conventional sphere is at least as vital as it was twenty years ago. The CFE Treaty is by no means obsolete.¹

Frank-Walter Steinmeier
Foreign Minister of Germany
2009

The disarmament community has wrestled for decades to identify mechanisms for reducing nuclear arsenals in a balanced fashion that would protect the security of the nuclear weapon possessing states as they reduce their holdings and, through verification and other procedures, provide confidence that all parties were complying with their disarmament undertakings. Although the United States has been recognized since the end of the Cold War as the preeminent conventional military power, however, arms control officials and specialists are only now beginning to examine the chilling impact of such preeminence on the future decisions of other nuclear states to relinquish their nuclear arms. The German Foreign Office is to be commended for its prescience in identifying this subject for urgent study.

The topic, however, is one of enormous breadth. In principle, for example, a study of the question should include a survey of the capabilities of the principal existing and possible future U.S. conventional weapon systems, including space-based systems and active defenses; the roles and missions of these weapons; and an examination how the perceived threat from each might be reduced to promote nuclear disarmament, while

¹ "Foreword," in Hans-Joachim Schmidt and Gotz Neuneck, Eds., *The Future of Conventional Arms Control in Europe*, (Baden-Baden: Nomos, 2009).

still enabling the United States to meet its security requirements. Because of time constraints, this paper cannot cover this heretofore unexplored subject in such depth. Instead, it hopes to provide a starting point and a methodology for considering this difficult and novel issue, which can provide a foundation for further study by the German Foreign Office and other interested parties.

Since the end of the Cold War, the unrivaled power of U.S. conventional military capabilities has been compellingly demonstrated in two wars against Iraq and interventions in Kosovo and Afghanistan. U.S. dominance has been shown on the high seas and in outer space, and Washington has achieved advanced capabilities in numerous specific areas, including networked/information-centric warfare, stealth technologies, and missile defense, while pursuing new areas that will further reinforce its superiority, such as prompt global strike, hypersonic flight, and directed energy and thermobaric weapons.

Moreover, the increasing ability of conventional weapons to carry out what used to be nuclear missions has allowed strategic planners in Washington to begin thinking seriously about drastically reducing the role of nuclear weapons, given that deterrence through conventional weapons is potentially more credible than that based on nuclear arms. Recent history has left no doubt that the United States will employ its conventional weapons if compelled to do so, while, fortunately, U.S. readiness to use nuclear arms has not been similarly tested. Further changes in military concepts and organization and to a lesser extent technologies could eliminate some of the remaining missions for which nuclear weapons might still be used (such as attacking hard and deeply buried targets or fleeting mobile targets armed with WMD). Under such a scenario, nuclear weapons would only need to be retained as long as they are required to deter other nuclear weapons.²

At the same time these very changes, particularly when coupled with the pre-emption doctrine advocated by the Bush administration (and not yet renounced by the Obama administration), has heightened threat perceptions among some U.S. strategic rivals, causing them to believe that for the indefinite future nuclear weapons will be the only effective counter to U.S. conventional power projection. Repeated calls by officials in the George W. Bush administration that the United States seize its moment as the world's sole superpower to reshape the global strategic environment to U.S. advantage deepened such anxieties, particularly when accompanied by actions that appeared to advance this agenda, such as the open-ended expansion of NATO's membership and missions.

² For a review of the history of this recent evolution in technology and strategic thinking and the possibility of further reducing reliance on nuclear weapons see Dennis M. Gormley, "Securing Nuclear Obsolescence," *Survival*, Vol. 48, No. 3, Autumn 2006, p. 127-148 and Dennis M. Gormley, "Silent Retreat: The Future of U.S. Nuclear Weapons," *Nonproliferation Review*, Vol. 14, No. 2, July 2007, pp 183-206.

As of mid-2009, Russia and China maintained nuclear arsenals as a means for balancing not only U.S. nuclear forces, but also the overwhelming superiority of U.S. conventional (non-nuclear) military capabilities. Persuading such states to relinquish their nuclear arms will thus not only require the United States to eliminate its own nuclear forces, but also to find means to manage its conventional military capabilities in a manner that minimizes the perceived threat to these potential adversaries.³

In theory, it is not difficult to imagine mechanisms, including arms control agreements, voluntary restraints, and confidence building measures, that might shape the U.S. conventional military profile so as to alter this calculus on the part of such states and make global denuclearization more attractive to them. But devising such mechanisms confronts a major obstacle: the need for the United States, as it reduces its nuclear arsenal, to satisfy its own security imperatives—ensuring U.S. national security, meeting U.S. obligations to protect friends and allies, and serving as a global humanitarian protector of last resort. Indeed, as the Obama administration and, in all likelihood, its successors, seek to build a consensus within the United States and among U.S. security partners that further nuclear reductions are sound policy, a crucial component in this dialogue will be the argument that U.S. conventional capabilities are so powerful that they can compensate for a diminished nuclear presence and still protect the full range of U.S. security interests. Unfortunately, the more effectively U.S. leaders make this case at home and among U.S. allies, the more potential adversaries will fear that the elimination of their own nuclear capabilities will place them in peril.

Thus Washington must develop *approaches for shaping its conventional military profile in a way sufficient to induce potential adversaries to join the United States in eliminating their nuclear weapons, while simultaneously retaining and even expanding its conventional capabilities to meet its own security requirements.* In effect, it must attempt to satisfy two audiences with directly opposing interests.

The United States is already confronting the need to manage aspects of the conventional-nuclear balance in current and near-term negotiations with Russia on specific issues. These negotiations, if they lead to agreement, may serve as models for the future and encourage U.S. leaders to recognize more fully and more consistently the impact that decisions on U.S. conventional capabilities may have on

³ North Korea's nuclear weapons are also partly intended to deter U.S. conventional military power. The United States continues to work with the international community to roll back North Korea's nuclear weapons program and, for this reason, does not consider North Korea to be an established nuclear weapon power. For the purposes of this paper, it is assumed that North Korea will have relinquished its nuclear weapons as a result of these efforts well before the time that Russia, China, and the United States are preparing to consider the elimination of their own nuclear arsenals. If, however, North Korea becomes a full-fledged nuclear weapon power, the tools described here to reduce Russian and Chinese anxieties regarding U.S. conventional military capabilities could also be applied with respect to North Korea—and with respect to any other state, such as Iran, that may become a nuclear -weapon power during this time frame.

the attitudes of other states towards nuclear disarmament. This, in turn, could lead the United States to develop and implement longer-term strategies to begin shaping the overall U.S. conventional military profile in order to facilitate future nuclear weapon reductions and eventual elimination.

This paper will explore both approaches, briefly highlighting near-term conventional/nuclear trade-offs and potential ones, with a focus on the U.S.-Russia relationship, and then examining how adjustments over the longer-term in U.S. strategy, doctrine, force deployments, weapon system development, and transparency could help set the stage for managing conventional military imbalances as nuclear forces diminish.

I. Near-Term Initiatives Where Restraining Conventional Capabilities May Help Achieve Nuclear Reductions and/or Set Precedents for Doing So in the Future

In important respects, current U.S.-Russian negotiations on a START follow-on treaty and an anticipated next phase of nuclear negotiations with Russia that may address reductions in theater (sub-strategic) nuclear weapons provide a microcosm of what may be anticipated on the global stage, as nuclear forces are drawn down and U.S. conventional capabilities begin to loom larger in the security calculations of potential U.S. adversaries.

START Follow-On

In the START follow-on negotiations, Russia has declared that further reductions of its strategic nuclear weapons will not be possible unless the United States constrains an emerging conventional capability—missile defense deployments in Eastern Europe—that Russia considers to be a grave security challenge. For its part, the United States must weigh the importance of these deployments for its own security and that of its allies and assess whether the modifications in these deployments that Russia is requesting can be implemented without jeopardizing these security requirements. This is very much like the trade-offs that might be required on a larger scale in the future to achieve the elimination of nuclear arms.

The details of managing the missile defense issue are reviewed a later section of this study (see “Issue 3 - Managing U.S. Missile Defenses and Russian Concerns”). What is important here is that both sides have suggested mechanisms that might achieve the necessary balance, combining transparency, cooperation, changes in deployment locations, numerical restrictions, and limitations on the technical capabilities of the systems at issue. These are some of the very tools that could be employed more broadly at a later stage of global nuclear disarmament to reduce threat perceptions from specific U.S. conventional capabilities, and the potential resolution of this issue in the U.S.-Russian context can serve as a model for later use.

One reason this case may lead to a solution acceptable to all parties is that the conventional weapon system at issue is not, in fact, directed at Russia, making it possible to accommodate Russian concerns without jeopardizing U.S. security interests. This attribute is, almost by definition, likely to be seen in future cases as the nuclear disarmament process unfolds, because it must be assumed that if Russia or China were prepared to consider the final elimination of their nuclear weapons, underlying tensions between these two countries and the United States would be all but ended, and relations would be akin to those between the United Kingdom or France and the United States. In this environment, reducing the threatening aspects of various U.S. conventional weapon systems while protecting U.S. security interests would be far more manageable than it might appear today.

Theater Nuclear Weapons and the Conventional Forces in Europe Treaty

With respect to theater nuclear weapons, also the subject of a detailed examination later in this study (see “Issue 4 Tactical (Substrategic) Nuclear Weapons”), it is expected that Washington and Moscow will turn to this issue in a negotiation that would begin after a successor agreement to the START treaty has been concluded, possibly as early as 2010. Russia is considered unlikely to significantly reduce its substrategic nuclear forces unless what it perceives as the West’s overall superiority in conventional forces can be mitigated. Russia has not expressly linked such mitigation of Western conventional military superiority to modifications it is seeking to the Conventional Forces in Europe (CFE) Treaty that would thin out NATO deployments near Russia’s borders and permit Russia to strengthen its own deployments in certain vulnerable sectors. Nonetheless, Moscow has drawn an implicit link between the two.

For example, Sergey Kislyak, Russia’s current ambassador to the United States, and its former deputy foreign minister and chief arms control negotiator, was asked in a December interview with *Arms Control Today*, “If the United States was willing to withdraw those tactical nuclear weapons, would that change Russia's position on consolidating, reducing, or eliminating its tactical nuclear weapons?” Kislyak responded that, “It would certainly be a serious factor, but would it be enough? I think we need to have a little bit more complex discussion between us and the United States and between us and NATO on the security environment in Europe.”

In particular, he said that:

When you come, say, to the European situation, we see a lot of imbalances in conventional weapons. We see a very disappointing situation with the CFE [Treaty]. We still believe the CFE Treaty that was negotiated for the situation when two opposing military blocs existed still regulates the relations between two groups of countries. ...I am not suggesting there are enormous buildups that are immediately threatening or deployed to prepare a tank attack, like we were concerned about in Cold War times. But the situation is

that there is an expansion of conventional weapons in one grouping that is still there. The situation in conventional arms control is not satisfactory.”⁴

In early June 2009, Russia presented the United States with a new proposal on the CFE agreement. This new proposal could lead to negotiations on CFE that might be very close in time to, or even overlap with, the anticipated negotiations on theater nuclear weapons. While the negotiations will unfold on separate tracks because the parties to the two treaties and their subject matter are different, it is easy to imagine that both Washington and Moscow might develop negotiating strategies that included trade-offs between the two agreements. Specifically, Russia might be prepared to consider concessions on theater nuclear weapons in return for better terms in the CFE talks.⁵ For the United States and other NATO member states, the question would be how much conventional superiority might be safely sacrificed to gain nuclear reductions—again very much the calculus that might be required on a larger scale as prospects for the global elimination of nuclear arms began to gel.

As in the case of the START/missile defense discussions, the tools for limiting conventional capabilities, namely, geographic restrictions on deployments, quantitative caps, and transparency measures, are well understood—indeed they are embedded in the CFE treaty—and could serve as models to be used on a wider scale at a future time. And, again, as in the START/missile defense context, the differences over the CFE/theater nuclear weapons are not differences between sworn adversaries, but among states with friendly relations, creating an environment that permits accommodation without necessarily jeopardizing vital national security interests.

Prompt Global Strike: Conventionally Armed Trident II/D-5

In a separate area, in 2008, the United States Congress declined to fund a program that would have enabled the United States to field Trident II/D-5 missiles armed with conventional warheads. The system was to have been part of an evolving U.S. “prompt global strike” capability to enable the United States to attack fleeting targets on very short notice without the need to resort to nuclear weapons, the sole warheads with which the Trident II/D-5 had been previously deployed. Russian concerns that it might mistake the launch of a conventionally armed Trident II/D-5 against a target in Asia for a nuclear attack on Russia and might mount a nuclear

⁴ Daryl Kimball and Miles A. Pomper, “A Fresh Start? An Interview with Russian Ambassador Sergey Kislyak,” *Arms Control Today*, December 2008, http://www.armscontrol.org/act/2008_12/KislyakInterview

⁵ We have chosen not to provide detailed suggestions of potential outcomes for the CFE talks as these were well covered in the June 10 meeting in Berlin and in the book, *The Future of Conventional Arms Control in Europe*, commissioned by the FRG Foreign Office and compiled by the Institute for Peace Research and Security Policy at the University of Hamburg (Hans-Joachim Schmidt and Gotz Neuneck, Eds) and published by Nomos, Baden-Baden, 2009. We would particularly commend the chapter, “Ways out of the Crisis: Approaches for the Preservation of the CFE Regime,” by Col. Wolfgang Richter.

retaliatory strike while the Trident was in flight was an important factor in the U.S. decision to halt the program.⁶ This decision was subsequently reinforced by the agreement by Presidents Obama and Medvedev at their July 2009 summit that the START follow-on agreement would include “A provision on the impact of intercontinental ballistic missiles and submarine-launched ballistic missiles in a non-nuclear configuration on strategic stability.”⁷

In this case, the United States did not restrict the conventional capability at issue with the specific goal of advancing nuclear weapon reductions, but rather to reduce the risk of inadvertent nuclear war. Nonetheless, the broader precedent of the United States voluntarily constraining a component of its conventional forces in order to reduce nuclear dangers has now been set and may encourage Washington in the future to consider carefully the potential impact of other novel conventional systems on nuclear decision-making in foreign capitals. (Concepts for constraining one such new system, the arming of U.S. Ohio-class submarines with scores of conventionally armed Tomahawk cruise missiles, are discussed in the Appendix to this section below.) Once again, it may be noted, the task of restraining a U.S. conventional system was facilitated by the fact that the party urging the change was not the target of the system.

II. Shaping U.S. Conventional Capabilities Over the Long Term to Facilitate the Ultimate Elimination of Nuclear Weapons

The three above cases make clear that even in the near term, the United States will have little choice but to begin weighing the trade-offs between maximizing its conventional military advantages and achieving desired reductions in nuclear arsenals and related nuclear risks. Indeed, the Obama administration, in its dealings with Russia over ballistic missile defenses, has shown itself to be well aware of this challenge. What is crucial is that the Obama administration not perceive this balancing as confined to the particulars of the START follow-on treaty negotiation

⁶ The January 1995 Black Brant incident, where a scientific rocket launched from Norway was initially misinterpreted by Russian defense officials as the launch of a single SLBM from a U.S. Trident submarine, triggering a false alarm, indicates that Russia believes the United States might initiate an attack with a single missile, using a high altitude nuclear detonation to generate an electromagnetic pulse to knock out Russian early-warning and communication systems. See Nikolai Sokov, “Could Norway Trigger a Nuclear War? Notes on the Russian Command and Control System,” Program on New Approaches to Russian Security Policy Memo 24, October 1997, Center for Nonproliferation Studies, https://gushare.georgetown.edu/eurasianstrategy/Memos/1997/pm_0024.pdf. It should be noted that when the Global Strike mission was first constituted, it counted nuclear weapons among its constituent components. The system was of sufficient concern to Russian planners that Moscow arms control officials have proposed strategic conventional delivery vehicles as candidates for possible limits in future strategic weapons treaties with the United States. The United States reportedly would prefer to keep any conventionally-armed delivery systems, like Trident, out of future nuclear arms control treaties. Interview with a former government official, Washington, D.C., April 2009.

⁷English text of full joint understanding is available at <http://www.armscontrolwonk.com/2384/joint-understanding-us-full-text>.

and subsequent near-term nuclear negotiations with Russia, but recognize it to be an unavoidable part of the administration's broader nuclear disarmament agenda, particularly where Russia and China are concerned.

In looking ahead as to how the conventional-nuclear relationship may be managed, it is useful to consider some basic principles. For the weaker state in a conventional dyad, multiple facets of the stronger state's capabilities are likely to be sources of concern. These can include:

- *The stronger state's strategic goals*, (e.g., whether it is perceived as seeking domination, a balance of power relationship, peaceful co-existence, or entente);
- *The stronger state's military doctrine* (e.g., whether is it offensively focused, including reliance on preemptive options, or defensively oriented);
- *The stronger state's conventional force deployments* (both the scale of such deployments and their location—threateningly close to the weaker state or at a more comfortable distance);
- *The stronger state's conventional force capabilities*, both qualitative and quantitative (e.g., whether and where it can project power, whether it enjoys numerical superiority in various force components, and the quality of its existing and planned weapon systems); and
- *The degree of secrecy the stronger state maintains* over its military affairs, which can increase the risk for the weaker state of strategic surprise.

From the weaker state's perspective, actions taken by the stronger state in each of these areas can fall across a spectrum from more reassuring to more threatening. If nuclear-armed potential U.S. adversaries are to be weaned from their nuclear arsenals, the United States will need to move slowly but steadily in each of these areas and possibly others towards the less threatening side of this spectrum.

Strategic Goals

Although the United States considers its strategic goals to be benign and non-threatening, these perceptions are not universally shared. To be sure, the United States is not seeking world domination in the style of Hitler or Stalin. From Russia's perspective, however, the U.S. intent to expand NATO to include Ukraine and Georgia, the establishment of U.S. military bases in Uzbekistan (now closed) and Kyrgyzstan, and U.S. support for anti-Russian revolutions in Ukraine, Georgia, and Kyrgyzstan were all perceived as expanding U.S. influence at Russia's expense and depriving it of a zone of states to buffer it from Western power. Plans to deploy missile defenses in Eastern Europe exacerbated Russian strategic concerns. China may similarly have perceived a hostile intent in the U.S.-India nuclear deal (ending an international ban on civil nuclear cooperation with India), through which the Bush administration sought to make India a strategic partner and a counter to Chinese influence in Asia.

As long as the United States remains wary of Russia and China, it will be difficult for any U.S. president to turn away from opportunities to diminish their influence. Nonetheless pressing for every advantage at the expense of these states can only heighten their anxieties regarding U.S. strategic intentions and make their ultimate elimination of nuclear arms the more difficult. While Washington will need to consider each future decision in this sphere on its own merits, U.S. policy will need to weigh in the balance the potential impact of each such choice on U.S. disarmament goals. Over time, if this factor is repeatedly recognized, it may slowly alter U.S. practice to help create an atmosphere more conducive to the elimination of nuclear arms.

The Obama administration appears to have begun this process, slowing a number of Bush administration initiatives of concern to Russia and seeking to recalibrate relations between the two states. Sustaining this style of interaction with Russia and with China over the long term, despite inevitable clashes over specific issues, will be essential to reduce concerns in Moscow and Beijing regarding U.S. strategic intentions.

Military Doctrine

At the level of military doctrine, the Bush administration's emphasis on preemptive and preventive warfare, including its ill-conceived war against Saddam Hussein, and its interest in assigning additional missions to nuclear weapons (although effectively stymied by the U.S. Congress), reinforced the image of a United States intent on expanding its power.

The Obama administration is tempering many of these policies, deemphasizing the Bush preventive war doctrine in dealings with Iran and North Korea, for example, and, at least as of mid-2009, the U.S. Congress, the American public, and U.S. allies appear satisfied that U.S. security requirements can be met without the assertiveness of the Bush years. The Nuclear Posture Review and Quadrennial Defense Review, both due later in 2009, are expected to reinforce this new orientation. From the standpoint of developing a strategic environment conducive to reductions and eventual eliminations of nuclear arsenals, this is all to the good. But the trend will need to be sustained over the long term to have the desired results in coming decades, something that may not always prove possible in the face of unexpected events.

Choices of specific conventional systems can also convey implicit messages about military doctrine. The conventionally armed Trident II/D-5 missile, for example, raised fears in China, in particular, that the United States might use the system preemptively to attack China's small force of strategic nuclear missiles. So serious did Chinese analysts consider this threat that they argued China should consider such a strike the equivalent of a nuclear attack, permitting China to retaliate with nuclear weapons despite its traditional no-first-use policy. As the United States makes future decisions regarding specific weapon systems, it will need to be

attentive to the doctrinal messages such weapon systems may convey and the possible impact on future nuclear disarmament decisions elsewhere.

Deployments

The scale of recent U.S. force deployments in Central Asia cannot be said to pose a serious new military threat to Russia, and U.S. forces in Europe have been partially redeployed to the Persian Gulf. Nonetheless, as noted earlier, the eastward expansion of NATO; the particular anti-missile system the United States proposes to deploy in Poland and the Czech Republic; and the very fact of U.S. military bases in Uzbekistan and Kyrgyzstan during the early 2000s are actual or de facto deployment decisions that raised serious concerns in Russia. The momentum of the first two of these U.S. actions is slowing under the Obama administration, and the United States no longer has bases in Uzbekistan. Nonetheless, this history shows that deployments can matter greatly. Thus, even if the perceived threats generated by the deployment decisions of the Bush Administration are now being mitigated, unless future deployment decisions are managed carefully, they may create security anxieties of their own that, in turn, could impede the movement towards nuclear disarmament.

As in the case of strategic decision-making, U.S. deployment decisions will need to be made on the merits of the particular situation at hand. Here, too, however, U.S. decision-makers should be encouraged to take account of the impact of such choices on U.S. nuclear disarmament policy. If the goal of nuclear disarmament is kept in view, over time, as nuclear reductions continue, it may come to play a larger role in U.S. deployment policy, influencing decisions in a manner that will reduce concerns of potential adversaries with nuclear arms and facilitate decisions to eliminate such weapons.

For its part, China's greatest concern regarding U.S. deployments is the presence of U.S. naval forces in the region to support the defense of Taiwan, as well as that of Japan and South Korea. As long as Taiwan's status remains unchanged, it is difficult to see how the United States can alter this pattern, or alleviate Chinese concerns that it must retain nuclear arms as a counter to possible U.S. coercion. Thus, this aspect of U.S. force deployment is likely to remain an enduring impediment to Chinese nuclear reductions, until a lasting accommodation between Taiwan and the mainland can be achieved.

Advanced U.S. Conventional Systems and Future Breakthroughs

One vital component of U.S. conventional military prowess has been the ability of the United States to develop and deploy advanced, sometimes revolutionary, military technologies. As such technologies find their way into the civilian economy, they can sometimes stimulate astonishing economic growth, the computer being a prime example. With this history and with so many organizations now participating

in military research and development, it is difficult to imagine constraining this extraordinary engine of innovation.

The more U.S. technological advances threaten to overpower the militaries of potential adversaries possessing nuclear arms, however, the more such adversaries may be driven to continue their reliance on nuclear weapons. The problem is exacerbated by the fact that the United States quite naturally seeks to maintain as much secrecy as possible over its military developments, stimulating fears elsewhere of technological surprise. Moreover, as new technologies are deployed, Washington not infrequently declines to identify the full scope of the program it envisions—such as the number of missile interceptors it may ultimately deploy in Poland—leaving potential adversaries to fear that use of the new technology will not be bounded.

Managing Prompt Global Strike.⁸ Because this problem may prove one of the most difficult to address in coming years, it is worth considering one example in greater detail, the U.S. program for prompt global strike apart from the conventionally armed Trident II/D-5 component discussed earlier. Russian strategic analysts have begun to write in some detail about the prospects that future advanced conventional weapons—together with improved missile defenses—could place Russia in a position of unacceptable vulnerability. This perception is not merely the product of wild speculation by non-specialists in the Russian press. The well-respected Maj. Gen. Vladimir Dvorkin (Ret.), who formerly directed fundamental research in mathematical modeling for nuclear planning, and then participated in virtually every major U.S.-Soviet strategic arms control negotiations, reflects the broad concern now existing in Moscow that conventional weapon imbalances represent a key roadblock to deep nuclear reductions. As Dvorkin notes:

[A Russian] concern is the possibility that high-precision conventional weapons could be used to destroy strategic targets. Precision-guided munitions (PGMs) pose a threat to all branches of the strategic nuclear triad, including the silo and mobile launchers of the Strategic Rocket Force strategic submarines in bases, and strategic bombers.⁹

If U.S. strategic conventional strike capabilities are only emerging today, Russian military planners must also worry about where such programs might be in a decade

⁸ The author is indebted to Dennis M. Gormley for his contributions to this section.

⁹ Maj. Gen. Vladimir Dvorkin (retired), "Reducing Russia's Reliance on Nuclear Weapons in Security Policies," in Christina Hansell and William C. Potter, eds., *Engaging China and Russia on Nuclear Disarmament*, Occasional Paper No. 15 (Monterey, CA: James Martin Center for Nonproliferation Studies, April 2009), p. 100. For its part, Russia would prefer to proceed along the conventional-oriented path that the United States has pursued since 1991. Russia's National Security Concept, published in 2000, notes that reliance on nuclear weapons is a temporary phenomenon. Once current plans to develop new air- and sea-launched cruise missiles and PGMs come to fruition by 2020, Russia will no longer need to rely predominantly on nuclear weapons for deterrence purposes. Still, there is no assurance that Russia will achieve these lofty goals.

or two. The U.S. Strategic Command's initial complement of forces comprising the Global Strike mission included the U.S. Air Force's F-22 fighter providing penetration corridors for B-52, B-1, and B-2 bombers loaded with conventional precision strike weapons. Although the Trident II/D-5 component has not been funded, the U.S. Navy has converted four of its 18 Trident Ohio-class submarines to each carry 154 Tomahawk land-attack cruise missiles, the latest version of which features a two-way satellite data link that permits the missile to attack one of 16 preprogrammed targets or take new GPS coordinates to attack a fleeting target of opportunity.¹⁰ Even more robust global strike systems could emerge from current research and development programs, including small launch boosters capable of launching highly maneuverable hypersonic glide vehicles, each able to carry a 500 kilogram (kg) conventional payload over international distances, and reusable unmanned hypersonic cruise vehicles capable of carrying 5,500 kg payloads over 14,500 kilometers within two hours.

Three options for reducing Russian concerns regarding prompt global strike could have wider application for other highly threatening conventional military programs, potentially creating increased prospects for nuclear reductions.

Practice full transparency regarding future global strike intentions. As a starting point, the United States should make a clear and comprehensive statement of the scope and purpose of the program, which is mired in vagueness, with various bureaucratic stakeholders offering differing interpretations of missile requirements and capabilities. Rather than being driven by any well-conceived concept of operation dictating how these various programs will transform military operations—the bellwether of truly revolutionary change—these efforts are propelled for the most part by raw technological momentum.

If the United States proceeds with developing a prompt global strike capability, transparency could also be significantly increased by involving Russia in the planning process in cases where such weapons are envisioned for use in Eurasia, for example against terrorist targets. A joint process, perhaps one in which some missions were even delegated to Russian forces, would engender trust and significantly reduce the risk of misinterpreting a conventional attack near Russian territory.

Adopt numerical limitations and reassuring declaratory policies. An additional option that combines both transparency and constraints would lie in counting strategic conventional delivery vehicles in U.S.-Russian arms control treaties as if they were nuclear-armed. The same may hold for future

¹⁰ Assuming it has reserve fuel, the missile can also loiter in the area for hours awaiting a more important target, as well as pass information from its own camera on battle damage. Instead of filling each of the four Trident submarines with its full complement of 154 Tomahawks, a few missiles can be traded off for special-operations mini subs or small reconnaissance UAVs.

hypersonic cruise and glide vehicles, not least because, in fact, they would be theoretically capable of delivering nuclear payloads.¹¹ It might also be helpful to make a policy decision and a declaration to Russia that UAV's will only be used for conventional missions.

Constrain deployment areas. Russian analysts are concerned that Tomahawk carrying Ohio-class subs will operate so close to Russian territory as to permit them to target fixed and mobile Russian strategic forces.¹² To build Moscow's confidence that Russian strategic land-based missiles will not be the target of these U.S. systems, the United States could evaluate the possibility of constraining the patrol areas where the Ohio-class submarines operate, so that Russian strategic assets would remain beyond the range of the Tomahawks. A U.S. declaration that Ohio-class submarines would be restricted in this way, though not verifiable, could be a confidence-building measure that might help alleviate Russian concerns. (See Appendix to this section.)

The example illustrates that although it may not be feasible to slow the pace of future U.S. advances in military technology, it may be possible on a case-by-case basis to mitigate their impact and reassure potential adversaries, so as to facilitate nuclear disarmament goals.

Secrecy

Secrecy is inherent in military planning and cannot be completely eliminated. Secrecy also leads, however, to "worst casing" by potential adversaries. Thus to the extent it can be reduced in the case of advanced conventional systems, potential adversaries may come to see them as less threatening, reducing the need for continued reliance on nuclear weapons. At a minimum, in the case of programs like prompt global strike and missile defenses that ostensibly are not directed against Russia or China, greater disclosures to allay their possible concerns is good practice, sustaining positive political relations in the near term and, if adopted as a standard approach, potentially paying long-term dividends in the form of further nuclear reductions and possible elimination.

¹¹ This is the approach suggested by former arms control negotiator, Linton Brooks, but it is by no means the likely approach that will be taken by U.S. negotiators. The latter may well submit to such counting rules for Trident, and even future hypersonic delivery means, but it is more doubtful that Ohio-class submarines would be counted as nuclear delivery systems. The preference there is for them to be grandfathered in as conventional-only systems.

¹² Such an operational pattern is not fanciful in light of the speed and quietness of the Ohio-class family of submarines.

III. Conclusions and Recommendations

U.S. conventional military capabilities have made possible significant reductions in U.S. nuclear weapons. Ironically, if not handled properly, however, such capabilities may also impede if not prevent the global elimination of nuclear arms. Speaking at a conference in Rome in April 2009, Mikhail Gorbachev asked, “whether it could be considered realistic that ultimately one country might remain with an amount of conventional weapons nearly surpassing the arsenals of all other countries together, that is, that this country might have absolute military dominance in the world.”¹³ He continued, “Military superiority would be an insurmountable obstacle to ridding the world of nuclear weapons. Unless we discuss demilitarization of international politics, the reduction of military budgets, preventing militarization of outer space, talking about a nuclear-free world will be just rhetorical.”¹⁴

As difficult as it may be to imagine a world without nuclear weapons, it is even more difficult to imagine a world where the United States willingly surrenders some of its military advantages and capabilities, especially in computing and aerial (and space-based) reconnaissance. U.S. officials will argue those advantages are essential in a non-nuclear world, even as most of the rest of the world argues, just as strongly, that overwhelming military superiority in the hands of a self-selected few is not an acceptable outcome. Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons recognizes the linkage between nuclear disarmament and general disarmament, but when that language was proposed, it was included primarily for political reasons. No one envisioned the kind of sophisticated conventional capabilities that exist today, let alone that they would be in the possession of only a handful of countries.

Perhaps the most important conclusion from the above analysis is that U.S. conventional capabilities will unquestionably affect nuclear decision-making in Russia and China in the long term, as the reduction of nuclear arsenals unfolds and their eventual elimination is considered. Indeed, existing U.S. conventional capabilities are already affecting current nuclear decision-making in these states. It is also clear that mechanisms exist for tempering the impact of the U.S. conventional military juggernaut, some of which are being implemented today or will be part of negotiations with Russia on the START follow-on treaty and on theater nuclear weapons.

Because U.S. relations with both Russia and China are generally friendly and at least some emerging U.S. conventional capabilities are not directed at them, it should be possible in many settings to make adjustments in U.S. conventional force planning to accommodate the concerns of these two states, while nevertheless permitting the United States to meet its own national security requirements. Over the longer term,

¹³ “U.S. Military Power Could Hinder Nuclear Disarmament Goals, Gorbachev Says,” Global Security Newswire, April 17, 2009, http://www.globalsecuritynewswire.org/gsn/nw_20090417_5439.php

¹⁴ Ibid.

however, the United States must recognize that its strategic objectives, military doctrines, conventional force deployments, conventional weapon systems, and military secrecy practices can all affect U.S. nuclear disarmament goals and that this reality needs to be considered as decisions in each of these areas are made. Over time, by taking such considerations into account, it may be possible for Washington to make U.S. conventional capabilities appear less threatening in Moscow and Beijing and create a greater readiness in these capitals to consider the elimination of nuclear arms.

For the immediate future, because this issue has received so little analysis in the ongoing debate over “getting to nuclear zero,” Germany can make an important contribution simply by continuing to call attention to this potentially serious obstacle to further nuclear reductions and eventual nuclear disarmament; underscoring that U.S. conventional capabilities are already intruding on nuclear reduction negotiations; highlighting that a panoply of arms control tools and related mechanisms, including unilateral restraints, can help manage this challenge; and urging that the issue receive serious study by the United States, other interested governments, NATO, and the arms control and disarmament community. Germany made an excellent start in this regard by hosting the international conference in Berlin in June 2009.

There are no easy solutions to this dilemma, but it is clear that some restrictions on conventional weaponry will be essential to the ultimate success of future nuclear disarmament efforts.

Appendix¹⁵

Prompt Global Strike: Ohio-Class Submarines Armed with Tomahawk Missiles

Limitations on Submarine Patrol Areas

If there is a solution to the conventional superiority issue, it lies less in trying to convince Russia that current or prospective U.S. advanced conventional strike systems are incapable of achieving what Moscow fears, and more in conceiving of options that might allay those concerns over the longer run. Thus, while, the United States should provide as much transparency as possible, it should also examine at additional mechanisms to build Moscow's confidence that it will not be the target of these capabilities.

One option the United States should evaluate is the possibility of constraining the patrol areas where Ohio-class Trident submarines bearing Tomahawk missiles operate. Russian analysts are concerned that they will operate sufficiently close to Russian territory to permit them to target fixed and mobile Russian strategic forces. Indeed, such an operational pattern is not fanciful in light of the speed and quietness of the Ohio-class family of submarines. They could quite conceivably, although not without some risk, operate with impunity not only inside a state's 200 nautical mile (nm) exclusive economic zone, but also within its 12 nm territorial waters.

To evaluate one mechanism to allay Russian concerns in this respect, we examined whether constraining Ohio-class submarines to a patrol area just outside Russia's 200 nautical mile exclusive economic zone might reduce the perceived threat of their striking Russian strategic nuclear forces (fixed and mobile forces, together with submarines bases), a set comprised of 14 large-area targets. Figure 1 (see next page) illustrates this option.

¹⁵ The author is indebted to Dennis M. Gormley and Johan Bergenas for preparing this appendix.

Figure 1: Examining the threat to Russia from Tomahawk-armed Ohio-class submarines

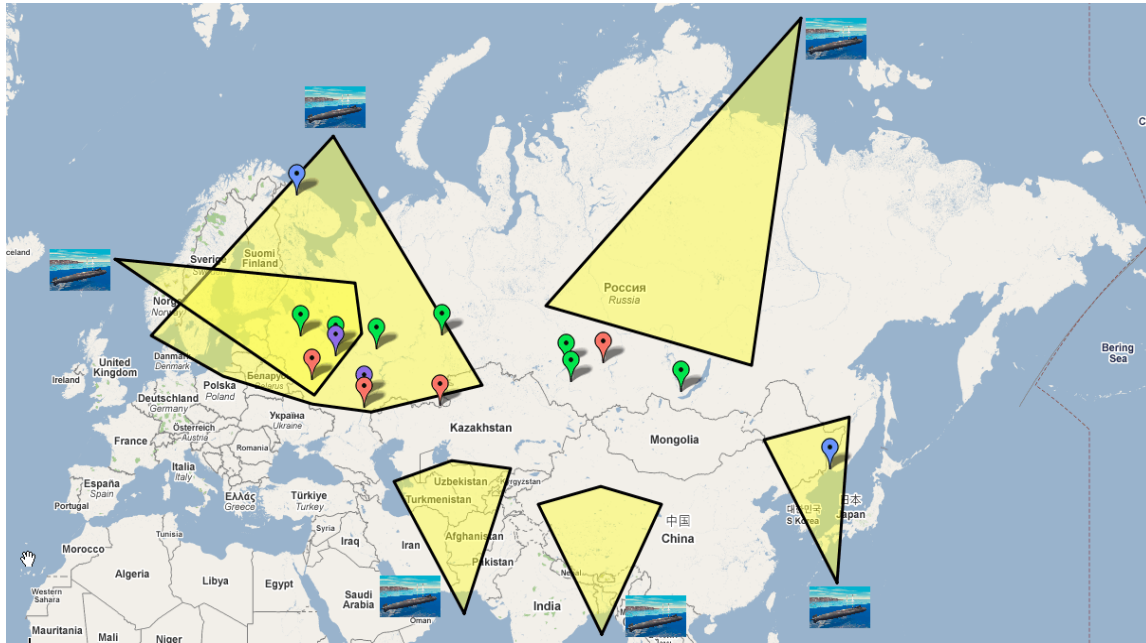


Figure 1. Red markers = silo fields, green markers = mobile missile garrisons, blue markers = submarine bases. The yellow bans depict the reach of Tomahawk cruise missiles launched from Ohio-class submarines positioned 200nm off the coast of any state. Six submarine launch areas are shown here, but currently the U.S. Navy possesses only four such submarines.

Assuming that Tomahawks have a maximum operational range of 2,500km, Ohio-class submarines would be able to reach nine of the 14 target areas. Importantly, however, three mobile divisional bases (housing today 99 Topol mobile missiles), and two fixed strategic missile groups (with 68 SS-18 missile silos, each missile armed with 10 independently targetable warheads)—together representing 57 percent of Russia’s land-based Strategic Rocket Forces—would not be within reach of Tomahawk missiles. Although offering to adopt such keep-out zones as a confidence-building measure seems unnecessary, since it is highly uncertain whether conventionally armed Tomahawks could actually threaten hardened missile silos or track mobile missile systems, U.S. planners should examine in much greater detail the merits and pitfalls of employing this and similar operational constraints in order to allay Russian fears.¹⁶

¹⁶ Even were these submarines to operate from within territorial waters, there would be little fuel remaining for advanced Tomahawks to employ their loiter and search capability against mobile missiles.

Issue 2

Germany, Nuclear Disarmament, Nonproliferation, and NATO

Patricia M. Lewis, Lead Author

The age of bloc confrontations, in which nuclear weapons created a cynical security, is over. We cannot resolve the problems of our time with the politics of mistrustful isolation and deterrence, which prevailed during the Cold War.... For the first time in humankind's history, we can only resolve central problems if we work together.... Nuclear weapons and other weapons of mass destruction neither create modernity nor prosperity. On the contrary, if a growing number of countries have them, they will create less security – even for those countries in possession of them.*

Frank-Walter Steinmeier
Foreign Minister of Germany
2008

I. Background: The German Advantage

This study considers the major multilateral arms control issues and discusses each in terms of recent German initiatives and proposals and their role in the EU and NATO. From the analysis, it can be seen how each proposal from Germany has had an impact in the arms control and disarmament arena, and from this, initiatives are proposed to enhance the advantage that Germany has already created for itself. This will be particularly important for the new U.S. Administration as it seeks to find a way to reengage multilaterally and searches for partners that have legitimacy, authority, and connections that bridge across the various nuclear weapon divides. At the end of the paper, proposals for German consideration that would be of significant international interest are presented. The proposals are practical – some immediate and relatively straightforward, others are for the longer term.

* Speech by Frank-Walter Steinmeier, Federal Minister for Foreign Affairs, at the CTBT Ministerial Meeting, New York, September 24, 2008, Das Auswärtige Amt, <http://www.auswaertiges-amt.de/diplo/en/Infoservice/Presse/Reden/2008/080924-BM-CTBT.html>.

II. Multilateral Arms Control – The Nuclear Nonproliferation Treaty (NPT)

Since well before the birth of the NPT, Germany's role in the nuclear nonproliferation regime has been one of the most significant. West Germany's entry into NATO, the founding of EURATOM, and the debates over the 1955 NATO exercise *Carte Blanche* and the MLF proposal all set the scene for the FRG signature of the NPT in 1969 and ratification in 1975.

That Germany could have developed nuclear weapons, debated developing nuclear weapons, and has chosen not to develop nuclear weapons means that it plays a unique and important role in the successful management and development of the NPT – a fact that is well understood by all other States Parties, and by those outside the treaty. Germany is well-placed to play a more influential role in the NPT and related fora. However, to do that, it is necessary to understand where and when Germany has had serious effect and where and when its creative work has had little serious impact and why.

The NPT: State of Play

The NPT is at a critical point in its history. Since its entry into force, the NPT is credited with being one of the most important pieces of international legislation in the realm of international peace and security. There are now only three countries that have never joined the treaty (India, Israel and Pakistan) and the norms of the Treaty are considered the international standard for all matters nuclear. However, the Treaty is most certainly at risk of erosion. Ever since the discovery of Iraq's clandestine nuclear weapons program by the IAEA-UNMOVIC in 1991, the Treaty has continued to suffer a number of serious assaults.

Not least of these are the fast developing illegal weapons program and withdrawal announcement by North Korea and the continuing non-compliance of Iran with its safeguards obligations and UN Security Council resolutions. Despite many positive developments with regard to the treaty, such as the near-universal participation since 1997, the accession to the treaty by South Africa as a non-nuclear weapon state, and the indefinite extension of the treaty in 1995, the insults to the treaty seem to outweigh the compliments, and Germany is not alone in fearing for the long-term integrity of the NPT.

The new U.S. Administration of President Obama has correctly understood that the counter-proliferation policies of the last decade have been largely counter-productive. As Germany and other European allies had warned, the pursuit of anti-proliferation policies without concurrent disarmament progress has severely imbalanced the carefully constructed stewardship of the non-proliferation regime.¹As a result, the countries that still care deeply about the NPT – its basic

¹ Riecke, Henning, "Nuclear Disarmament and the 2010 NPT Review Conference: The Position of the Major European Players," *Atlantisch Perspectief* 2008 No. 4, Netherlands Atlantic Association.

bargains and its sustainability – have their work cut out to redress the balance, build confidence in the intentions of the nuclear weapons states, and prevent further proliferation.

The 2009 Preparatory Committee (PrepCom) of the NPT marked the beginning of what could be a new partnership across the divides. However, trust in the process is low and will remain so until States Parties are convinced that the new approach from the United States is long-term and that it can bring its allies and other nuclear weapons states with it. Nonetheless, the adoption of the agenda for the 2010 Review Conference so early in the PrepCom meeting and the endorsement of the Chair-Designate for the 2010 session have prepared very well for that event. There is a great deal of work to be done over in coming months to create a constructive atmosphere within the NPT discourse. Germany could play a significant role in that process and make a lasting contribution to the longevity of the NPT.

German Initiatives Within the NPT Framework

German Foreign Minister Klaus Kinkel's ten-point initiative of December 1993 was a major nonproliferation initiative, notable primarily for two things: 1) the rather prescient insistence that military enforcement measures against proliferators, pursuant to Chapter VII of the UN Charter, necessitate always – except in the case of defense against armed attack – the legitimacy of the U.N. Security Council; and 2) the proposal of a nuclear weapons register to build transparency in the nuclear weapons stockpiles. The proposal was not supported by the nuclear weapons states, although it was proposed again by the UK's Robin Cook in 1995 when he was UK Shadow Foreign Affairs spokesperson. (He did not follow through with this once he was the UK Secretary of State for Foreign and Commonwealth Affairs, however.) The idea was further developed in a paper submitted to the NPT PrepCom in 2002 on "Attaining a Nuclear-Weapon-Free World," in which Germany made the strong case that a reliable inventory of all nuclear weapons and stocks of fissile material usable for military purposes needed to be established. The paper pointed out that only on the basis of comprehensive and reliable data would it be possible to implement the final steps towards the establishment of a nuclear-weapon-free world. Now that the debate on nuclear disarmament has taken on new momentum, it may be possible to consider again the nuclear weapons inventory idea, learning lessons from the past and recasting it in a new light.

At the NPT PrepCom in 2002, Germany tabled a Working Paper on non-strategic nuclear weapons, which built on the conclusions of the 1990 London meeting of the North Atlantic Council that stated: "As a result of the new political and military conditions in Europe, there will be a significantly reduced role for sub-strategic nuclear systems of the shortest range." The paper was developed from the NPT Review Conference in 2000, which had agreed to the "Thirteen Practical Steps" for the systematic and progressive efforts to implement Article VI of the NPT. Step Nine included the following language: "The further reduction of non-strategic nuclear weapons, based on unilateral initiatives and as an integral part of the nuclear arms

reduction and disarmament process.” (The approach to theater nuclear weapons (TNW) in Europe is the focus of the section of this study entitled, “Issue 4 Tactical (Substrategic) Nuclear Weapons,” and so will not be dealt with in any detail here, except to explore how Germany’s role in resolving the issue would strengthen the NPT and assist the work in the Conference on Disarmament (CD) .)

The multilateral approaches to the fuel cycle proposal contained in IAEA INFCIRC/704, in which Germany proposed the creation of a multilateral uranium enrichment center with extra-territorial status, has been further developed into the proposal for a “Multilateral Enrichment Sanctuary Project” and has caught the imagination of the international community.

In 2009, at the NPT PrepCom, Germany and Russia co-tabled a working paper on Principles of Fuel Supply Guarantees and the Multilateralization of Fuel Cycle Activities (NPT/CONF.2010/PC.III/WP.22), which suggests that countries should have the opportunity to choose among different supply chains and different types of guarantees. This is a very liberating idea, in that there are now over a dozen proposals for multilateral approaches to the fuel cycle, allowing many flowers to bloom. Empowering countries in this way to be able to make their own choices is very creative. Germany’s collaboration with Russia on this working paper was also perceived as useful. Russia has been one of the few countries that have invested serious effort and resources to establish as the first step, an international uranium enrichment center in Angarsk. The paper signaled also that the work between Germany and Russia over several years on the nuclear fuel cycle has developed to the point from which genuine international collaboration could flow. This established practical relationship between Russia and Germany in the field of the nuclear fuel cycle adds value to Germany’s role in the NPT framework from the point of view of the United States.

In 2004, Germany tabled two significant Working Papers at the NPT PrepCom on: (1) “Strengthening the NPT Against Withdrawal and Non-Compliance; Suggestions for the Establishment of Procedures and Mechanisms,” (NPT/CONF.2005/PC.III/WP.15); and (2) “Compliance” (NPT/CONF.2005/PC.III/WP.16). The papers contained a number of practical concepts on which further ideas and suggestions have been developed.

The Working Paper on withdrawal and non-compliance looked at ways to structure the withdrawal process, communications between states parties and reactions to a withdrawal. Some of these proposals were then developed by Germany in the 2010 review cycle in the working paper tabled in 2008 on a successful 2010 Review Conference (see below). The Working Paper on compliance addressed issues such as: ensuring the detectability of significant violations; preventing misuse of civilian nuclear programs for military ends; securing and eliminating weapons usable nuclear materials and nuclear weapons; enhancing international response capabilities and enforcement; and adopting a credible approach towards the de facto nuclear weapon states that remain outside the NPT. Given the failure of the

2005 NPT Review Conference to produce a final document, it is important that relevant ideas and suggestions find their way through to the 2010 Review Conference and also find resonance in the new atmosphere of cooperation and forward planning.

In 2008, Germany tabled two Working Papers on 1) “Creating a New Momentum for an FMCT [Fissile Material Cut-Off Treaty],” which is dealt with below under FMCT and 2) “Working Towards a Successful 2010 NPT Review Conference,” (NPT/CONF.2010/PC.II/WP.22). The second working paper pulls together some of the approaches taken up in 2002 and 2004, recasting them in the light of 2008. The paper is notable for the proposal of a “New NPT Implementation Baseline” that would comprise a comprehensive, realistic twin-track approach, strengthening the non-proliferation regime and instilling a new momentum into the process of nuclear disarmament. The nonproliferation track would include: determined support for solving pressing proliferation risks, in particular Iran and North Korea; making the IAEA Additional Protocol the new verification standard; a solution to the risks posed by the nuclear fuel cycle; joint understanding on withdrawal from the NPT; institutionalizing UN Security Council Resolution 1540 by defining obligations and best practice guidelines, assistance for effective national export controls, the safeguarding of nuclear materials, and the adoption of national implementation laws; and strengthening the role of the UN Security Council as the final arbiter on the consequences of non-compliance.

The disarmament track would include: overcoming the deadlock in the Conference on Disarmament and negotiating a treaty banning the production of fissile materials for weapons purposes, i.e., the FMCT; a follow-on to the START I and SORT treaties; an arms control approach to non-strategic nuclear weapons; the entry into force of the Comprehensive Test Ban Treaty (CTBT); the establishment of accountability and reporting obligations and capping of nuclear arsenals in support of NPT Article VI; exploring ways to formalize existing security assurances; and bringing all existing nuclear-weapon-free zones (NWFZs) into force.

It is worth noting that most of the above is already the stated intention of President Obama. It would pay Germany to be less cautious in new proposals in 2010 and support the quest for a nuclear-weapon-free world with more ambitious ideas.

Germany, the EU, and the NPT

The 2003 EU Strategy against Proliferation of Weapons of Mass Destruction, as adopted by the European Council, contains a list of measures that need to be taken both within the European Union and in third countries to combat such proliferation.² The 2003 EU Common Position on Weapons of Mass Destruction

² 2003/805/CFSP Council of the European Union, Council Common Position of November 17, 2003, on the Universalisation and Reinforcement of Multilateral Agreements in the Field of Non-

(WMD) promotes the universal ratification of, and adherence to, multilateral nonproliferation treaties and agreements, including the NPT, and, where necessary to reinforce their provisions, ensuring compliance with them. In the Common Position, the EU and its Member States pledge to “pay particular attention to the need to reinforce compliance with the multilateral treaty regime by enhancing the detectability of violations and strengthening the enforcement of obligations....”³

The Common Position states that the NPT is

... the cornerstone of the global non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament, under Article VI. Achieving universal adherence to the NPT is of crucial importance. To that end, the EU will: call on all those States not yet parties to the NPT to accede unconditionally to the NPT as non-nuclear-weapon States and to place all their nuclear facilities and activities under the provisions of the IAEA Comprehensive Safeguards System; urge those States not yet having entered into Safeguards Agreements with the IAEA to fulfill their obligations in accordance with Article III of the NPT and to conclude such agreements as a matter of urgency; promote all the objectives laid down in the NPT; support the Final Document of the 2000 NPT Review Conference and the Decisions and Resolution adopted at the 1995 NPT Review and Extension Conference; promote further consideration of security assurances; promote measures to ensure that any possible misuse of civilian nuclear programmes for military purposes will be effectively excluded.⁴

Germany belongs to no other like-minded group in the NPT. It does not belong to the NATO-7, to the Vienna-10, or to the New Agenda Coalition (NAC). So when Germany develops a working paper, replete with practical ideas for moving forward, it generally does so alone (with the exception of the Russia-German paper on the fuel cycle, noted above), with no collaboration other than within the EU. However, although the hand of Germany is evident in the drafting of EU working papers, the content of the papers is usually less than the sum of its parts. And so, Germany’s ideas are either presented alone or – in order to obtain wider support – are watered down through intra-EU negotiation. In many ways this limits the actions of Germany and reduces cross-regional support for Germany’s proposals.

For example, Ireland and Sweden are in the EU, the NAC, and the Vienna-10. So in addition to their own national statements and working papers, they have three

Proliferation of Weapons of Mass Destruction and Means of Delivery, Official Journal of the European Union ,20.11.2003 L 302, available at

<http://www.reachingcriticalwill.org/political/dc/papers06/wg1crp4eu.pdf>.

³ Ibid.

⁴ Ibid.

other groups (as well as the Western Europe and Others Group (WEOG)) to influence in favor of their ideas. In addition, because of their prominence in all of the groups, those outside those groups seek them for their influence and for their advice. Germany may carry significant weight in the EU, but in the end, progressive ideas are often diluted by the two EU nuclear weapon states and certain fixations by other countries may have similar effect. So Germany's edge in the NPT has resided, to some extent by Germany acting alone. However, having an edge and being on the edge are quite different postures. Germany needs to plan how to maximize its influence by retaining its edge whilst being more in the center of the play. The 2009 joint paper with Russia on the fuel cycle was an excellent example of how partnership in the NPT discourse can assist in elevating important proposals. Germany's relationship with Russia in this regard was highlighted, ensuring that others, including the United States, are now fully aware of that as a potential new opportunity for further exploration. Germany can – and undoubtedly will – leverage the collaboration, to enhance its long-standing role as a lynch-pin in the East-West dialogue.

The Special Case of Iran, Germany, and the EU3

Germany has, however, cast itself in a very special role in the former EU3-Iran talks and the now P5+1-Iran process. Germany is the only non-nuclear weapon state to participate in the talks with Iran, and this has lent Germany a special status in the eyes of the world, as it clearly has such a status in the eyes of the P5. This special position affords Germany some leverage on other issues in the EU and allows it to expect that new ideas on nonproliferation and disarmament should be considered carefully by the P5 in the context of the Iranian dialogue. Carefully casting proposals that are in the long-term interests of preventing proliferation and resolving the Iran nuclear issue could allow a fresh look at proposals of transparency and accountability by the nuclear weapons states. In particular, depending on how the recent Iranian elections ultimately play out, Germany could find itself in a unique position on Iran, the Middle East, peaceful uses of nuclear energy and nonproliferation and could be of considerable importance in helping the international community find a way through the maze.

Germany, NATO, and the NPT

NATO as a body is not a visible player in the NPT framework, although some of the NATO states (such as the likeminded NATO-7) do work collectively to produce working papers. However, aspects of NATO policies have a significant impact on the NPT debates and on the relationships between the nuclear weapon states and their allies and others – particularly the Non-Aligned (NAM) states.

The thorny issues of nuclear sharing and its cousin, extended deterrence, are such examples. Regularly and consistently, these two issues arise in the debates on nuclear proliferation and nuclear disarmament. It is beyond the scope of this analysis to delve into NATO policy and the historic record of nuclear sharing vis-à-

vis the legal obligations of the NPT, but it is worth noting that the issue of nuclear nonproliferation and nuclear disarmament will require reanalyzing the policies of extended nuclear deterrence and NATO nuclear sharing, including the basing of U.S. nuclear weapons in a number of European NATO states. In order to achieve nuclear disarmament, each state within NATO will have to address its reliance on nuclear weapons as part of its defensive doctrine and shift to a non-nuclear strategy. This will be hard, not just for the nuclear weapons states but also for several non-nuclear weapon states. Foreign Minister Steinmeier has made this very clear in recent speeches, including in the Bundestag April 24 debate, saying that a tactical nuclear weapons agreement has to be part of reaching the goal of complete nuclear disarmament. "If we want Europe to evolve into a nuclear-free zone, then what I say of course also applies to the remaining nuclear weapons in Germany."⁵ The debate leading up to the NATO Strategic Review will be watched closely by those outside the alliance and will play into the 2010 NPT Review Conference.

III. Multilateral Arms Control – The Comprehensive Test Ban Treaty

The CTBT: State of Play

Since the end-game of the CTBT negotiations in 1996 in the Conference on Disarmament in Geneva, the treaty has continued to suffer from India's use of the veto at that time to prevent the forwarding of the CTBT text from the CD to the UN General Assembly in New York. One of the reasons given by India – and the feature of the treaty that has prevented its implementation – was the inclusion of 44 named countries whose ratification of the pact was required to bring the treaty into force. In 1998, India carried out two sets of nuclear weapon tests (having carried out no such tests since 1974), with Pakistan replying in kind. In 1999 the United States Senate voted against ratification of the CTBT by 51 votes to 48 in favor. Ratification of the treaty would have required 67 votes in favor.

The decision by the U.S. Senate not to give its consent to ratification shocked the whole arms control and nonproliferation agenda into a stupor and has effectively prevented the entry into force of the CTBT. Of the 44 needed ratifications, six countries that have signed the Treaty have yet to ratify, China, Egypt, Indonesia, Iran, Israel, and the United States. Another three countries – the DPRK, India and Pakistan – have not yet even signed it. As of May 2009, 180 States worldwide have signed the CTBT, and 148 have ratified.

With the current U.S. President saying that he will "will immediately and aggressively pursue U.S. ratification of the Comprehensive Test Ban Treaty," there may be a chance that the U.S. Senate will ratify in 2010. Should this be agreed in the United States, there could be a "chain reaction" of ratifications of the treaty (China,

⁵ Oliver Meier, *Arms Control Today*, May 2009.

Indonesia, and Egypt are among the possible early post-U.S. ratifications).⁶ Given the strongly negative reaction by India's newly appointed Foreign Minister, S. M. Krishna to North Korea's May 25, 2009, nuclear weapon test, it is possible that India might reconsider its opposition to the treaty and join it. Krishna declared, "For the Democratic People's Republic of Korea to conduct such a test in violation of its international commitments is unfortunate. Like others in the international community we are concerned at the adverse effect on peace and security in that region of such tests."⁷ The Indian Prime Minister's special envoy, Shyam Saran, quoted in the *Times of India* on May 26, 2009, declared:

India has been a consistent votary of a CTBT but did not sign the CTBT as it eventually emerged because it was not explicitly linked to the goal of nuclear disarmament.... For India, this was crucial since it was not acceptable to legitimize, in any way, a permanent division between nuclear weapon states and non-nuclear weapon states.⁸

If India were to sign and ratify the CTBT, it is likely that Pakistan would follow suit. Should the international community reach that point, the decision on whether to allow North Korea, for example, to prevent the CTBT from entering into force would need to be discussed. Provisional application of the Treaty is possible under the Vienna Convention and may be the preferred option in such a situation.

German Initiatives in the CTBT

Germany is the third largest contributor to the CTBTO Provisional Technical Secretariat (PTS) in Vienna, donating 8.7% of the total budget. The first Executive Secretary (1996-2005) of the CTBT PTS was Ambassador Wolfgang Hoffman, former German Ambassador to the CD during the CTBT negotiations who had chaired the 1994 working group on verification. Germany ratified the Treaty in 1998, being the nineteenth state to do so, and remains an active proponent of the Treaty in every relevant forum. Indeed, during the deliberations in the Nuclear Suppliers Group over the U.S.-India deal, Chancellor Merkel made the issue a significant piece of her platform in her late 2007 visit to India.

⁶ Remarks by President Barack Obama, Prague, the Czech Republic, April 5, 2009, http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/.

⁷ North Korea's Nuclear Test Triggers Outrage," ThaiIndia News, May 25, 2009, http://www.thaindian.com/newsportal/world-news/north-koreas-nuclear-test-triggers-outrage_100196804.html.

⁸ "India Takes Tough Stand on North Korea Nuclear Test," *Times of India*, May 26, 2009, <http://timesofindia.indiatimes.com/India/India-takes-tough-stand-on-North-Korean-nuclear-test/articleshow/4576912.cms>.

Germany, the EU, and CTBT

The European Union is an effective actor in the push for entry into force of the CTBT. It is one of the few issues on which there is complete agreement within the European Union, across the domestic political divides and across international boundaries.

The 2003 EU Common Position includes the promotion of the early entry into force of the CTBT. In February 2009, the Foreign Minister of three successive European Union Presidencies, (the French, Czech, and Swedish Presidencies) sent a letter to the remaining Annex II countries whose ratification is necessary for entry into force, appealing to them to sign and/or ratify the treaty without delay. The European Union has adopted an action plan for the promotion and entry into force of the CTBT that aims to address in particular, systematically, and at a high level, the issue of ratification and, where necessary, of signature of the CTBT, at European Union meetings with relevant partners. More boldly the European Union urges all States to dismantle all their nuclear testing facilities in a transparent process open to the international community.

Germany, NATO, and the CTBT

The CTBT has been a far more contentious issue in NATO than the NPT or most of the other nuclear arms control issues. This is not only because of the U.S. Senate's 1999 decision not to consent to ratification of the CTBT, but more importantly because of the hostility of the George W. Bush administration to the accord. In 2000, during the final year of the pro-CTBT Clinton administration, in the Final Communiqué Ministerial Meeting of the North Atlantic Council held in Florence, Italy, NATO Ministers agreed: "We remain committed to an early entry into force of the Comprehensive Test Ban Treaty (CTBT), and in that context, welcome the Russian Duma and Federation Council's approval of the ratification of the CTBT by Russia. Pending entry into force of the CTBT, we urge all states with nuclear capabilities to abide by a moratorium on nuclear weapon test explosions or any other nuclear explosions and refrain from any actions which are contrary to the obligations and provisions of the CTBT."⁹ In contrast, in the group's 2001 communiqué the mention of the CTBT was relegated to: "As long as the Comprehensive Nuclear Test Ban Treaty (CTBT) has not entered into force, we urge all states to maintain existing moratoria on nuclear testing." In 2002 there was not a single mention of the CTBT, nor in 2003, 2004, 2005, 2006, 2007, 2008, and 2009.

At the Sixtieth Anniversary Meeting in Strasbourg/Kehl, in April 2009, NATO Heads of State and Government requested the Secretary General to convene and lead a

⁹ Final Communiqué, Ministerial Meeting of the North Atlantic Council held at NATO Headquarters, Brussels on 14 and 15 December 2000, Press Release M-NAC-2(2000)124, December 15, 2000.

broad-based group of qualified experts, which will lay the foundation to develop a new Strategic Concept for approval at the next summit. This could be an easy opportunity to re-cement NATO support for the CTBT – particularly if it is done at a time when it may positively influence the U.S. Senate debate.

IV. Multilateral Arms Control – A Ban on the Production of Fissile Material for Weapons Purposes (Fissile Material Cut-Off Treaty - FMCT)

FMCT: State of Play

At the time of writing, the CD is poised to begin negotiations on an FMCT for the first time in more than a decade.

The FMCT really began as a concept in 1946 with the Baruch Plan that contained an International Atomic Development Authority Proposal for “managerial control of all atomic energy activities potentially dangerous to world’s security.” Then in 1953 President Eisenhower in his Atoms for Peace speech said, “The United States would seek more than the mere reduction or elimination of atomic materials for military purposes..... The atomic energy agency could be made responsible for the impounding, storage and protection of the contributed fissionable and other materials.” Through the 1950s to the 1980s, many proposals from East and West on FMCT-type measures were made but none obtained traction. Then in 1978 at the UN Special Session on Disarmament (SSODI), Canada submitted a proposal to ban fissile materials for use in weapons. Following on from SSOD1 in 1980, Canada tabled a proposal in the CD for, “The Prohibition of the Production of Fissionable Material for Weapons Purposes.” Thanks to stalemate in the CD due to the Cold War, little progress was made until it ended. In 1993, the UN General Assembly agreed on a consensus resolution calling for negotiations on a treaty to ban the production of fissile material for weapons purposes and in 1995, the CD adopted the Shannon Report (known as the Shannon Mandate) to establish an Ad Hoc Committee to negotiate the treaty.¹⁰ The report had proposed an Ad Hoc Committee to negotiate a ban on the production of fissile material for nuclear weapons or other nuclear explosive devices that would be non-discriminatory, multilateral, and internationally and effectively verifiable. The mandate did not preclude any delegation from raising issues for consideration in the Ad Hoc Committee (including issues regarding the appropriate scope of the convention).

Several attempts have been made to begin negotiations in the CD on an FMCT. In August 1998, a CD FMCT Ad Hoc Committee was formed under the leadership of Canadian Ambassador Mark Moher. The committee met twice before the end of the final session, with a “gentlemen’s agreement” to reconvene 1999. However, in

¹⁰ Report of Ambassador Gerald E. Shannon of Canada on Consultations on the Most Appropriate Arrangement to Negotiate a Treaty Banning the Production of Fissile Material for Nuclear Weapons or Other Nuclear Explosive Devices, CD/1299, March 24, 1995, available at <http://www.reachingcriticalwill.org/political/cd/shannon.html>.

January 1999 China blocked progress, demanding equal treatment of a treaty for the prevention of an arms race in outer space (PAROS) and nuclear disarmament.

In 2000, the Amorin Proposal CD/1624 was framed as a means for launching negotiations but failed, and the 2002 Five Ambassadors (A5) proposal met the same fate, as did the draft Presidential Decision of 2008.¹¹ Coming in the midst of all this effort was the announcement by the United States that as a result of an internal review, it now believed that “effective international verification of an FMCT is not realistically achievable.”¹² This led to an impasse that the Six Presidents’ Initiative in 2008 tried to solve by proposing that negotiations begin without preconditions, that is, without the requirement that FMCT negotiations follow all of the prescriptions of the Shannon Mandate. However, this formulation was rejected by Pakistan, which insisted that negotiations should begin under the Shannon Mandate.

Since the election of President Obama, the United States now refers to seeking a verifiable treaty, and the Algerian president of the CD on May 19, 2009, tabled a draft program of work that would begin negotiations under the Shannon Mandate. The Program of Work was adopted on May 29, 2009, and discussions are under way to begin negotiations in the CD for the first time since 1998.

German Initiatives on the FMCT

Germany has been a significant player in the years of tortuous attempts to begin negotiations on the FMCT in Geneva. The German delegation has brought in experts, supported seminars, and worked energetically across the divides to assist the commencement of negotiations.

Most recently Germany has proposed a set of elements that would create the conditions for an incremental/phased approach consisting of:

- (i) A political declaration (to be adopted as rapidly as possible) containing a fissile material cut-off commitment, a commitment to adopt/maintain the necessary measures for security, control and accounting of weapon-usable materials, and a commitment to enter into negotiations on a non-discriminatory legally binding FMCT. Such a political declaration could be made in the CD, or at a specially convened international conference.
- (ii) A framework treaty charting the course for a gradual implementation process with transparency measures, voluntary

¹¹ For detailed information on these initiatives, see Acronym Institute for Disarmament Diplomacy, website <http://www.acronym.org.uk/acroinst.htm>.

¹² “The Test of Effective Multilateralism: Meeting the Dangers of the World With Resolve,” Stephen G. Rademaker, Assistant Secretary of State for Arms Control, Remarks at the United Nations, New York City, October 8, 2004, <http://www.cdi.org/news/law/rademake-101304.cfm>.

measures, and a process or timetable for moving towards stricter verification and the incorporation of stocks.

In parallel Germany has proposed, as have a number of other countries, the establishment within the CD of a Group of Scientific Experts to study the scientific and technical requirements of an FMCT. Germany has also supported exploring a proposal by former U.S. Assistant Secretary of State (and now Senior Advisor to Secretary of State Hilary Clinton) Robert Einhorn calling for a fissile material control initiative to deal with the issue of pre-existing stocks. To a large degree, however, events have rather taken over and many of the proposals, creative as they were, may no longer have as much to contribute. There are however, a number of things that Germany could do in the CD on FMCT issues now that FMCT negotiations have begun again. In particular, German strengths in the technical field, particularly in the field of verification could make a significant contribution. Indeed there is a precedent for Germany taking such a lead in that Ambassador Wolfgang Hoffman chaired the 1994 CTBT working group on verification. Because of the former U.S. administration's policy against verification of the FMCT over recent years, the United States is likely to be appreciative of practical, technical proposals that could move the negotiations along.

Germany, the EU, and the FMCT

In its 2003 Common Position on the “universalization and reinforcement of multilateral agreements in the field of non-proliferation of WMD and their means of delivery,”¹³ the European Union Council made no mention per se of the FMCT other than in an oblique reference to supporting the 2000 NPT Final Document and the 1995 NPT Decisions and Resolutions. However, in the EU Strategy against Proliferation of Weapons of Mass Destruction as endorsed by the Council on December 9, 2003, the EU policy is stated as “to pursue an international agreement on the prohibition of the production of fissile material for nuclear weapons or other nuclear explosive devices.”¹⁴

In 2009, at the NPT PrepCom in New York, the EU stated that it:

[...] attaches a clear priority to the negotiation, without preconditions, in the Conference on Disarmament, on an FMCT, including verification provisions, as a means to strengthen disarmament and non-proliferation. It is a priority that is ripe for negotiation, as demonstrated, inter alia, by the encouraging and interactive debates in the Conference on Disarmament on the issue during the past three years. The EU welcomes and is encouraged by the recent joint statement made by Presidents

¹³ Council of the European Union, Council Common Position of November 17, 2003, op. cit.

¹⁴ “EU Strategy Against Proliferation of Weapons of Mass Destruction,” Brussels, December 12, 2003, [Not published in the *Official Journal*] <http://europa.eu/scadplus/leg/en/lvb/l33234.htm>.

Obama and Medvedev in support of “international negotiations for a verifiable treaty to end the production of fissile materials for nuclear weapons.”¹⁵

It was generally understood that the language contained in this statement had not proved an easy consensus. The primary reason for the difficulties was that France, having reformulated its policy on the verifiability of an FMCT to fit the 2004-2008 Bush Administration policy, was finding it difficult to reposition itself with the new U.S. line of supporting a verifiable FMCT. Other European states, including Germany, have formulated their stances in a way that kept the integrity of their approach to FMCT verification, but allowed flexibility in accommodating the Bush Administration position.

Germany could play a significant, constructive role in the EU with regard to the FMCT. Within the EU, Germany’s views have traditionally been very influential with on a wide range of issues.

Given how closely Germany has worked with France and the UK in the resolution of the Iranian nuclear program, Germany is positioned well to play a very significant role in promoting EU cohesion and, at the same time, move forward quickly on nuclear disarmament issues (see below).

Germany, NATO, and the FMCT

As with the CTBT, NATO has found it difficult to find consensus on language with regard to the FMCT ever since the 2004 U.S. policy shift eschewing the verifiability of such a treaty. Now that the U.S. position has reverted back to enthusiasm for a verifiable FMCT, NATO will again be able to play a constructive role in the debate.

One of the key ways in which NATO could play such a role is through the Partnership for Peace (PFP) agreements. One of the key features of PFP is that each partner country has committed to fulfill obligations under international disarmament and arms control agreements. In particular, countries within the PFP could be invited to attend seminars and conferences or commit to technical studies on the verifiability of an FMCT, for example. In addition, as a result of the ground-breaking work that Germany has been carrying out with Russia on the nuclear fuel cycle, Germany would be well placed to work through the NATO-Russia Council (NRC), which has been engaged in a dialogue on nonproliferation, including the development of concrete recommendations to strengthen existing non-proliferation arrangements. It is of note that NATO’s science programs, which support collaborative research among scientists in NATO and Partner countries, have awarded more grants to scientists from Russia than any other state. The NRC has a

¹⁵ Cluster I Statement on behalf of the European Union, NPT PrepCom, New York, May 6, 2009, <http://www.reachingcriticalwill.org/legal/npt/prepcom09/statements.html>.

Science for Peace and Security Committee that could be of great support to – for example – a CD Group of Scientific Experts for the FMCT, as proposed by Germany in 2008 (see above).

V. Nuclear Disarmament – The New Grand Scheme

Nuclear Disarmament: State of Play

Ever since the January 2007 *Wall Street Journal* (WSJ) article entitled, “A World Free of Nuclear Weapons,” by George P. Shultz, William J. Perry, Henry A. Kissinger and Sam Nunn in which they endorsed “setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal,” visionary leaders have been seized with a sense that new moment has arrived for progress towards nuclear disarmament.¹⁶ Indeed the WSJ article spelled out loud and clear that this was an issue for genuine leadership. As the article stated,

Reassertion of the vision of a world free of nuclear weapons and practical measures toward achieving that goal would be, and would be perceived as, a bold initiative consistent with America's moral heritage. The effort could have a profoundly positive impact on the security of future generations. Without the bold vision, the actions will not be perceived as fair or urgent. Without the actions, the vision will not be perceived as realistic or possible.¹⁷

There has been an overwhelming international response to this call. The UK Secretary of State for Foreign and Commonwealth Affairs, Margaret Beckett, in 2007 at the Carnegie Endowment in Washington, DC, said:

So my commitment to the vision of a world free of nuclear weapons is undimmed. And though we in this room may never reach the end of that road, we can take the first steps down it. For any generation, that would be a noble calling. For ours, it is a duty.¹⁸

In Prague in April 2009, similarly, President Obama made good on his election promise to place nuclear disarmament at the center of his foreign policy by declaring: “I state clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons.”¹⁹

¹⁶ “A World Free of Nuclear Weapons,” George P. Shultz, William J. Perry, Henry A. Kissinger and Sam Nunn. *The Wall Street Journal*, January 4, 2007.

¹⁷ Ibid.

¹⁸ Margaret Beckett, “Keynote Address: A World Free of Nuclear Weapons?” Carnegie Endowment for International Peace, June 25, 2007, <http://www.carnegieendowment.org/events/?fa=eventDetail&id=1004&prog=zru>.

¹⁹ Remarks by President Barack Obama, Prague, the Czech Republic, April 5, 2009, op. cit.

For insomuch as it is clear that the NPT bargain requires nuclear disarmament, that nuclear weapons have lost much of their military utility, that the leadership in this generation is being handed a terrible legacy – the explosive remnants of the Cold War – and that the next generation of leaders will be left with enough problems without having to also deal with the legacy of nuclear weapons, there is now a sense of timeliness and urgency for nuclear disarmament.

German Initiatives on Nuclear Disarmament

Germany has been at the center of nuclear arms control and disarmament efforts since 1945. All too aware of what would happen “should deterrence fail” and which country would bear the first brunt of any East-West conflict, Germany actively pursued arms control efforts throughout the Cold war. In 1979, in large part thanks to the brainchild of Helmut Schmidt,²⁰ NATO adopted the twin-track (double-track) decision²¹ to deploy theater nuclear weapons in Europe and at the same time actively pursue their elimination through negotiation. Germany has also been an active member of the Conference on Disarmament and all of the major nuclear disarmament and nonproliferation treaties.

In January 2009, Helmut Schmidt, Richard von Weizsacker, Egon Bahr and Hans-Dietrich Genscher published, “Toward a Nuclear-Free World: A German View” in which they called for the rekindling of the vision of a world free of the nuclear threat, as developed by Reagan and Gorbachev in Reykjavik.²²

In response to President Obama’s Prague speech and the earlier announcement by Presidents Obama and Medvedev on negotiating a new strategic nuclear arms reduction treaty, Foreign Minister Steinmeier said “The time is right for a new beginning on nuclear disarmament” and Chancellor Merkel said that she saw the announcement as an important signal.²³

Thanks to Germany’s long-standing commitment to nuclear disarmament, nonproliferation and European Security and thanks to Germany’s good-standing in the NPT, the CD, the IAEA, NATO and the EU, the FRG is well placed to exert serious

²⁰ A Tribute to Helmut Schmidt, The German British Forum, 13th annual conference of the German-British Forum, November 2008, Hamburg, <http://www.gbf.com/gbf/overview.asp?ConfNo=1026>.

²¹ Special Meeting of Foreign and Defence Ministers, “The ‘Double-Track’ Decision on Theatre Nuclear Forces,” Brussels, December 12, 1979, <http://www.nato.int/docu/basicxt/b791212a.htm>.

²² “Toward a Nuclear-Free World: A German View,” Helmut Schmidt, Richard von Weizsacker, Egon Bahr and Hans-Dietrich Genscher, *New York Times*, January 9, 2009, <http://www.nytimes.com/2009/01/09/opinion/09iht-edschmidt.1.19226604.html>.

²³ ²³ “Opposition Pushes for Nuclear-Free Germany in Bundestag Debate,” Deutsche Welle, April 24, 2009, <http://www.dw-world.de/dw/article/0,4202694,00.html>.

²³ “Statement on Strengthening International Security,” Council of the Europe Union, December 8, 2008, http://www.eu2008.fr/webdav/site/PFUE/shared/import/1211_Conseil_europeen/Statement%20on%20strengthening%20international%20security_EN.pdf.

influence on the way forward in global nuclear disarmament. If Germany proposes new, creative ideas it will be heard – all the more so if it does so in collaboration with other similar like-minded states.

Germany, the EU, and Nuclear Disarmament

The EU frames the issue of nuclear disarmament in two contexts. The first is the Common Foreign and Security Policy Framework and the second is the NPT. In 2008, in a document entitled “Statement on Strengthening International Security,” all EU Heads of State and Government endorsed a range of disarmament measures. These included:

- Universal ratification of the CTBT;
- Negotiations for an FMCT;
- Establishment of transparency and confidence-building measures;
- Development of a legally-binding post-START agreement;
- Overall reductions in the global stockpile of nuclear weapons;
- Inclusion of tactical nuclear weapons in the disarmament process (with a view to elimination);
- Start of consultations on a treaty banning short-range and intermediate range ground-to-ground missiles;
- Adherence to Hague Code of Conduct (HCOC); and
- Mobilization in all other disarmament areas.²⁴

At the NPT PrepCom in 2009, the EU reiterated its commitment to the pursuit of nuclear disarmament. The Union welcomed the reductions in strategic and sub-strategic nuclear weapons and stressed the need for an overall reduction of the global stockpiles of nuclear weapons.²⁵ In addition, the EU said that it was pursuing efforts to secure transparency as a voluntary confidence-building measure and was encouraging all those states with nuclear weapons to take steps in this direction.

The EU recognized the high value of security assurances. In 2003, the EU Strategy against the Proliferation of Weapons of Mass Destruction stated that “positive and negative security assurances can play an important role: they can serve both as an incentive to forego the acquisition of WMD and as a deterrent,” and pledged to promote further consideration of security assurances.²⁶ In fact, however, the EU as a whole – or each individual country – has done very little to promote further

²⁴ “Statement on Strengthening International Security,” Council of the Europe Union, December 8, 2008,

http://www.eu2008.fr/webdav/site/PFUE/shared/import/1211_Conseil_europeen/Statement%20on%20strengthening%20international%20security_EN.pdf.

²⁵ Cluster I Statement on behalf of the European Union, NPT PrepCom, New York, May 6, 2009, <http://www.reachingcriticalwill.org/legal/npt/prepcom09/statements.html>.

²⁶ Council of the European Union, Council Common Position of November 17, 2003, op. cit.

consideration of security assurances. Ireland and Sweden, as members of the NAC, have developed the issue somewhat further than other EU members but this topic is more than overdue for a closer look. And it is a measure where EU and NATO interests could overlap in a constructive manner.

Germany, NATO, and Nuclear Disarmament

Nuclear disarmament – although a long-term goal – causes a number of challenges for NATO. As an alliance in which all member states agree that an armed attack against one is an attack against them all, nuclear weapons have become part of the array of tools at the disposal of NATO states, even for those that do not possess them. Nuclear sharing (in practice only of U.S. nuclear weapons) means that non-nuclear NATO states are involved in planning for the use of nuclear weapons by NATO, including making decisions on nuclear weapons policy, maintaining equipment for the use of nuclear weapons (including aircraft), and storing nuclear weapons on member states' territory. In addition, the militaries of non-nuclear NATO states could be involved in the delivery of nuclear weapons in the event of their use.

Many NATO states, including Germany have integrated the concept of extended deterrence (the threat of retaliation with nuclear weapons on behalf of a non-nuclear weapon state (the “nuclear umbrella”)) into their defense and strategic planning. In the 1960s and 1970s, when NATO states and other U.S. allies were debating whether to join the NPT, there was a belief that the U.S. nuclear umbrella afforded non-nuclear weapon states the option of nuclear deterrence without actually developing and possessing nuclear weapons themselves. In the United States, it is still believed by many experts that the nuclear umbrella is a major factor in preventing certain allied states (perhaps even Germany) from withdrawing from the NPT and developing nuclear weapons of their own. In this way, it is argued, extended deterrence prevents proliferation.

The conundrum for NATO, Germany and the United States is how do the allies move from the concept of extended deterrence to nuclear disarmament? Or, to rephrase, unless the concept of extended nuclear deterrence is modified or replaced, nuclear disarmament will be prevented by the non-nuclear allies of the United States. Clearly, however, the non-nuclear NATO allies do not wish to stand in the way of global nuclear disarmament. (The same is equally true for Japan and South Korea and perhaps rather more close to the bone for them than for NATO states in mid-2009.)

Consequently, the concept of conventional extended deterrence – making full use of the U.S. sophisticated and demonstrably usable conventional capability – needs to be developed and replace the structures of the nuclear umbrella (although this may raise problems of its own, by discouraging nuclear disarmament by other nuclear weapon possessing states that perceive the United States as a potential adversary).

(See “Issue 1, Moving Toward Zero Nuclear Weapons: Managing the Overhang of U.S. Conventional Military Power,” above.)

Nuclear deterrence as a concept has been undergoing major revision since the end of the Cold War. In order to square the distaste for the use of nuclear weapons, their commitments to nuclear disarmament, and their reliance on nuclear deterrence, allied states have tied themselves in contextual knots. The erroneous distinction between nuclear weapons for use and nuclear weapons for deterrence implies that nuclear deterrence somehow does not rely on the likelihood of and preparedness for nuclear use – clearly a false premise. The fundamental flaw in the argument – that served so well throughout the Cold War – is that for nuclear weapons to be a deterrent, an enemy has to believe that they could be used. For that to be the case, doctrines, military practices, military training and exercises, postures and so on, all have to show that the threat of use is real. There is no possibility for sustainable Potemkin nuclear deterrence. Nuclear weapons deterrence is premised on the belief that there is at least a significant chance of their use. The idea that the possession of nuclear weapons is the way to secure prevention of use is so convoluted and fraught with danger that it has forced people to hold two mutually contradictory beliefs in their heads for decades.

A world free of nuclear weapons, and one that is moving towards that point, must challenge the concept of nuclear deterrence, including extended nuclear deterrence, and invent a new approach to defense, or the vision of a world free of nuclear weapons will never become a practical reality.

Given Germany’s unique geography and history and its long-held commitment to a secure world free of nuclear weapons, it may be well placed to work with others in NATO – in a like-minded configuration – to explore the doctrines of extended deterrence and propose a careful, practical transition out of the clash of ideals that will be inevitable if the study is not undertaken.

VI. Progress Towards a Middle East Nuclear Weapon Free Zone

State of Play

Prior to the 1995 NPT Extension Conference, there were a number of states in the Middle East (Arab states and Israel) that had not acceded to the NPT. Universal membership was and remains one of the key goals of the NPT. During the preparatory process of the 1995 conference, Egypt, the U.S. and others worked hard to rectify the situation and by the conference close, most Arab states had ratified; by 1997, all of them had.

As part of the package of agreements that conditioned the indefinite extension, the Depositary States (Russia, the United Kingdom, and the United States) tabled a resolution on the Middle East that was adopted by the Conference and called upon:

- All States in the Middle East to take practical steps in appropriate forums aimed at making progress towards, inter alia, the establishment of an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems, and to refrain from taking any measures that preclude the achievement of this objective;
- All States party to the Treaty on the Non-Proliferation of Nuclear Weapons, and in particular the nuclear-weapon States, to extend their cooperation and to exert their utmost efforts with a view to ensuring the early establishment by regional parties of a Middle East zone free of nuclear and all other weapons of mass destruction and their delivery systems.

Since then, to the palpable frustration of the Arab states, very little attention has been paid to the resolution by the non-Arab states. It is, in fact, a very moderate resolution, demanding no more than exertion of effort towards the goal of a zone.

Germany and the Middle East Zone

While Germany has not taken the lead on the issue of a nuclear weapons free zone in the Middle East (NWFZ-ME), it has been an active and supportive participant at a range of important meetings and conferences. For example, in July 13, 2008, Germany participated in a high-level summit meeting in Paris to launch “The Barcelona Process: Union for the Mediterranean.” The meeting issued a joint declaration that included a commitment to pursue a “mutually and effectively verifiable Middle East Zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems.”²⁷ However, little practical detail beyond the formulation of the declaration was discussed and it remains to be seen if the Union for the Mediterranean will take the issue any further.

Germany however has recently taken up a new constructive role in the Middle East Peace Process when Foreign Minister Steinmeier intervened in the Israeli-Hamas conflict over Gaza in January 2009 and was credited with having a significant impact on outcome, particularly on the issue of humanitarian aid, opening of the borders and assisting in bringing the conflict to an end.

In May 2009, Chancellor Merkel and His Majesty King Abdullah of Jordan discussed efforts to bring about peace in the region. Chancellor Merkel stated: “If no progress

²⁷ Joint Declaration of the Paris Summit for the Mediterranean Paris, July 13, 2008, http://ec.europa.eu/external_relations/euromed/index_en.htm.

is achieved in the peace process in the Middle East, there will be no progress in reaching a settlement with Iran.”²⁸

The role that Germany is playing in the Middle East Peace Process and the role it is playing in the P5+1 talks with Iran, place the FRG in a truly unique position and one that could help usher in a new approach to the Middle East Zone. In this regard it is worth noting that Russia made a significant statement at the NPT PrepCom in 2009 that included support for a shepherd or special coordinator for the NWFZ and linked the NWFZ to the Peace Process. Given the working relationship between Germany and Russia on the fuel cycle, might it be possible to begin a new creative partnership in the Middle East spearheaded by the U.S., Russia and Germany?

Germany, the EU, and the Middle East Zone.

At the NPT PrepCom in 2009, the EU reiterated its consistent advocacy of the implementation of the 1995 resolution on Middle East and other relevant UN and IAEA resolutions on the Middle East. The EU proposed a seminar on Middle East Security, WMD Nonproliferation and Disarmament prior to 2010 that would consider practical steps such as confidence-building measures (CBMs). Such CBMs could include scientific projects, training seminars for diplomats and civil society initiatives.²⁹

Also, for the European Union, Iran’s nuclear activities, the roles of the IAEA, the EU3 plus 3 and UN Security Council are all significant features in any moves towards the establishments of a zone free of nuclear weapons in the Middle East. German’s key role in the EU and in the Eu3 plus 3 (P5 + 1) talks and the link through to the UN Security Council carries a great deal of weight and influence within the EU, as well as outside it. Germany seems to be well placed to play a more significant role in the move towards a NWFZ in the Middle East and could well be of significant assistance to the peace process and the NPT in this regard.

²⁸ “Jordan, Germany to Work Together on Peace Process,” Embassy of Jordan in Canberra, May 8, 2009, <http://www.jordanembassy.org.au/testing/?p=1909>.

²⁹ Regional Issues and the Implementation of the 1995 Middle East Resolution, New York, May 8, 2009.

Germany, NATO, and the Middle East Zone

Ever since the attacks on the United States on September 11, 2001, when NATO members invoked the Article 5 defense clause for the first time, NATO policy and action has become increasingly involved with Middle Eastern activities. This includes, for example, a NATO-wide training operation for Iraqi forces; the NATO Response Force; the Istanbul Cooperation Initiative; the expanded Mediterranean Dialogue (which was established in the mid-1990s) to facilitate political dialogue with Middle Eastern countries including Egypt; North Atlantic Council briefings on Middle Eastern issues; and, in part, the Chemical, Biological, Radiological and Nuclear Response (CBRNR) team.³⁰ NATO has held conferences (such as "NATO and the Broader Middle East Region" in 2005) and briefed journalists from the Middle East (such as at the Bucharest Summit in 2008).

Recently, NATO Secretary General, Jaap de Hoop Scheffer said at a conference in Israel:

Continuing to work for opportunities to build new patterns of security cooperation across the Mediterranean and throughout the Middle East is not a sign of naivety. Given the pivotal importance of this region, fostering cooperation is an investment in regional and indeed global security. It is an investment that promises a return – even if that return may come in trickles only, rather than in waves.

In an age of globalisation – in an age that is characterised by religious fundamentalism, terrorism, and the proliferation of Weapons of Mass Destruction – the interdependence between the Northern, Eastern, and Southern shores of the Mediterranean has become simply too obvious to ignore. Accordingly, cooperation in the framework of the Mediterranean Dialogue has accelerated. And the Dialogue is increasingly accepted as a viable framework that serves the interests of all partners.³¹

The Mediterranean Dialogue aims to:

- Contribute to regional security and stability
- Achieve better mutual understanding
- Dispel any misconceptions about NATO among Dialogue countries

Mediterranean Dialogue is based on five principles:

³⁰ Philip H. Gordon, "NATO's Growing Role in the Greater Middle East," The Brookings Institution, Emirates Lecture Series, Spring 2006, http://www.brookings.edu/papers/2006/spring_middleeast_gordon.aspx.

³¹ Jaap de Hoop Scheffer at an event jointly organized by the Institute for National Security Studies and the Atlantic Forum of Israel in Tel Aviv, Israel - Jan. 11, 2009, <http://www.nato.int/docu/speech/2009/s090111a.html>.

1. Shared ownership - participation and content is allowed to evolve over time
2. A bilateral structure (NATO+1) with regular NATO+7 multilateral meetings
3. Non-discrimination
4. Mutual reinforcement of other international efforts (such as the EU's Barcelona Process (Euro-Mediterranean Partnership) and the OSCE's Mediterranean Initiative).
5. Self-funding basis with financial assistance in support of Mediterranean partners' participation in the Dialogue.

The Mediterranean Dialogue has an annual Work Program that includes seminars, workshops and other practical measures including consultations on terrorism and the proliferation of weapons of mass destruction.

VII. Ways Forward

Recommendations are grouped under substantive headings and labeled A, B or C with the following meaning:

- *Near-term relatively easy proposals (A)*
- *Mid-term, practical but harder proposals (B)*
- *Longer-term and more creative proposals (C)*

(Not every subject will have recommendations in each category)

NPT

It is notable that, apart from being a member of the EU and WEOG in NPT meetings, Germany is not part of any other like-minded groups – not the Vienna 10, nor the NAC, nor the NATO-7. It is also worth remarking that, aside from EU statements, in which Germany is a lead player, the FRG did not circulate a paper at NPT PrepCom in 2009 except for the one that was on the subject of multilateral approaches to the nuclear fuel cycle in collaboration with Russia. However, producing a paper on that topic with Russia was a major event and one of which other states parties took notice.

1. Level A -- We propose that Germany take immediate steps to work more in collaborative likeminded groups in addition to the role that Germany plays within the EU.

For example, Germany could build on the strong connections it has made in other forums such as the Land Mine Ban Convention and the Convention on Cluster Munitions where it works in like-minded groups and plays a vital role.

This way of working assists in garnering support for new ideas and pollinating other groups with new ways of thinking and doing. This style of working would help Germany amplify its effort and increase the take-up of German proposals.

2. Level B -- We propose that Germany and Russia host a workshop on multilateral approaches to the nuclear fuel cycle with all those that have made serious fuel cycle proposals along with key NAM states to forge a new way forward. Particular attention should be paid to the whole fuel cycle not just the supply side. In holding such a meeting and continuing to forge a genuine partnership with Russia on this issue, Germany can take the opportunity to work from a position of strength and ownership with the United States on an aspect to which the U.S. has not been privy until very recently.

CTBT

1. Level A -- We strongly urge Germany to work with others in NATO in the examination of a New Strategic Concept to re-cement the CTBT in NATO statements. This is an opportunity to make it clear to the world (including the U.S. Senate) how important the CTBT is in the view of NATO allies. This action could be vitally important in the U.S. Senate debate.

2. Level C -- We urge Germany to continue to work within the EU to push for test site closures. The chances of success are low due to the sites being used for hydrodynamic experiments, but the point is well worth making and serves to strengthen the CTBT and irreversible nuclear disarmament measures.

FMCT

1. Level A -- We propose that Germany takes the initiative, playing to technical strengths and holds an international meeting or conference of experts on the verification of the FMCT following the UNGA First Committee. This would serve the purpose of helping keeping momentum in the CD and provide a much-needed spur to technical discussions.

2. Level A -- We encourage Germany to continue to push (along with Canada, Japan, and Norway and others) for a Group of Scientific Experts (GSE) in the CD to support the FMCT negotiations. Not only is this a useful idea in its own right but if the negotiations get started and then get held up as in 1999, at least the GSE should be able to continue to carry on with meaningful work (if care is so taken in its establishment).

3. Level B -- We also propose that Germany, along with like-minded states in the CD explore the practicality of ideas for a parallel Fissile Material Control Initiative to deal with the issue of preexisting stocks and thus present a credible alternative to inclusion of stocks in the FMCT itself.

4. Level A -- We propose that Germany works with other like-minded states in NATO to:

- Work with PFP countries to develop bids to carry out technical studies on the verifiability of an FMCT under the NATO science program, in support of negotiation in the CD
- Work through the NATO-Russia Council's dialogue on nonproliferation, on the FMCT technical and political aspects.

Nuclear Disarmament

1. Level C -- We propose that Germany in collaboration with other like-minded countries in NATO hold a well prepared conference focused on moving away from nuclear extended deterrence to conventional extended deterrence, what that would mean for all NATO states, and how to make it happen as a vital contribution to the vision of a nuclear weapon free world. This meeting could build on recent discussions on the future of the CFE and conventional arms control in Europe, in which Germany is playing a lead role.

2. Level C -- We propose that Germany consider ways to explore the plausibility of new security assurances including no-use agreements. This could be done under the auspices of the EU or NATO.

3. Level B -- We strongly encourage Germany to continue to develop transparency and accountability measures, including building on the 1993 proposal for a nuclear weapons register, to act as a baseline for measuring progress toward nuclear disarmament. This could begin, for example, as a transparency measure for sub-strategic weapons reductions.

Mid East Zone

1. Level B -- We are encouraged by the new role played being played by Germany in the Middle East and recommend that the FRG builds on this success and the trust engendered to work quietly behind the scene on creating the conditions for a nuclear weapon free zone in the Middle East.

2. Level C -- We propose that Germany set up a like-minded group on the Mid-East Zone and act as an honest broker in starting up a low-key, official discussion, with a view to negotiating a zone in the longer-term

3. Level C -- We propose that Germany, along with other like-minded states with NATO, explore the possibility for discussing the Middle East NWFZ in the NATO Mediterranean Dialogue in order to develop another channel for progress.

Issue 3

Managing U.S. Missile Defenses and Russian Concerns

**Dennis M. Gormley, Miles A. Pomper, and
Nikolai Sokov, lead authors**

The challenge of achieving complete abolition of nuclear weapons is a daunting enough task by itself. But completing several stages of nuclear reductions and maintaining strategic stability at the same time as missile defense systems proliferate around the globe sometimes seems impossible. At times, such systems seem to have exacerbated instabilities produced by conventional imbalances in Europe, the Middle East, Southeast Asia, and Northeast Asia. It is clear, in particular, that Russia will be reluctant to cut deeply into its nuclear forces until it can be confident that U.S. missile defense systems will not negate its deterrent. The first step along the way to that base camp is for the United States and Russia to restart a critical feature of Cold War arms control negotiations: the elevation of transparency, or making both sides of any competition aware, within the limits of security, of what the other side is doing

I. Options for Dealing with Missile Defenses - The United States and Russia

The notion of greatly improved transparency and perhaps even substantial cooperation between the United States and Russia is not a novel concept; it rose to center stage after September 11, 2001. In November 2001, presidents Bush and Putin signed a "Joint Statement on a New Relationship Between the United States and Russia," followed by another in May 2002 specifying a range of possibilities for cooperative engagement.¹ These included strengthening confidence and increasing transparency in the area of missile defenses, exchanging information on missile defense programs and tests, reciprocal visits to observe tests, and work on bringing

¹ Joint Statement by President George W. Bush and President Vladimir V. Putin on a New Relationship Between the United States and Russia, The White House, Office of the Press Secretary, November 13, 2001, <http://www.cdi.org/russia/johnson/5544-5.cfm>; Joint declaration by President George W. Bush and President Vladimir V. Putin on the new strategic relationship between the United States of America and the Russian Federation, May 27, 2002, http://ipmall.info/hosted_resources/ippresdocs/ippd_3.pdf.

a joint center for exchanging data from early warning systems into operation. Most importantly, the two sides agreed to study possible areas for missile defense cooperation beyond joint exercises to include joint research and development on missile defense technologies within the limits of security and protection of property rights. The Russia-NATO Council was singled out as the framework to examine cooperative engagement in missile defense.

Following that decision, such cooperation between NATO and Russia did move forward effectively in terms of theater missile defenses. The alliance and Russia worked together to develop means of providing joint missile defense coverage for their troops in places where NATO and Russian forces might operate together (another Bosnia-type scenario, for example). Experts say that the two sides managed to work through key issues—such as rules of engagement and how to defend targets—despite the lack of interoperability between NATO and Russian forces. Essentially, each side focused on defending one area of territory but could come to the other's aid if that side ran out of interceptors. The two sides even ran an exercise in Munich where they cooperated in defending against a simulated missile attack by Canada on Idaho. Afterwards, Gen. Ray Henault, chairman of NATO's Military Committee and Russia Maj. Gen. Sergei Yagolnikov concluded that "Russia and NATO forces have proven that they can fight and protect jointly territory and population against missile attacks wherever they wish to do so, based on jointly agreed procedures and rules of engagement."²

After several years, however, that cooperation was cut short by the U.S. decision to move forward unilaterally with deployment of interceptors and radars in Poland and the Czech Republic for a system to defend against long-range missiles (U.S.-Russian cooperation against such missiles had never gotten underway). U.S. efforts to bring Georgia and Ukraine into NATO were further irritants. U.S. attempts to allay Russia's concerns about these developments failed to impress, and U.S. gestures toward transparency and an examination of the potential contribution of Russian radars were less than enthusiastically pursued, at least in Russian eyes.

A high point in the U.S.-Russian dialogue on missile defense under the George W. Bush administration was a visit of Secretary of State Condoleezza Rice and Secretary of Defense Robert Gates to Moscow in October 2007 to discuss a possible package of confidence-building measures that would allay Russian concerns. Moscow's subsequent reaction suggests that that package was judged unsatisfactory, but worthy of further negotiations. The written U.S. proposals tabled a month later were rejected by Russia as a less conciliatory revision of the October *ad referendum* agreements and after that, constructive discussions of the missile defense issue virtually ceased and emotions largely overtook substance. Russia brushed aside a NATO statement at its April 2008 summit in Bucharest, where the final communiqué

² Interview with and presentation by Robert Bell, SAIC-Europe, Brussels. May 26, 2009. Bell, a former senior Clinton Administration National Security Council official and a former senior NATO official, has recently led internal NATO studies on missile defense issues.

stated that “We encourage the Russian Federation to take advantage of United States missile defense cooperation proposals and we are ready to explore the potential for linking United States, NATO and Russian missile defense systems at an appropriate time.”³

Thus, despite the Obama administration’s outreach to Russia, the attitude on this subject has grown significantly worse, and now, in addition to discussion of substance at the U.S.-Russian START talks, an effort is needed to address basic issues of trust that continue to bedevil the relationship. Today some more conservative Russian analysts even consider Obama administration’s statements about deep reduction of nuclear weapons as a ploy to reduce the Russian nuclear arsenal to a level that would enable American missile defense to negate its deterrent value.⁴

It is clear that the missile defense controversy will affect the ongoing START talks, but the manner and the extent of that influence are still unclear. Judging by news accounts, Moscow remains divided on that issue. Some assessments posit an indirect relationship between the two issues (primarily in terms of the acceptable upper limit on the number of strategic nuclear warheads under the new treaty—between 1,000 and 1,500 depending on whether plans to deploy missile defense in Europe remain intact),⁵ while other, perhaps even more authoritative statements (such as those made by Prime Minister Putin and Foreign Minister Sergey Lavrov), suggest full-scale linkage between the two issues.⁶ Recently, Chief of General Staff General Nikolai Makarov even suggested that Russia might refuse to conclude a new treaty on reduction of strategic weapons unless the United States changes its stance on missile defense: “As long as the situation in the world, including with the U.S.

³ North Atlantic Treaty Organization. Bucharest Summit, Declaration, April 3, 2008, <http://www.nato.int/docu/pr/2008/p08-049e.html>.

⁴ For a recent example see Igor Korotchenko, “Sokhranit Potentsial Otvetnogo U dara” [Preserve the Capability for a Response Strike], *Voyenno-Promyshlennyi Kurier*, May 27, 2009. Igor Korotchenko is Editor-in-Chief of *Voyenno-Promyshlennyi Kurier* (“The Military-Industrial Courier”) – a weekly publication funded primarily by Russian defense companies and oriented toward those working in the defense sector.

⁵ See interviews by Konstantin Kosachev, Chairman of the International Affairs Committee of the Duma (“Peregovorom po SNV Mozhet Pomeshat PRO SShA v Evrope” [START Talks Between Russia and the U.S. Could be Hindered by Missile Defense in Europe] RIA-Novosti, May 19, 2009), former Chief of Staff of Strategic Rocket Force Col.-Gen. Viktor Yesin (“Sokrashchenie Yadernykh Boezaryadov RF i SShA Zavisit ot Pozitsii po PRO” [Reduction of Nuclear Warheads in Russia and the U.S. Depends on Positions on Missile Defense], RIA-Novosti, April 1, 2009), and retired general Pavel Zolotarev, deputy director of the Institute of USA and Canada of the Russian Academy of Sciences (Petr Iskenderov and Boris Yunanov, “Obama Vsekh Obezoruzhit” [Obama Will Disarm Everyone], *Vremya Novostei*, April 6, 2009).

⁶ “Putin: Rossiya v Ontosheniyakh s SShA Budet Uvyazyvat Voprosy PRO i SNV” [Putin: In Its Relations with the U.S. Russia will link Missile Defense and Offensive Arms Issues], RIA-Novosti, May 10, 2009, and an interview with Lavrov, “Delegatsii RF i SShA na Peregovorakh po SNV Obsuzhdayut Konkretnye Predlozhenia, Kotorye Obespechat Ravnuyu Bezopasnost Storon” [Russian and U.S. Delegations at START Talks Discuss Specific Proposals that will Ensure Equal Security of the Parties], ITAR-TASS, May 20, 2009.

missile shield plans, remain unclear, we will not alter our nuclear arsenal.”⁷ The July 2009 Obama-Medvedev Summit indicated that the issue is far from being resolved.

While Russian concern is usually formulated in straightforward terms that appear to seek a virtual ban on missile defenses, reminiscent of the Anti-Ballistic Missile (ABM) Treaty, a closer look suggests that Russian military leaders do not object, in principle, to a limited U.S. missile defense.⁸ They are mostly worried by the open-ended nature of the defense system, which, over time, could be expanded and upgraded to deny Moscow deterrence capability vis-à-vis the United States, and the East European location of one of the sites, which could potentially enable it to intercept not only Iranian, but also Russian missiles.

As George Lewis and Ted Postol wrote in *Arms Control Today* several years ago:

In order to understand Russian concerns, it is useful to examine how Russian military analysts might assess the capabilities of the proposed U.S. system. They would assess both the initial technical capabilities of the U.S. system and its potential capabilities as it matures. They would look twice at U.S. decisions to site the system as the Pentagon intends and rightly conclude that the system might be designed to counter Russia’s deterrent in addition to a nuclear attack from Iran.⁹

Some Russian (and U.S.) experts have commented in this regard that Turkey or ships based in the Eastern Mediterranean would seem to be a more logical place for missile defense systems intended to intercept Iranian missiles. Systems based here could protect sites on NATO’s southern flank, which would not be covered by the proposed missile defense deployments in Poland and the Czech Republic, but which can be reached by the medium range ballistic missiles that Iran is currently producing and testing (including through its most recent “satellite launch vehicle”).¹⁰ These experts have said that the Obama administration should be emphasizing systems designed to protect those areas, such as the Theater High Altitude Area Defense (THAAD) or air-based systems, rather than the long range interceptor systems, which have yet to be fully developed, let alone tested and that antagonize Russia.¹¹ Among those who have urged giving far more priority to

⁷ “Russia Rules Out Nuclear Arms Cut While U.S. Shield Plans Unclear,” RIA-Novosti, May 5, 2009, <http://en.rian.ru/russia/20090605/155178574.html>.

⁸ It is worth noting that an antiballistic missile system has been deployed around Moscow since 1972.

⁹ George N. Lewis and Theodore A. Postol, “European Missile Defense: The Technological Basis of Russian Concerns,” *Arms Control Today*, October 2007, http://www.armscontrol.org/act/2007_10/LewisPostol.

¹⁰ The most recent U.S. government assessment of Iran’s missile development is National Intelligence Council, “Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions,” Covering January 1 to December 31, 2008. See also, Greg Thielmann, “Strategic Missile Defense: A Reality Check,” Arms Control Association, May 21, 2009, http://www.armscontrol.org/system/files/TAB2_5_21_2009_FINAL1.pdf.

¹¹ Iran’s Nuclear and Missile Potential: A Joint Threat Assessment by U.S. and Russian Technical

protection for Southeastern Europe and Turkey was Representative Ellen Tauscher (Democrat of California), during her tenure as chair of the U.S. House of Representatives Armed Services Committee subcommittee responsible for overseeing strategic systems and missile defense.¹² (Tauscher is currently U.S. Under Secretary of State for Arms Control and International Security.)

In any case, despite all the tough talk, the absence of an agreement on missile defense controversies will probably not become an insurmountable obstacle to successful conclusion of the initial START follow-on talks: Russia is concerned primarily about the open-ended nature of the American program and its potential consequences rather than about near-term developments. Thus, the initial START I replacement negotiations can probably be concluded successfully without a comprehensive solution to the missile defense issue. The future of subsequent reductions, however, remains uncertain without greater predictability in the American missile defense program and without some sort of an understanding between the two countries.

II. Seeking Consensus on Missile Threats to NATO and Russia

The first step in achieving real and lasting cooperation in missile defense is for Russia and the United States, through the NATO-Russia Council, to reach consensus on the pace and scope of the threat from Iran's ballistic and cruise missiles to the whole of NATO.

This has not been easy given Russia's preference to downplay, if not actually dismiss, Iran's recent ballistic missile achievements. (See Appendix to this section on Russian views on Iran.) European states could also be part of this process, perhaps communicating their concerns directly to Russia to demonstrate this is not merely a U.S. concern. Concerns about the current and future threats posed by the missile programs of other countries—such as Syria and Pakistan—should also be addressed in this manner.

An important step in this process occurred recently with the publication by the East-West Institute of a joint assessment by U.S and Russian technical experts (with

Experts, East-West Institute, May 2009. See also Theodore A. Postol "Defensible Missile Defense," *International Herald Tribune*, March 12, 2009, in which he proposed to deploy air-based missile defense assets in the vicinity of Iran and North Korea. These proposals received positive reaction from Russian experts; see "Amerikanskii Ekspert Predlagayet Rossii i SShA Kontseptsiyu Sovmestnoi Protivoraketnoi Oborony" [An American Expert Proposes a Joint U.S.-Russian Missile Defense System], *Izvestiya*, June 1, 2009.

¹² See, for example, several articles in the October 2007 edition of *Arms Control Today*: George N. Lewis and Theodore A. Postol; "European Missile Defense: The Technological Basis of Russian Concerns; Dinshaw Mistry, "European Missile Defense: Assessing Iran's ICBM Capabilities," Rep. Ellen Tauscher, "European Missile Defense: A Congressional Perspective," <http://www.armscontrol.org/epublish/1/v37n8>.

the help of a number of German experts).¹³ This panel was brought together by senior officials on the Russian side and involved such senior U.S. figures as former Defense Secretary William Perry and retired Gen. James L. Jones, before he became President Obama's national security adviser.

In the missile realm, the report touched on Iran's ballistic missile capacity, the pace of Tehran's success in weaponizing a suitably compact nuclear reentry vehicle that could survive the rigors of reentry, as well as how quickly their solid-fuel missile capabilities will mature. The report concluded that it would probably be approximately six to eight years before Iran could develop a ballistic missile capable of delivering a 1,000 kg nuclear warhead to a range of 2,000 km, produce the fissile material for such a warhead, and design and build a nuclear warhead, itself, and mate it with a long-range missile.

It did add an important qualifier, however, noting that this timetable could be accelerated if Iran received substantial help from outside, such as from North Korea. In this regard, the report said that while North Korea's April 2009 long-range missile test failed in some respects, it nonetheless demonstrated that Pyongyang has made significant advances in rocket technology, particularly in staging. And it warned that if North Korea were to transfer this technology to Iran, it could help Iran, especially by increasing its potential to build missiles with a much greater lift capability than the Shahab-3. In mid-June 2009, Lt. General Patrick O'Reilly, director of the U.S. Missile Defense Agency, underscored the importance of North Korean support for Iran's missile program, declaring that the two states have formed an information-sharing "coalition" aimed at bolstering their respective ballistic missile capabilities.¹⁴

Current threat assessments regarding the NATO region, it must be noted, focus in the main on ballistic missile systems. Far less attention is given to the growing cruise missile threat on the periphery of Europe. Iran is among a rapidly growing number of countries that have begun pursuing land-attack cruise missile programs.

According to a 2004 NATO Parliamentary Committee report, Iran was converting some 300 Chinese anti-ship cruise missiles into land-attack systems by fitting them with turbojet engines and new guidance systems. Such designs have been demonstrated as capable of achieving around 1,000 km range and could be readily launched from merchant ships to target substantial portions of Europe. Even more worrisome over the longer-term was the 2005 disclosure that Ukrainian arms dealers illegally sold 12 to 20 Soviet Kh-55 strategic (and nuclear capable) cruise missiles to China and Iran. The Kh-55's range is 3,000 km. Even though the illegal transfer of at least six Kh-55s to Iran also included a ground support system for testing, initializing, and programming the missiles, such a small number of cruise

¹³ The German experts were Dr. Markus Schiller and Professor Robert H. Schmucker of Schmucker Technologies, Munich, Germany.

¹⁴ Iran, "North Korea Cooperating on Missile Programs, Says U.S. General," Friday, Global Security Newswire, June 12, 2009, http://gsn.nti.org/gsn/nw_20090612_7277.php.

missiles were probably acquired primarily for purposes of examination and reverse engineering, leading eventually to the development of Iran's own long-range cruise missile program.¹⁵ A common U.S.-Russian view of the threat of both ballistic and cruise missiles would offer opportunities for broader cooperation than one focusing solely on ballistic missile defense and could include warning, detection, and defeat of airborne threats, more generally.

U.S. cruise missile defense programs today are not in good shape. Fighters equipped with advanced detection and tracking radars will eventually possess some modest capability to deal with very low-volume attacks, assuming advance warning is available. But existing U.S. programs are underfunded, while interoperability, doctrinal, and organizational issues discourage the military services from producing joint and effective systems for defending U.S. forces and allies in regional military campaigns. NATO's own cruise missile defenses are no better off. The poor state of cruise missile defenses raises the question: can either or both the United States and Europe find security by fielding only half a missile defense system, capable of handling but one dimension of the missile threat?

III. Involve Russia in Tackling the Cruise Missile Threat

One way to deal with this threat would be by expanding the Cooperative Airspace Initiative (CAI). Launched within the NATO-Russia Council in 2002, the CAI's goal is to achieve a system of air traffic information exchange along the borders of Russia and NATO member countries. Four sites each currently exist in Russia and NATO countries—from the far north in Russia (Murmansk) and Norway (Boda) to Turkey (Ankara) and Russia (Rostov-on-Don) in the south. Poland hosts a NATO coordination center in Warsaw, while the companion Russian center is located in Moscow. Besides forming a basis for NATO and Russia to establish greater confidence in working together, the CAI has focused especially on aircraft that might be under the control of terrorists or a rogue state. CAI is complemented as well by a functionally equivalent system of Air Sovereignty Operation Centers (ASOC) that the United States funded in former Warsaw Pact states beginning in 1997. Although the CAI information exchange system had successfully passed joint testing qualifications in July 2008, it, together with other bilateral NATO-Russia initiatives, was suspended in August 2008 in protest for Russia's intervention in Georgia. CAI only recently resumed in March 2009.¹⁶

CAI, working in possible cooperation with the ASOCs in the former Warsaw Pact states, could form the basis for investigating an expansion of air monitoring

¹⁵ These developments are documented and assessed in Dennis M. Gormley, *Missile Contagion: Cruise Missile Proliferation and the Threat to International Security* (Westport, CT: Praeger Security International, 2008), chapters 3 and 4.

¹⁶ Brooks Tigner, "NATO and Russia Near Air Traffic Information Exchange," *International Defence Review*, April 29, 2009, <http://idr.janes.com/public/idr/index.shtml>. See also Press Release of the Russian Mission to NATO, at <http://natomission.ru/en/society/article/society/artnews/40/>.

capabilities to the domain of cruise missile warning and defense. Russia initially balked at the formation of ASOCs, but the more CAI starts to take on the character of the air sovereignty centers, the more potentially useful it may become as a NATO-wide and Russian vehicle for collaborating on defenses against cruise missiles. About \$6.5 million has been invested in CAI thus far, with financial support coming from twelve countries, including Russia and the United States.¹⁷

Engaging Russia's participation in an expanded CAI concept that includes the role it might play in cruise missile defense offers benefits that go well beyond trust-building and improved air safety and security. Rather, an expanded CAI offers Russia the chance to become a full participant in a potentially constructive endeavor to address the lesser-included dimension of missile defense. Russia's longstanding prowess in developing effective air defense systems, including the S-400, which boasts capability to intercept ballistic and cruise missiles, as well as aircraft, could fit nicely into a broad-area concept for European cruise missile defense. Directing Moscow's export energies away from S-300 and S-400 transfers to countries like Syria and Iran and toward the prospect of a more effective collaborative working environment within the NATO-Russia Council is worthy of serious evaluation.

IV. Engage Russia on Ballistic Missile Defenses

There is already broad support in Washington for engaging Russia on ballistic missile defenses in a manner substantially different from that taken by the Bush administration. While the Moscow-Washington agenda on strategic arms control will surely dominate the two states' bilateral relationship over next several months, it might be possible to revive earlier initiatives that have been allowed to lapse and perhaps "repackage" a variety of both sides' initiatives to achieve a breakthrough.

These could include a resumption of NATO-Russia cooperation on theater missile defenses, an exploration of the expansion of this effort to the strategic level, a renewed discussion of Putin's 2007 proposals, and an investigation of potential boost phase missile defenses and other options.

Moscow has indicated interest and cautious optimism: speaking after his first meeting with President Obama, Russian President Dmitriy Medvedev called the plan to deploy missile defense in Europe a "mistake that must be blamed on the George W. Bush administration," and said that any missile defense plans should be pursued "jointly."¹⁸ It should be noted, however, that Moscow clearly prefers to expand discussion of missile defense beyond the bilateral U.S.-Russian context to include all

¹⁷ The other sources of financial support include Canada, France, Greece, Hungary, Italy, Luxembourg, Norway, Poland, Turkey, and the United Kingdom. Tigner, "NATO and Russia Near Air Traffic Information Exchange," *op. cit.*

¹⁸ "Medvedev Nazval Oshibkoi na Sovesti Administratsii Busha Plany SShA po PRO" [Medvedev Called U.S. Missile Defense Plans a Mistake That Must be Blamed on the Bush Administration], RIA-Novosti, April 2, 2009.

of Europe.¹⁹ In May Medvedev was already talking about a “comprehensive” missile defense that would protect the United States, Europe, and Russia.²⁰

There are a number of areas where dialogue could bear fruit.

One such opportunity is offered by the **implementation of the Joint Data Exchange Center (JDEC)** in Moscow. Russia and the United States first agreed to a joint warning concept involving notifications of ballistic missile flights to each side in 1998, which was formalized in a June 2000 meeting between Presidents Clinton and Yeltsin, who agreed to establish the center in Moscow. Although all of the operational details have been worked out, legal and tax issues have prevented the center from becoming operational. Support of the Russian military for JDEC was lukewarm at best even at that time, and through the first half of 2009, the Russian Ministry of Defense appeared dead set against the revival of that agreement. At their July Summit, however, Presidents Obama and Medvedev agreed to have their experts “conduct a joint review of the entire spectrum of means at our disposal that allow us to cooperate on monitoring the development of missile programs around the world.”²¹ Their statement continued, “Our experts are intensifying dialogue on establishing the Joint Data Exchange Center, which is to become the basis for a multilateral missile-launch notification regime.”²² The logistical and organizational elements that were agreed earlier in the decade could contribute to facilitate the discussions. In addition, then-Russian President **Vladimir Putin’s 2007 proposal to establish a second data exchange center** in Brussels could be utilized to streamline negotiations.

U.S. officials have already signaled their willingness to examine **the use of Russian low-frequency warning radars at Gabala, in Azerbaijan, and Armavir**, in Russia’s Krasnodar Region, as part of the U.S.-led global missile defense system. Russia rejected that offer because its proposal was intended to substitute missile defense in Eastern Europe rather than to complement it. (According to the Russian initiative, these radars were intended to provide data on the Iranian missile program to give advance warning if Iran began to test long-range missiles capable of reaching the United States; only in that case was Russia prepared to discuss deployment of missile defense.) The recent Iranian intermediate-range ballistic missile tests may serve as a pretext for a reexamination of the Iranian missile threat by Moscow. In particular, it is possible to make a case that the original Russian

¹⁹ See Dmitriy Medvedev’s statement in Helsinki on April 20 (published by RIA-Novosti), April 20, 2009.

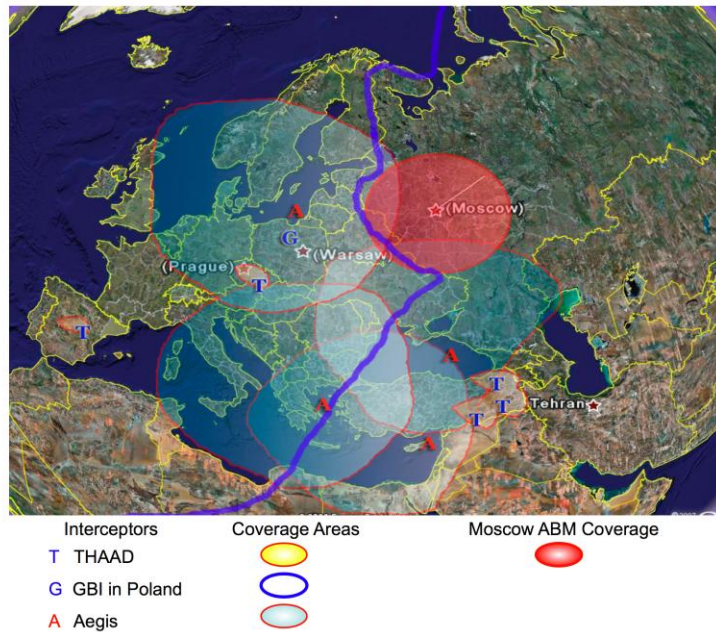
²⁰ “Medvedev Privetstvuet Gotovnost SShA Obsuzhdat Temu PRO” [Medvedev Welcomes U.S. Readiness to Discuss Missile Defense Issues], RIA-Novosti, May 5, 2009.

²¹ “Statement by President Obama and Russian President Medvedev on Missile Defenses,” The White House, Office of the Press Secretary, <http://useu.usmission.gov/Article.asp?ID=BD76F060-B3A0-47F0-BC81-D536D07FB2E1>.

²² Ibid.

condition has been met and makes a joint project that includes these two radars more viable than it was when first discussed with the Bush administration in 2007.

Figure 1: Potential NATO-Russia Missile Defense: Coverage Against Iran



As non-governmental radar specialists have noted, there is the chance that combining an X-band radar deployed either in Azerbaijan or Turkey with the Armavir radar could possibly offer three to four more minutes of additional warning than could the X-band radar operating alone from the Czech Republic.²³ At the very least, a discussion between American and Russian radar specialists on precisely how these two radars might contribute not only to improved missile defense performance but also to partnerships with Russia in areas where Russian technological prowess might complement American and European missile defense skills might help improve the atmosphere between the two countries. Russia is likely to be more receptive to the inclusion of these two radars into an American missile defense if the latter is deployed more to the south of the currently planned location (i.e., is made less capable of intercepting Russian ICBMs.)

²³ See, for example, Theodore Postol, "A Ring Around Iran," *New York Times*, July 11, 2007, <http://www.nytimes.com/2007/07/11/opinion/11postol.html>. Postol argues that the Gabala radar's lower frequency radar could crudely yet effectively provide earlier warning than a Czech-based X-band radar, whose higher frequencies and resolution are useful to characterize the target initially detected by the Russian radar. Thus, the sum of the two could furnish additional warning time with no loss of much-needed target resolution.

It may also be time to **revisit Russia's 2001 proposal to incorporate S-300 and S-400 missiles into a cooperative ballistic missile defense system to protect Europe.**²⁴ Greece is purchasing the S-300 for its arsenal, indicating that integrating these systems with NATO forces is possible.

North Korean nuclear and missile tests in the spring of 2009 could also affect Russian calculations and attitudes toward American missile defense plans. At the very least, these tests offer a strong justification for such defense and might help switch Russia from outright opposition to searching for ways to make American-Japanese-South Korean missile defense efforts less threatening to Russia itself. In the latter case, cooperation could become more feasible. By the same token, both the United States and Russia have an incentive to stop North Korea from spreading this technology to Iran—such cooperation would both lessen the need for a European leg to the missile defense system and would be facilitated by U.S. restraint in this regard.

If cooperation in missile defense warning systems were not difficult enough, **cooperation with regard to developing interceptors** poses an even more daunting challenge. Security and intellectual property rights issues have always stood in the way of achieving much progress. Assuming, however, that U.S.-Russian relations improve in the aftermath of negotiation of a successful strategic arms control treaty, it would make good sense to explore avenues toward cooperation in missile defense interceptors.

One such area is interception of tactical and intermediate-range missiles, which Russia has pursued for years. (Its longstanding opposition to strategic missile defense has limited R&D in that area, but missile defense assets not prohibited by the 1972 ABM Treaty have traditionally remained at the center of attention.) The sale of S-300 systems to Greece was intended to demonstrate that Russian systems can be integrated into NATO air and missile defense and the exercises of the NATO-Russia Council seemed to confirm this.

Another competitive advantage that Russia once had is in directed energy technologies. In the early 1990s, U.S. and Russian technical exchanges disclosed that Russia then led the world in carbon dioxide and high-power solid-state lasers. Again, in the 1990s at least, there was significant cooperation between U.S. and Russian scientific and academic organizations, including in the area of solid-state lasers for non-military applications. The U.S. missile defense program has experienced less-than-optimal success in the Airborne Laser (ABL) program, an effort seen as critical to achieving some modest capability in defeating ballistic

²⁴ Nikolai Sokov, "Russian Missile Defense for Europe: The February 20 Proposal is More Serious Than It Seems," CNS Report, March 14 2001, <http://cns.miis.edu/reports/sokrmd.htm>.

missiles shortly after they are launched (during the so-called boost phase).²⁵ Building on past endeavors in the 1990s, it makes good sense to explore once again opportunities to cooperate in such directed energy interceptors. The greatest impediment here is a firm belief by Russian governmental and non-governmental experts that ABL is intended primarily against Russian strategic missiles and as long as this belief remains in place, Moscow will hardly be willing to contribute to that program.

A significant obstacle on the path of any cooperation between the United States and Russia on missile defense (as well as to any compromise on American missile defense plans) is **the relationship between Russia and China**. Since at least 2007 Moscow has made its official and public position that American missile defense plans are a threat to both countries equally. Consequently, any compromise that Russia could strike with the United States in the bilateral context and, to an even greater extent, cooperation in that area, could undermine the Russian-Chinese entente. For that reason, Moscow is likely to be very cautious about changing its opposition to the United States.

V. Resurrect Arms Control Constraints and Transparency Measures

The purest form of reassurance would be to resurrect formal arms control constraints designed to allay Russian (and Chinese) concerns about the open-ended nature of the U.S. global missile defense program. It is advisable to revisit **the placement and the architecture of missile defense** vis-à-vis Iran. Of particular importance are clear-cut constraints on the scale and the capability of the future missile defense system if any is deployed. Ways have to be found to reassure both Russia and China that the future system will not be able to negate their respective deterrent capabilities. It will be necessary to address all components of American missile defense plans—land-based, sea-based, ABL, and space-based assets.

The first step that could be achieved in the near future is **a package of confidence-building measures** perhaps building on the informal discussions in Moscow in October 2007. A more comprehensive and lasting solution will probably require additional negotiations and a more formal document.

Possible space-based components of missile and anti-satellite defense systems present a major long-term challenge. These could perform double duty as both ballistic missile interceptors, with potentially significant capabilities against Russian offensive forces in the aftermath of deep reductions, and anti-satellite weapons to maintain or extend American dominance in space. It appears that American pursuit

²⁵ Defense Secretary Gates recently downgraded this program, noting that, “The operational concept doesn't work because to be of any value, for example, against Iran, that 747 would have to orbit inside Iran—and I don't think they're going to allow that. Same way with North Korea.” See Richard Mauer, “Defense Secretary Says Cuts Won't Leave Alaska Vulnerable,” *Anchorage Daily News*, June 1, 2009, <http://www.adn.com/news/alaska/story/815727.html>.

of such options could carry hidden costs: while no conceivable regional nuclear power would merit such an expansion, U.S. actions could trigger an arms race in anti-satellite weapon capabilities that could threaten American space capabilities essential to sustain its conventional superiority. An alternative would be for the United States to examine what limits it might be willing to accept on mid-course and upper-tier interceptors, which could be incorporated in a new legally binding treaty with Russia. At the same time, the United States could take the lead with Russia and China to negotiate “rules of the road” for space operations akin to ones that govern air, ground, and naval operations on earth.

In February 2008 Russia and China tabled, at the Conference on Disarmament, a draft treaty on prevention of deployment of arms in space, use of force, or threat to use force against space objects. It might be advisable to seriously discuss this proposal, especially since Moscow has also expressed interest in and support for a EU initiative about a Code of Conduct in space—but only as a complement to a more formal treaty.²⁶

Even in the case that the Iranian nuclear missile threat accelerated unexpectedly, requiring rapid completion of the third U.S. missile defense site in Europe, it is nonetheless possible to imagine a significant degree of Russian cooperation. Among other options, this would entail dusting off the assurance proposals the Bush administration introduced in 2007, which involved, for example, restricting the radar’s angle of view so as not to threaten Russian missile launches and agreeing not to activate the site until the Iranian threat was palpable to both sides. Russia had also insisted on a permanent observer presence at both the Czech and Polish bases, but one well-placed Russian observer has suggested that a Polish proposal, allowing for an “almost permanent presence” by Russians, might be satisfactory to Moscow. This would entail aperiodic visits by Russian observers who would be accredited to the Russian embassies in the Czech Republic and Poland and the installation of surveillance cameras for around-the-clock surveillance.²⁷

At its recent summit, NATO made clear that it supports the Obama administration’s effort to cooperate with Russia on missile defense:

We support increased missile defense cooperation between Russia and NATO, including maximum transparency and reciprocal confidence-building measures to allay any concerns. We reaffirm our readiness to explore the potential for linking United States,

²⁶ For detailed explanation of Russian position on space issues and the attitude toward the EU initiative see Yevgeni Buzhinski, “Kosmos: Novyi TVD ili Sfera Sotrudnichestva” [Space: A New Theater of War or a Sphere of Cooperation?], *Nezavisimoe Voennoe Obozrenie*, April 10, 2009. (Yevgeni Buzhinski is the Chief of the International Treaty Department of the Russian Ministry of Defense.)

²⁷ Victor Yesin, “Action and Counteraction,” *Global Affairs* 1 (January-March 2009), <http://eng.globalaffairs.ru/numbers/26/1262.html>. Yesin is a retired Colonel General in the Russian military and a professor at the Russian Academy of Military Sciences.

NATO and Russian missile defence systems at an appropriate time and we encourage the Russian Federation to take advantage of United States' missile defence cooperation proposals.²⁸

At the summit, NATO leaders also concluded, based on the initial results of a study commissioned for NATO, that "missile threats should be addressed in a prioritised manner that includes consideration of the level of imminence of the threat and the level of acceptable risk."²⁹ In particular, they asked for continued research "to identify and undertake the policy, military and technical work related to a possible expanded role of the Active Layered Theatre Ballistic Missile Defense (ALTBMD) program beyond the protection of NATO deployed forces to include territorial missile defence."³⁰

The ALTBMD program is a command and control system that will allow NATO nations to integrate various national weapons systems (e.g., PAC-3, Aegis Ballistic Missile Defense) to defend alliance forces against ballistic missile threats of up to 3,000 km. The system is currently scheduled to achieve an initial operational capability in 2010.

Then Representative Tauscher, for one, encouraged pursuing this system before moving ahead with the deployment to Poland and the Czech Republic, a position that would likely receive support from Moscow and could also be the basis of NATO-Russian cooperation:

Given the existing short- and medium-range threat to Europe, I believe that NATO should accelerate its efforts to protect its territory and population centers against this current threat. This includes ensuring that the NATO ALTBMD system can be fully integrated with the proposed U.S. system and encouraging individual allies to acquire and deploy missile defense capabilities such as Aegis and Terminal High Altitude Area Defense (THAAD), which are designed to counter short-, medium-, and intermediate-range ballistic missiles.³¹

VI. Conclusion

In sum, multiple opportunities now exist for the United States to engage Russia on missile defenses in a practical and mutually beneficial manner. If the Obama administration continues to reduce tensions with Moscow, pursuit of these options

²⁸ North Atlantic Council, Strasbourg / Kehl Summit Declaration, April 4, 2009.

²⁹ Ibid.

³⁰ Ibid.

³¹ Ellen Tauscher, "European Missile Defense: A Congressional Perspective," *Arms Control Today*, October 2007, http://www.armscontrol.org/act/2007_10/Tauscher.

could not only reduce frictions in the missile defense arena but also emerge as an important new strand in an improved U.S.-Russia relationship. On this issue, the main decisions will be made by the United States and Russia. However, there are several ways Germany can help move things in a positive direction.

Germany's most important role is likely to be in NATO. On ballistic missiles, Germany can encourage the alliance to pursue the ALTBMD system first and to support Obama administration efforts to put off discussion of the longer-range system until later. On cruise missiles, Germany can press for the alliance to pay greater attention to the issue and support the expansion of the Cooperative Airspace Initiative. Germany could follow up on a suggestion made by Tauscher and encourage NATO to create a counterpart to the Nuclear Planning Group that would coordinate missile defenses within the alliance. And, it could urge that the NATO-Russia Council renew its efforts on missile defense.

Outside of NATO, Germany could continue its efforts to press for greater legal measures to stem the proliferation of missiles worldwide, from strengthening the Missile Technology Control Regime and Hague Code of Conduct to supporting the recent EU proposals for a treaty banning ground-to-ground short- and medium-range missiles.

Finally, Germany might consider a track 1 ½/track 2 approach to pursuing progress on this issue. For instance, Germany could host a conference of governmental and non-governmental experts from NATO countries and Russia that could examine the threat posed by ballistic missiles and look at the ability of legal mechanisms and missile defenses to counter this trend as well as possibilities for NATO-Russian cooperation. Such a conference could also examine how these efforts could support efforts to move toward a world without nuclear weapons.

APPENDIX

Russia's attitude toward Iran's nuclear and missile programs is highly contradictory, and in the past several years Moscow has tried to walk a fine line balancing a variety of interests and concerns:

- The attitude of Russian leaders toward Iran is apparently cool, if not negative. Tehran rejected Russian attempts to help resolve the ongoing crisis around the Iranian nuclear program (the well-known Russian proposal for an International Uranium Enrichment Center was originally the central element of that attempt) and has become a liability and a headache rather than an asset for Moscow. Optimism about Russian-Iranian cooperation, including granting Iran observer status in the Shanghai Cooperation Organization in 2005, is long past.
- Iran could become a threat to Russia if it acquires long-range missiles and nuclear weapons. The negative impact of the Iranian nuclear program on the nonproliferation regime can also have serious implications for Russia's own security and interests.
- Cooperation with Iran is still important in a number of issue areas, such as trade and investment (for example, Iran is one of the few countries that imports Russian civilian aircraft and cars), the delineation of the Caspian Sea (that sea has to be divided between successor states of the former Soviet Union; at stake are existing or potential deposits of oil and gas on the sea floor), and potentially in setting natural gas prices.
- Moscow knows its influence on Iran with respect to nuclear and missile developments is very limited, indeed almost non-existent. Yet it is interested in exploiting the widespread perception in the West that such influence exists, because this perception enhances its stature in relations with the United States and Europe.
- The anti-American stance of the current Iranian leadership has rather strong domestic support in the increasingly conservative Russian policy establishment. Going against this sentiment could be costly for the government.
- The continuing uncertainty around the Iranian problem can be leveraged in a complex diplomatic game Moscow plays with the West: this game includes, among other elements a desire to stabilize and improve relations with the West, on the one hand, and to prevent expansion of American influence in the Middle East, on the other. Moscow's conventional arms sales, particularly its calculated ambiguity about sales of S-300 anti-aircraft missiles to Tehran, have been important pawns in this geopolitical chess game.

For these reasons Moscow tends to prevent "excessively" strong sanctions against Iran and presses for a diplomatic solution. Its position is built around the thesis that Iran must clear its record with the IAEA. That position has impeccable legal foundations, but at the same time is more limited than what the United States and

the EU seek from Iran—a complete halt to Tehran’s enrichment program. (Russia talks only about a temporary halt until Iran’s record with the IAEA is cleared). “We do not have evidence that [the Iranian nuclear] program has a military component,” said Foreign Minister Sergey Lavrov recently, presenting once again a longstanding Russian position. “But some countries and the IAEA have questions, which Iran has to clarify.”³²

Furthermore, Moscow is concerned that Iran’s missile program provides a justification for American missile defense plans and is thus potentially detrimental to other Russian interests. For that reason, Russia, and especially the military, tends to downplay the significance of Iran’s achievements. Without a solution in sight, Moscow is marking time, all the while carefully balancing the many contradictory impulses that underlie its position.

³² “Iran Dolzhen Uredit ‘Shesterku’ v Mirnom Kharaktere Svoego Atoma” [Iran Must Convince the Group of Six in the Peaceful Nature of Its Nuclear Program], RIA-Novosti, April 9, 2009.

Issue 4

Tactical (Substrategic) Nuclear Weapons

Nikolai Sokov, Lead Author

Tactical nuclear weapons (TNW) are generally defined as nuclear weapons that are associated with short-range delivery systems of various types, although, as discussed in Section II, below, there is considerable debate as to which weapons fall into the TNW category. Importantly, TNW comprise the least regulated category of nuclear weapons. American and the Russian TNW are subject only to non-binding political statements made in 1991 (known as the Presidential Nuclear Initiatives, or PNIs) whose status, at least where Russia is concerned, is uncertain, while TNW that belong to the other nuclear armed states (China, France, China, India, Israel, North Korea, and Pakistan) are not subject to any international regime whatsoever.

Chronologically, TNW and intermediate-range nuclear weapons were the first to appear simply because of technological limitations on delivery vehicles. In the 1950s they were assigned the role of a war-fighting tool, little more than more powerful artillery, intended to break through enemy defenses, stop advancing enemy tanks and troops, and similar missions. Gradually, as strategic weapons began to appear in significant quantities and the destructive consequences of any use of nuclear weapons became clearer, TNW came to be conceptualized primarily in the context of a large-scale, global war, even though they kept the role of immediate support of troops.

A relatively independent role for sub-strategic nuclear weapons persisted at least for some time in American planning. A version of flexible deterrence foresaw limited nuclear strikes against advancing Soviet troops without resort to strategic weapons: according to the logic of this concept, a limited strike of this sort could demonstrate to the Soviet Union the futility of aggressive designs and force it to retreat.¹ Contemporary Soviet planning, however, regarded limited nuclear use as an attempt to avoid damage to the United States and, accordingly, postulated massive strikes with strategic weapons against U.S. territory in response to any use of nuclear weapons

¹ “A Study of the Management and Termination of War with the Soviet Union, prepared by the Staff of the Net Evaluation Subcommittee of the National Security Council,” November 15, 1963, Top Secret (declassified in 1997), National Archives, Record Group 59, Department of State Records, Records of Policy Planning Council, 1963-64, Box 280, File “War Aims.”

In at least two cases the United States considered the limited use of nuclear weapons in local and regional conflicts against “third states”—during the Korean War and during the war in Vietnam, but in both instances this option was rejected. An important reason behind the reluctance to use nuclear weapons was fear that this would legitimize Soviet nuclear use against American friends, allies, and clients.²

Today, the situation with regard to TNW is characterized by the following main features:

- Unprecedented asymmetry: the Russian TNW stockpile is estimated at 5,000 warheads while the American stockpile is probably around 500 warheads;³
- American gravity bombs in Europe (estimated at fewer than 240) are the only nuclear weapons permanently deployed outside national territories of nuclear weapon states;
- Absence of any arms control regimes with respect to TNW (the status of the 1991-92 PNIs is highly uncertain);
- Complete absence of official, much less verifiable information about stockpiles, deployment patterns, employment plans, or anything whatsoever about TNW stockpiles worldwide;
- High risk that any relocation of TNW that appeared to be readying them for use—or even rumors about such relocation—could trigger a major international crisis and result in dangerous escalation, including between U.S./NATO and Russia;
- Potential risk of losing control over nuclear warheads for short-range delivery systems;
- China’s growing arsenal of conventionally armed tactical ballistic missiles, which could potentially be refitted with nuclear weapons;
- Growing stockpiles of short- and intermediate-range nuclear weapons in India and Pakistan.

While the thinking about tactical nuclear weapons has been shaped by the history and the logic of the Cold War U.S.-Soviet nuclear balance, the potentially dangerous features of this class of nuclear weaponry is further exacerbated by the emerging

² This point was developed by Thomas Schelling in the context of the Korean War. Thomas Schelling, *Nuclear Weapons and Limited War* (Santa Monica, CA: RAND, 1959). A similar point was made in a 1960s study of possible use of nuclear weapons during the war in Vietnam: F.J. Dyson, R. Gomer, S. Weinberg, S.C. Wright, “Tactical Nuclear Weapons in Southeast Asia,” Study S-266, Jason Division, Institute of Defense Analyses, contract DAHC15 67 C 0011, published March 1967, released under the Freedom of Information Act to the Nautilus Institute on December 4, 2003, <http://nautilus.org/VietnamFOIA/report/report.html>.

³ Robert Norris and Hans Kristensen, “Nuclear Notebook: U.S. Nuclear Forces, 2009,” *Bulletin of the Atomic Scientists*, March/April 2009, p. 61. Robert Norris and Hans Kristensen, “Nuclear Notebook: Russian Nuclear Forces, 2009,” *Bulletin of the Atomic Scientists*, May 2009, p. 57. See also Hans Kristensen, “Russian Tactical Nuclear Weapons,” FAS Strategic Security Blog, March 25, 2009, <http://www.fas.org/blog/ssp/2009/03/russia-2.php>.

“new” nuclear balances, such as between India and Pakistan, and potentially also between Israel and Iran, if the latter acquires nuclear weapons. Unlike in the U.S.-Soviet context, these weapons can be directly employed against the national territory of the opponent and thus inherent dangers of escalation present an even greater challenge. Yet, it appears difficult, if not impossible to address these challenges in the absence of dialogue and arms control efforts with regard to these systems between the United States/NATO and Russia.

I. The 1991-92 PNIs

American and Russian TNW are subject to an informal regime created by unilateral declarations made by President George H.W. Bush and President Mikhail Gorbachev in the fall of 1991; Gorbachev’s statement was confirmed and somewhat expanded by President Boris Yeltsin in January 1992.⁴

On September 17, 1991, Bush announced a set of wide-ranging measures to reduce the U.S. inventory of TNW. This initiative, following the failed coup attempt in the Soviet Union on August 19-21, was prompted by the mounting concern about the security of Soviet nuclear weapons. It was designed to prompt a reciprocal response, which would facilitate the process of TNW consolidation and reduction. The initiatives included the following provisions:

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

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

- Complete elimination of warheads for tactical land-based missiles, artillery shells, and mines;

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

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

During discussions of the PNIs in the fall of 1991, the Soviet Union proposed to start negotiations on a legally binding verifiable treaty on reduction of tactical nuclear weapons, but the United States preferred to limit action to parallel political obligations.

The absence of any verification and transparency measures, which is inherent in PNIs, led to at least one serious political crisis after a report, in early 2001, that Russia was transferring nuclear warheads for tactical Tochka-U missiles to Kaliningrad Oblast.⁵ These allegations caused considerable uproar, especially in Eastern Europe, and led Poland to publicly demand an inspection of Russian military facilities in that region.⁶ Subsequent investigation showed that rumors were based on questionable and misinterpreted information⁷ and the crisis quickly dissipated. It serves as a reminder, however, that any arms control regime lacking a verification mechanism is fraught with risk of provoking serious crises, which may not always be resolved quickly and peacefully.

The 1991-92 parallel declarations provide for removal to central storage facilities or elimination of all tactical nuclear warheads except for a limited number of gravity bombs, which remain deployed (i.e., usable on short notice). Also included were systems whose precise classification was contested, such as long-range nuclear-armed sea-launched cruise missiles (SLCMs). Total reductions (both removal to central storage and elimination) measured in thousands of warheads and represent the single largest reduction of nuclear warheads, surpassing all other agreements between the United States and the Soviet Union/Russia. The United States originally planned to complete reductions by 1998, but that date was subsequently extended to 2000. Russia announced a plan to complete reductions by 2000, but has not made an official statement on the status of PNI implementation since 2004, when it declared that its PNI had been “almost” implemented.

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

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

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

The lack of a formal treaty resulted in the absence of any kind of hard data on the existing stockpiles, as well as with respect to the number of warheads to be put in central storage, eliminated, or deployed. The initiatives produced two unwelcome consequences, which haunt the U.S.-Russian and international arms control agenda today: uncertainty with respect to their implementation and considerable disparity of numbers between the U.S. and Russian stockpiles.

Periodically, both countries updated each other and other countries on the status of reductions. This process became more formal in 1997 when the NATO-Russia Permanent Joint Council emerged as a venue for exchanges of information with respect to TNW reductions. Still, even in that forum, the sides only discussed the share of warheads eliminated or transferred to central storage, but not absolute numbers. In 1999, in the wake of the NATO bombing of the former Yugoslavia, contacts in the Permanent Joint Council were severely limited and information exchanges on TNWs stopped. Since 2003-04, Russia has stopped even mentioning the PNIs and currently regards them as nonbinding measures, which it is not required to implement. In part, this attitude probably reflects dissatisfaction with the George W. Bush administration's approach to nuclear arms reductions, including the lack of transparency and verification under the 2002 Moscow Treaty on Strategic Offensive Reductions (also known as SORT).

However, speaking in 2007, General Vladimir Verkhovtsev, Chief of the 12th GUMO (the Main Directorate of the Ministry of Defense responsible for handling nuclear weapons), claimed that Russia had completely implemented its promises with regard to TNW reduction, including a sixty percent reduction of warheads in the Air Defense Force, a fifty percent reduction in the Air Force, one-third in the Navy, and 100 percent in Ground Forces. He also said that Russia did not deploy TNW on surface ships and submarines, but "if necessary we could deploy them there, no one should doubt that."⁸ This would amount to implementation of at least the letter of Gorbachev and Yeltsin's statements.

Since the late 1990s international efforts to achieve action on reduction and eventual elimination of TNW have concentrated on the following package of proposals:

- Reaffirmation of the PNIs and perhaps giving the unilateral statements legally binding status;
- Transparency measures starting with the exchange of basic numbers (total stockpile and perhaps the breakdown by category of delivery vehicles) and their location; and
- At a later date, negotiating a legally binding and verifiable treaty on TNW.

⁸ Nikolai Poroskov, "Takticheskii Yadernyi Kozyr" [A Tactical Nuclear Ace], *Vremya Novostei*, September 7, 2007.

Unfortunately, all these efforts, undertaken primarily within the UN and the Conference on Disarmament (CD), have encountered Russian stonewalling or outright rejection.

II. Definition of TNW

There is no agreed upon definition of which nuclear weapons should be considered tactical.⁹ Defining TNW is difficult because their delivery systems are all dual-use, i.e., they can carry both nuclear and conventional warheads. Consequently, the standard criterion that has been used for strategic weapons since late 1960s (that each deployed delivery system is considered to be carrying nuclear warheads) is inapplicable: by that criterion, TNW arsenals would become immensely large because they would include a wide variety of systems, many of which have never been assigned nuclear roles. For example, the same aircraft can carry nuclear or conventional weapons, and nuclear-capable aircraft differ primarily by the presence of a special launch-control system on board.

For practical purposes, TNW are often defined as systems that are not subject to existing U.S.-Soviet (Russian) treaties and, in the bilateral context, can be categorized as substrategic rather than tactical. The following weapons systems fall under that loose definition:

- Warheads for land-based missiles with a range of less than 500 kilometers (km) (everything above is considered intermediate-range under the 1987 U.S.-Soviet Intermediate-Range Nuclear Forces (INF) Treaty);
- Warheads for air-launched cruise missiles with a range less than 600 km (everything above falls under the U.S.-Soviet START I Treaty) and gravity bombs. A cautionary note is that many of the same bombs can be used by different classes of aircraft—strategic, medium, and tactical.
- While SLCMs with a range of 600 km and higher are indirectly limited by START I, the United States has never recognized this class of weapons as strategic and therefore included them into the PNIs.
- Finally, nuclear artillery shells and nuclear landmines, as well as nuclear warheads for air defense and missile defense assets have been lumped into the TNW category under the PNIs (regardless of their range).

Obviously, this approach to definition has significant limitations because it is based exclusively on the U.S.-Soviet and the U.S.-Russian experience. For states that share a border, intermediate-range weapons (such as long-range cruise missiles) fulfill the

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

same role as strategic weapons in the U.S.-Soviet (Russian) context. Still, it makes sense to base the definition on U.S.-Russian experience for the following reasons:

- Nuclear arsenals of other states have never been subject to any sort of categorization;
- The largest TNW arsenals belongs to Russia and United States. TNW in Europe remain at the center of the controversy; and
- It is exceedingly difficult to differentiate between nuclear weapons intended for short-range aircraft and for medium bombers.

This approach leaves aside one important category of nonstrategic nuclear weapons: intermediate-range land-based missiles. The United States and Russia banned and eliminated such weapons under the INF Treaty. A joint U.S.-Russian initiative has been proposed in the CD to make that treaty multilateral to include similar weapons in all other nuclear weapon states. Thus, weapons with approximately the same ranges could fall under different treaties depending on their basing mode (land vs. sea and air).

III. TNW Arsenals

There is no official, much less verifiable data on the number of TNW for any country. All available data are only estimates, some more reliable than others. Arriving at credible estimates is complicated by two factors. One is the dual-use nature of delivery vehicles. The other is the murkiness of the distinction between the “deployed” and “non-deployed” status of TNW. With few exceptions, warheads intended for short-range delivery vehicles are not mated to them and are kept at storage facilities that are part of or adjacent to bases where delivery vehicles are located. Other warheads are kept at “central” storage facilities, whatever that term might mean (differences between the American and the Russian definitions are discussed below). The two categories differ, basically, by the time needed to release warheads to troops and mate them with delivery vehicles, but even that distinction can be moot.

Since the end of the Cold War, U.S. and Russian TNW arsenals have been reduced significantly. Still, by all estimates, Russia possesses by far the larger TNW arsenal, both deployed and non-deployed, comparable in size to what the United States had prior to the adoption of the PNIs. This has focused international attention on Russia, whose agreement to act on TNW is widely regarded as the key condition for further reduction of this class of nuclear weapons. The large TNW arsenal maintained by Russia also causes concern, especially in Eastern Europe, about the possible role TNW might have in Moscow’s security policy.

United States

The United States has a small TNW arsenal, which is currently estimated at 500 weapons, including 100 warheads for SLCMs (the remainder are gravity bombs).¹⁰ The United States reportedly has preserved the ability to redeploy nuclear-armed SLCMs.¹¹ The number of nuclear weapons (gravity bombs) the United States keeps in Europe is declining as well—whereas a decade ago it was sometimes estimated at roughly 500, today, following the withdrawal of American gravity bombs from the United Kingdom (some were apparently transferred to other bases in Europe while others were returned to the United States), U.S. expert Hans Kristensen estimates the total number of U.S. TNW in Europe at fewer than 240.¹²

Russia

Earlier this year, U.S. analysts Robert Norris and Hans Kristensen estimated the Russian TNW arsenal at 2,050 deployed warheads out of a total inventory of 5,380 substrategic warheads (including those in reserve and awaiting dismantlement).¹³

The estimate for deployed weapons is based on the number of nuclear-capable delivery vehicles and included air defense missiles, bombs and short-range missiles for aircraft, and SLCMs. The methodology for deriving a figure for the total arsenal was not disclosed. As was noted above, however, where TNW stockpiles are concerned, counts based on delivery vehicles are questionable because such systems are dual-use.

A different method of assessing the Russian TNW arsenal is available. Russian analyst Alexei Arbatov estimated the total TNW stockpile in 1991 at 21,700 warheads;¹⁴ at the 2005 Review Conference for the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Russian delegation reported that three quarters of Russian TNW warheads had been eliminated, putting the total stockpile at approximately 5,000.¹⁵ According to data obtained from interviews, about 2,000 of those or fewer are intended for aircraft and should be considered deployed (i.e., available for deployment on delivery vehicles). The breakdown of the rest is unknown, but perhaps another 1,500-2,000 warheads are reserves intended for

¹⁰ Norris and Kristensen, “Nuclear Notebook: U.S. Nuclear Forces, 2009.”

¹¹ Amy Woolf, “Nonstrategic Nuclear Weapons,” Congressional Research Service, January 28, 2009, p. 12, <http://ftp.fas.org/sgp/crs/nuke/RL32572.pdf>.

¹² Hans Kristensen, “U.S. Nuclear Weapons Withdrawn from the United Kingdom,” FAS Strategic Security Blog, June 26, 2008, <http://www.fas.org/blog/ssp/2008/06/us-nuclear-weapons-withdrawn-from-the-united-kingdom.php>.

¹³ Norris and Kristensen, “Nuclear Notebook: Russian Nuclear Forces, 2009”; See also Kristensen, “Russian Tactical Nuclear Weapons.”

¹⁴ Alexei Arbatov, “Deep Cuts and De-Alerting: A Russian Perspective,” in Harold Feiveson, ed., *The Nuclear Turning Point* (Washington: Brookings Institution, 1999), p. 319

¹⁵ The coincidence between this figure and the figure from Norris and Kristensen can be considered spurious. Using the same methodology, they estimated the total Soviet TNW stockpile in 1991 at 15,000, much less than the actual number.

surface ships and submarines; according to General Verkhovtsev's statement referenced above, Russia no longer has nuclear warheads for land-based short-range missiles.

One complicating factor in estimating the size of the deployed versus nondeployed TNW force is the difference between the Russian and the U.S. interpretation of the term "central storage" in the PNIs. Whereas the United States apparently meant "centrally located" storage facilities, the Russian understanding of the term referred to the warheads' status ("subordination to central authorities"). As a result, according to credible information, warheads for SLCMs are kept at naval bases but the storage facilities are controlled by the 12th GUMO. Moreover, crews of ships and submarines continue to train for their use.

The Russian TNW stockpile continues to shrink: its size is primarily determined by the capacity to dismantle and refurbish warheads with expired warranties. According to available data, the warranties for all TNW warheads that existed in 1991 has already expired and today the arsenal consists of a mixture of refurbished warheads and those that are slated for dismantlement (for example, in 2004 Russian officials indicated that a limited number of artillery shells and mines were awaiting dismantlement). The pace of reduction was high in the early 1990s, but then declined because priority was given to refurbishment of strategic warheads. It is likely that the TNW stockpile will continue shrinking at a modest rate, until it reaches the level of perhaps 1,500-2,000 warheads.

China

The number of Chinese warheads intended for short-range missiles, tactical aircraft, and artillery was traditionally estimated at 120-150; warheads for delivery vehicles that can be classified as intermediate-range were usually estimated at about 150.¹⁶ This traditional view was challenged in the mid-2000s, however. In 2006 the "Nuclear Notebook" of the *Bulletin of the Atomic Scientists* questioned whether China had a tactical nuclear arsenal at all—the impressive arsenal of short-range missiles that country was deploying vis-à-vis Taiwan are believed to be armed with conventional warheads. On the other hand, it is believed that Chinese intermediate-range air- and ground-launched cruise missiles are nuclear-capable.¹⁷ While it appears possible that in the past China, like all nuclear weapon states, deployed a limited number of short-range nuclear assets, including perhaps even nuclear artillery, the current estimates seem to lean toward the conclusion that Beijing did not maintain that arsenal. Instead, it appears to concentrate on a conventional short-range capability and a limited force of intermediate-range nuclear-capable delivery vehicles, which, according to the best available unclassified estimate,

¹⁶ Robert S. Norris, William M. Arkin, Hans M. Kristensen, Joshua Handler, "Nuclear Notebook: Chinese Nuclear Forces, 2001," *Bulletin of the Atomic Scientists*, July-August, 2001, pp. 71-72.

¹⁷ Robert Norris and Hans Kristensen, "Nuclear Notebook: Chinese Nuclear Forces, 2008," *Bulletin of the Atomic Scientists*, July-August, 2009, p. 44,
<http://thebulletin.metapress.com/content/25094v7235832574/fulltext.pdf>.

numbers 144.¹⁸

IV. Politics and Policies: Russia, NATO, and the United States

Russian Perspectives on TNW

Russia's official position on additional arms control and disarmament measures with regard to TNW can be summarized in just two points:

1. Russia has probably fully implemented the 1991 PNIs or is close to full implementation, but considers them mere political declarations and is under no obligation to report on their status.
2. No new action on TNW is feasible until American nuclear weapons no longer remain in Europe. Their number is inconsequential: this is a matter of a principle that nuclear weapons should only be based on the national territories of nuclear weapon states.

Any change in the existing Russian position on TNW is unlikely in the foreseeable future.

TNW in Russian Security Policy. Russian tactical nuclear weapons attracted international attention in the mid-1990s when Russian government, military, and non-governmental experts were discussing options for a response to the increased level of perceived threat as a result of NATO enlargement.¹⁹ At that time, reliance on TNW was regarded by some as an appropriate method of balancing that threat:

- The majority of Russian experts firmly believed that NATO superiority in conventional armed forces could only be balanced through enhanced reliance on nuclear weapons.
- Also, the threat itself was theater-level in nature—it was created, many argued, by NATO moving closer to Russian borders—and thus the threat arguably called for development of assets designed to target enemy troops at short ranges.
- Finally, some regarded TNW as more “usable” and thus considerably more credible than strategic weapons, which had always been associated with global war and carried the stigma of “the end of the world.”

¹⁸ Ibid.

¹⁹ For details of the debates on TNW role in Russia in mid-1990s see Nikolai Sokov, “Tactical Nuclear Weapons Elimination: Next Step for Arms Control,” *Nonproliferation Review*, 4 (Winter 1997), pp. 17-27.

This discussion brought forth certain properties of TNW, which helped shape the international agenda on the limitation and reduction of this class of weapons:

- TNW can be forward deployed in secret, without the other party's knowledge and thus are particularly damaging to international security and stability, especially during crises, compared to strategic weapons whose locations are well known. The absence of any kind of transparency with regard to TNW serves to exacerbate this danger;
- During a crisis situation, when TNW are released to troops, the risk of unauthorized use can increase;
- Deployment or only a suspicion of deployment of TNW can provoke a preemptive strike by the other side; accordingly, the party that deploys TNW may be more prone toward early use out of fear of such a preemptive strike (the "use 'em or lose 'em" dilemma); and
- TNW carry greater risk of theft than strategic weapons, especially when they are released to troops during the deployment phase.

By the end of 1990s a sustained international campaign for limitation and reduction of TNW emerged led by the countries of the New Agenda Coalition, comprised of Brazil, Egypt, Ireland, Mexico, New Zealand, Slovenia, South Africa, and Sweden. The central point of near-consensus in that campaign was the proposal to make the 1991 PNIs legally binding and adopt a set of transparency measures as an intermediate step toward a full-scale verifiable treaty on deep reduction and preferably elimination of TNW. As noted above, these proposals met with Russian stonewalling or outright rejection.

In the meantime, the evolution of Russian nuclear strategy took a different path from the discussions of the mid-1990s, which generated widespread concern. To deter numerically and qualitatively superior U.S. and NATO conventional forces, the 2000 Russian Military Doctrine proposed the concept of "de-escalation"—a threat of a limited nuclear strike in response to a large-scale attack that exceeds the capability of Russian conventional forces. The assets assigned to limited nuclear use are long-range weapons, namely, strategic and apparently also medium bombers. Targets for such limited strikes include airbases and aircraft carriers from which the United States is expected to fly missions against Russia, as well as command and control centers. There are indications that the number of warheads assigned to this scenario is small—it has been in single digits in all large-scale exercises in the last ten years that simulated use of nuclear weapons against these classes of targets. Consequently, Russia's limited—and still shrinking—nuclear arsenal should be sufficient for existing missions.

Short-range weapons do not appear to have a place in that strategy. Of all the categories of weapons usually lumped into the TNW category for want of a better

definition, only weapons intended for Tu-22M3 medium bombers appear to have a mission, but these are certainly not short-range.

Nuclear warheads for sea-launched cruise missiles, which are stored at 12th GUMO facilities at naval bases, appear to be another component of the forces Russia would use in a conflict with NATO. Russian naval commanders admit that they simply cannot face the U.S. Navy—in case of a direct clash between Russia and the United States—without reliance on these assets. Accordingly, crews of surface ships and submarines have reportedly trained to mate warheads to SLCMs and launch them.²⁰

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

The limited, if not negligible role of TNW in Russia's security strategy (in fact, the weapons that do have or might have a role should be more properly classified as intermediate-range) begs for an explanation as to why Russia continues to reject proposals on further reduction of these weapons.

The Politics of Russian TNW. The explanation for the Russian position on TNW can hardly be found in strategic planning: the experts who continue to advocate reliance on TNW to balance U.S. and NATO conventional superiority are outside the government (or no longer on active military duty) and are in a decided minority. The more likely answer lies in domestic politics and in public and elite perceptions.

- *"No More Unreciprocated Concessions."* The determination to keep a large arsenal of weapons that do not have obvious utility is related to the deep-seated dissatisfaction with what is seen as excessive, unreciprocated concessions of the Gorbachev and early Yeltsin eras. In the present day, giving up any advantage, no matter how illusory, is rebuffed, because of deep Russian distrust of Western intentions. The problem is further aggravated by the fact that the United States keeps a limited number of TNW warheads in Western Europe—a capability, which, seen from Russia, does not have a logical justification given the overwhelming superiority of the United States and NATO over Russia, and is thus assumed to be a potential threat. Furthermore, persistent attempts, many of which originate in the United States and Europe, to persuade Russia reduce its TNW or at least disclose their location, numbers, and other information, tend to be regarded with suspicion almost automatically, without serious thought given to the reasons

²⁰ Author's interviews with Russian officials (who requested anonymity).

for these proposals. Instead, such attempts are seen as proof that these weapons are truly valuable. Put differently, Western concern is not a sufficient reason to part with the advantage. According to this line of thinking, the West should not be allowed to have a “free lunch,” and at the very least Western concern can be leveraged to achieve equally significant concessions in areas of interest to Russia.

- *Inertia.* The longer the same position is maintained, the more entrenched it becomes. The key elements of the current Russian position have remained unchanged for over a decade. Changing it without sufficient justification might seem an unjustified concession to the other party. Such a position can be changed either when the leadership changes (as happened when Gorbachev assumed the highest office in the Soviet Union) or when the environment changes. Neither reason is present today.
- *“Capabilities-Based Planning.”* The Russian elite, including the military leadership, acutely feels the uncertainty of the international environment. The main threat is still associated with the United States and its allies, but other potential threats are emerging, and Russia is reluctant to part with any assets. In 2005-2007, similar arguments were made in favor of the withdrawal from the INF Treaty, which was justified by “other states” possessing or developing similar weapons. Although specific states were never mentioned, the culprits are obvious—China, India, Pakistan, Israel, and Iran; perhaps also North Korea. One can detect an attitude that follows the logic of the concept of “capabilities-based planning” that favors maintenance of all available assets as insurance against unforeseen (and unforeseeable) threats.
- *Parochial Group Politics.* The current Russian position on TNW can also be attributed to a peculiar alignment of relevant interest groups. As noted above, the Navy is interested in keeping TNW as a “just-in-case” option.²¹ In contrast, the Air Force appears much less interested in TNW except for weapons assigned to Tu-22M3 medium bombers. Other groups probably have even less interest in TNW, but are unlikely to invest political resources in a push to get rid of these weapons. Similarly, the Foreign Ministry, another important player, is reluctant to push for a change of the Russian position: it has many other, more pressing items on its agenda, and the use of the TNW issue as a lever to remove American nuclear weapons from Europe appears a reasonably convenient position. In other words, no one is actively seeking a change and thus the Navy’s interest obtains. Perhaps if retention of TNW becomes a threat to the interests of other services, they might become more willing to challenge the parochial position of the Navy.

²¹ It is ironic that confidential interviews collected in 1991-92 among U.S. officials attributed the rejection by George H.W. Bush of the Russian proposal to start negotiations on a legally binding and verifiable treaty on TNW to the U.S. Navy, which was reluctant to allow on-site inspections of ships and submarines to confirm the absence of nuclear warheads.

- *Arms Control Challenges.* Russian ambivalence with regard to TNW might also reflect the challenges of crafting a verifiable treaty. The traditional approach, according to which nuclear weapons are accounted for and reduced indirectly, through accounting and reduction of nuclear-capable delivery vehicles, is inapplicable to TNW. New accounting rules and verification procedures need to be designed for TNW—those that address warhead stockpiles themselves. This, in turn, involves much more intrusive verification at military bases and, for the first time, one of the most sensitive categories of nuclear-related facilities—storage sites for nuclear weapons. While such procedures are, in principle, not unthinkable, it would take serious investment of political resources to overcome entrenched resistance and political opposition.

The Russian position on TNW appears very static and also very stable. Support for keeping a relatively large arsenal of short-range nuclear weapons appears rather weak, but support for its reduction does not exist at all. While American TNW in Europe are few, they provide a convenient justification for rejection of any initiatives aimed at reducing the Russian TNW arsenal. This is a position Moscow can maintain almost indefinitely.

U.S. and NATO Perspectives on TNW

When the West speaks about NATO TNW, it means American short-range assets—gravity bombs intended for aircraft. Great Britain no longer has TNW and French nuclear weapons should be more properly classified as either strategic or intermediate-range. Thus, as far as NATO is concerned, the issue of TNW is effectively the issue of the limited number of U.S. nuclear weapons in Europe.

During the Cold War, these weapons had a clear-cut mission assigned to them: deterrence of numerically superior Soviet and Warsaw Pact conventional forces. In case of aggression, these weapons were supposed to stop the invading masses of Soviet tanks and terminate hostilities on conditions acceptable to NATO (i.e., no worse than status quo ante). These TNW, along with U.S. troops in Europe, also came to be conceptualized as an embodiment of American extended deterrence—a symbol of American involvement and a guarantee that the United States would not stay aside if the Soviet Union tried to launch an offensive at Western Europe.

It should be noted, however, that the symbolic role of troops and that of TNW were not identical. The prospect of loss of American life in a hypothetical Soviet offensive was a clear-cut, unambiguous guarantee that the United States would be involved. TNW, in addition to that mission, created the possibility that war between NATO and the Warsaw Pact would be limited to Europe. That possibility was widely discussed in the West, especially in Germany in the early 1980s in the context of deployment of intermediate-range missiles and was also actively exploited by the Soviet Union in an attempt to prevent that deployment.

In the late 1960s, after the Multilateral Force project was dropped and the NPT signed, nuclear weapons deployed in Europe also acquired the role of a justification for the Nuclear Planning Group (NPG). To this day, the NPG remains the only institution that coordinates nuclear policy of NATO member-states, and the only venue which provides access for non-nuclear members of NATO to nuclear policymaking in the United States.

When the Cold War ended, American TNW in Europe were drastically reduced from an estimated 1,600 to around 500 by the early 2000s, and further to about 200-240 today. Reductions continue—see above—but these occur in secret, without public announcement, and consequently without garnering any credit or political benefit.

The mission assigned to TNW has also undergone serious modification. In its 1991 Strategic Concept, NATO effectively eliminated the traditional mission of deterrence of a large-scale conventional attack. Nuclear weapons became a “just-in-case” asset against uncertain threats that might materialize in the future and were no longer specifically targeted against Russia. Furthermore, as NATO enlarged to the east, neither TNW, nor the infrastructure associated with them moved in that direction. In 1997, the NATO-Russia Charter specifically declared that NATO had “no intention, no plan and no reason to deploy nuclear weapons on the territory of new members, nor any need to change any aspect of NATO’s nuclear posture or nuclear policy—and do not foresee any future need to do so.”²² That policy covered nuclear infrastructure, including weapons storage sites. Moreover, according to available information, in the 1990s the United States no longer certified aircraft deployed in Europe for carrying nuclear weapons, meaning, in effect, that by the end of the decade it no longer had the means to deliver the weapons it still had in Europe.

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

- A “just-in-case” deterrence against unforeseeable threats, such as “Russia going bad” or new threats from other directions. In this sense, NATO thinking is similar to the “capabilities-based planning” that is practiced by Russia. The situation in the world remains unpredictable, and it is difficult to rule out the emergence of direct immediate threats ten or twenty years from now. While Russia is not such a threat today, its growing assertiveness might translate into a desire to restore influence over the former Soviet empire as (and if) its power continues to grow. Russia’s summer 2008 war with Georgia is regarded by many, especially in Eastern Europe, as a troubling sign. There can be other threats as well: Iran is developing missiles capable of reaching Europe and might—especially if it acquires nuclear weapons—extend its influence over the entire Middle East.

²² Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation Paris, May 27, 1997; <http://www.nato-russia-council.info/htm/EN/documents27may97.shtml>.

- *A symbol of the security link between European NATO and the United States and of American extended deterrence, which provides a security (including nuclear) umbrella for Europe.* According to this argument, the presence of TNW enhances the ability of the United States to react to possible aggression against Europe by providing it with a means for responding to such aggression. This concern is particularly strong in Eastern Europe: new members of NATO that share a border with Russia or are close to it (Baltic states, Poland, etc.) have little confidence in the willingness or the ability of Western European states to defend them vis-à-vis a resurgent Russia and regard the United States as the most reliable provider of security.
- *A justification for (or a reason for continued existence of) the NPG.* Admittedly, without TNW in Europe, the NPG could become hollow and the United States would not have a reason to continue its involvement in its work. Europe would thus lose leverage on U.S. nuclear policy.

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

If a direct military threat to European NATO materializes in the future, it is far from obvious that the United States will resort to nuclear use at all, including the use of tactical weapons. U.S. and NATO conventional forces are the most advanced in the world and can address every—or nearly every—imaginable contingency without crossing the nuclear threshold. In any event, it is difficult to envision a situation when nuclear weapons are engaged promptly after a conflict starts, because no threat on the horizon appears to be as overwhelming and immediate as the Soviet threat was perceived to be.

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

It is also far from obvious that the presence or absence of a limited number of U.S. nuclear bombs in Europe influences the Russian perception of the credibility of American extended deterrence, including with regard to Eastern Europe. If the situation is contemplated from Moscow's perspective, the decision of the United States to interfere in a possible conflict is likely to be influenced by a much broader array of variables, including American interest in maintaining its global role, the overall indicators of U.S. power, etc. Ultimately, the question on the minds of future Russian policymakers, if they contemplate possible designs on European members

of NATO, will be about the political will of U.S. leaders, not about specific assets that might or might not be used for deterrence.

Even if nuclear weapons were to play a role in this contingency, the choice of nuclear options is not limited to TNW. These can include, for example, gravity bombs, short-range missiles deployed on heavy bombers, as well as air- and sea-launched cruise missiles. These assets can also be forward deployed if necessary: U.S. heavy bombers, for example, can be based in the United Kingdom (as was done multiple times during the wars in Kosovo, Iraq, and Afghanistan). Temporary deployment in Europe is even allowed under the START I Treaty and will likely be allowed by its replacement.

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

To make these weapons militarily useful, that is to restore the original employment options vis-à-vis Russia, TNW would have to be relocated to the territory of one or more of the East European members of NATO. In order to give them a role vis-à-vis the Middle East, they would have to be relocated to the Balkans, in addition to the existing deployment in Turkey. These options would entail deployment in the Baltic states, Poland, the Czech Republic, Bulgaria, and perhaps Romania. Such redeployment is extremely unlikely under current geopolitical circumstances. But only in this case could they be used promptly after the beginning of hostilities and hold at risk a wide array of targets, especially in European Russia.

To see how unlikely such a deployment is, one need only look at the potential costs of such relocation. They include:

- If TNW can be used promptly, on short notice, their deployment areas will immediately be classified as first-priority targets for nuclear use. In fact, to avoid dispersion in time of hostilities, TNW storage sites must be destroyed *prior* to the beginning of hostilities in a preemptive strike. This enhances the risk of a nuclear preemptive strike in times of political crisis.
- Russia is certain to classify relocation of TNW to its border as a major threat and as an indication of aggressive designs. It regards U.S. and NATO conventional superiority as a potential threat, and any addition to the existing capability will trigger an easily predictable reaction.
 - Limiting new TNW deployment to the Balkans will hardly change the Russian reaction because it will not believe claims about the desire of

NATO to strengthen deterrence of other countries (Iran, for example). One need only review the controversy over deploying ballistic missile defenses in Eastern Europe, which has been justified by potential threat from Iran, to understand this. Also, the prospect that the United States could locate two new bases in Bulgaria and Romania, which were clearly intended to support operations in the Middle East, became one of the triggers for Moscow's decision to freeze its membership in the Conventional Forces in Europe (CFE) Treaty.

- In case TNW are moved to the east or southeast, Russia will promptly deploy its own TNW to the new frontline and will most likely reverse changes in the TNW posture that resulted from the PNIs. In particular, it is likely to deploy a limited number of nuclear-armed ground-launched missiles (*Iskander*), whose range could probably be enhanced beyond 500 km. Likely deployment areas are in the northwest, including Kaliningrad Oblast. Nuclear warheads would probably be deployed on submarines, including diesel-powered ones in the Baltic Sea.
 - Employment options will probably include a preemptive strike according to the logic outlined above, because Moscow is bound to see the movement of TNW to its borders as preparation for war or, at the very least, as a sign that the United States and NATO are preparing to use threat of force in its dealings with Russia.
 - At the same time, a full-scale nuclear arms race is highly unlikely. Changes will probably include limited additional production (currently, Russia does not have warheads for ground-launched missiles), a new deployment pattern, and new employment scenarios.
- Given that the move would be a violation of the 1997 “three no’s” commitment between NATO and Russia, relocation of TNW to the East will undermine and possibly deal a mortal blow to the NATO-Russia relationship. In a typical fashion, Moscow is likely to seek to “punish” NATO without due regard to possible costs to itself. For example, it is likely to terminate any and all cooperation with regard to Afghanistan and Iran. Abrogation of the political obligations of the 1997 NATO-Russia Charter will also undermine the credibility of any future political obligations of NATO.

The only exception to the limitations inherent in TNW is for weapons deployed in Turkey, which are close to both potential theaters of operations. These weapons can be used promptly and hold at risk a wide range of targets from their present deployment areas. Given their potential military utility, the withdrawal or retention of these assets must be a matter of a political decision for NATO made in a broader context of alliance security policy.

An important factor in any decisions with regard to the future of TNW in Europe is the availability of alternative options for the employment of the threat of nuclear use. These alternative options may include, for example, pre-deployment of nuclear

weapons to address possible threats from the Middle East, which are less likely to be viewed by Russia as a threat (for example, on ships and aircraft carriers in the Indian Ocean and the Persian Gulf, on Diego Garcia, etc.).

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

It is also possible to retain, at least temporarily, the existing infrastructure for NATO TNW (such as storage sites) that could support relocation of these weapons to Europe in a time of crisis. This decision would carry both short- and longer-term political, military, and diplomatic implications. It could weaken the political benefits that could be reaped from TNW withdrawal. Secondly, some in NATO warn that any attempt to return the weapons could create an escalatory dynamic. It is recommended, therefore, that in case a decision is made to withdraw TNW from Europe, retention of infrastructure should from the very beginning be declared an intermediate option and its dismantlement perhaps made contingent on a positive Russian response to the withdrawal of weapons.

The issue of escalation, meanwhile, is more complicated than those who urge the retention of TNW in NATO would admit. First of all, any moves to return the weapons to Europe need not be acknowledged as long as dual-capable aircraft remain in Europe deployed with conventional weapons, and no verification regime exists. Deciding whether or not to announce any redeployment could be left to NATO's discretion. Indeed, the option to announce a redeployment could give NATO commanders a new and flexible military tool—one of greater utility than the weapons provide under the current scenario. This possibility would also serve to provide an inducement to Russia to construct an appropriate verification regime.

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

U.S. TNW can be kept in Europe, at least to avoid tensions within the alliance, as long as they do not incur political or other costs. This has been the case for the last 15 years. The advisability of the continued deployment of that force has to be assessed in terms of external variables, such as the Russian unwillingness to engage on TNW limitation and reduction. If withdrawal of TNW can facilitate the removal of that

perceived threat, and if handled properly, it is possible that this change can be brought about with quite limited, if any, consequences for NATO security and cohesion.

Diverging Views of European Members of NATO on Withdrawing

U.S. TNW in Europe. U.S. officials have told their European counterparts that they are prepared to withdraw TNW if that is what other NATO members want. Indeed, the U.S. European Command and an Air Force task force have cited concerns about the operating and security procedures for the weapons, with USEUCOM concluding that the U.S. military would be better off if they were withdrawn from Europe.²³

A task force report for Defense Secretary Robert Gates cited comments from senior EUCOM officers complaining that it could cost between \$120 million and \$180 million to cope with emerging threats to the weapons' security, with one senior military leader saying: "We pay a king's ransom for these things and . . . they have no military value."²⁴

European NATO members, however, are split on the subject. Many Western European governments (including some of the few countries where the weapons continue to be based) would just as well do without the weapons, facing public opposition to their presence and sensing little security benefit from them. Moreover, some countries, such as Germany, are less than eager to take on the cost of fielding a new generation of dual-capable aircraft, given the low probability of their use.²⁵

However, these countries believe that even discussing the issue in NATO and other fora can only lead to political problems and would prefer that the United States make a decision and announce it to other states. One representative of a European state complained in a recent interview that the Obama administration had been seeking his country's advice on what to do about nonstrategic nuclear weapons. "They shouldn't come here asking us what to do," he said. "They should decide what to do, and pull the weapons out a week later."²⁶ In recent years, these countries have been accommodated by a slow but silent drawdown of these weapons.

²³ U.S. Air Force, "Air Force Blue Ribbon Review of Nuclear Weapons Policies and Procedures," February 8, 2008, <http://www.fas.org/nuke/guide/usa/doctrine/usaf/BRR-2008.pdf>; Hans Kristensen, USAF Report: "Most" Nuclear Weapons Sites in Europe Do Not Meet U.S. Security Requirements, Federation of American Scientists Strategic Security blog, June 19, 2008, [http://www.fas.org/blog/ssp/2008/06/usaf-report-\"most\"-nuclear-weapon-sites-in-europe-do-not-meet-us-security-requirements.php](http://www.fas.org/blog/ssp/2008/06/usaf-report-\); Report of the Secretary of Defense Task Force on DOD Nuclear Weapons Management, *Phase II: Review of the DOD Nuclear Missions*, Washington DC, December 2008, pp. 59-64.

²⁴ Report of the Secretary of Defense Task Force on DOD Nuclear Weapons Management, "Phase II: Review of the DOD Nuclear Missions," Washington DC, December 2008, p. 59.

²⁵ The German Tornado fighters are scheduled to go out of service and their replacement, the Eurofighter, has not been certified as nuclear-capable because Berlin fears that by doing so the United States could learn commercial secrets. Italy and the Netherlands have not made a decision on whether to buy a nuclear-capable variant of the new U.S. Joint Strike Fighter. Belgium plans to continue flying its current dual-capable aircraft until 2025, pushing off a decision for years.

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

Rose Gottemoeller, the Obama administration's lead nuclear arms control negotiator, summed up the current awkward status quo last year, before taking on her new official duties:

It appears that the United States and the NATO allies have arrived at a new place in their long and stormy marriage, without explicit action but decisive effect: They have decided to sell the nuclear beach house and buy a conventional house in the mountains. Now they just have to figure out how to tell the children.²⁷

To be sure, there are conservative elements in these countries, particularly in their defense ministries, and in NATO headquarters that argue for the continued deployment of these weapons. They stress that unless European members of NATO are willing to share the burden of nuclear defense, the United States will not allow them to influence its nuclear weapons policy and their interests will be sacrificed as the United States decouples from Europe.²⁸

Given the diminished role for nuclear weapons in NATO and the even smaller role of tactical weapons in the practical aspects of its defense, this argument seems overdone. Instead, it would be in NATO's interest to raise the threshold of nuclear use as high as possible since its strongly superior conventional forces can address all likely threats. In the unlikely scenario that such a threshold were crossed, it should be possible to employ U.S. nuclear weapons deployed outside Europe. One possible example that could be emulated is the role of U.S. nuclear SLCMs in providing an "umbrella" for Japan.²⁹ Reliance on British and perhaps also French nuclear weapons in case the nuclear threshold in Europe is crossed is another potential option.

This policy would also fit into the general U.S. tendency to centralize nuclear and other "global strike" capabilities in the U.S. Strategic Command.

On the other hand, Turkey and new NATO members in Eastern Europe are more eager to retain American tactical nuclear weapons to insure against a resurgent Russia or a more capable Iran, just as they show greater interest in the European leg of the U.S. missile defense system. They also see the presence of the weapons as a means of insuring that the alliance remains focused on territorial defense rather than shifting to out-of-area efforts, such as the conflict in Afghanistan or the effort to inject NATO into areas such as arms control and nonproliferation.

²⁷ Rose Gottemoeller, "Eliminating Short Range Nuclear Weapons" in *Reykjavik Revisited; Steps Toward a World Free of Nuclear Weapons*, Hoover Institution Press, 2008, pp. 107-158.

²⁸ See, for example, Michael Ruhle, "Good and Bad Nuclear Weapons: Berlin's Part in Shaping Nuclear Reality," Korber Policy Paper No. 3, Korber Foundation for International Affairs, April 2009.

²⁹ Arrangements for protection of Japan reportedly include the option of the United States returning nuclear warheads to long-range SLCMs and deploying them to the region.

The Obama administration has already raised concerns among NATO's Eastern European members by its decision to slow deployment of the U.S. missile defense system in Poland and the Czech Republic. This slowdown may be particularly painful because the latter countries have invested considerable political resources to push through the decision to deploy the defenses that were perceived as highly important for Washington, but faced considerable opposition domestically in the two Eastern European states. Withdrawing TNW, a perceived symbol of U.S. commitment, in this light—and so soon after the conflict in Georgia—carries risks for alliance cohesion, regardless of the weapons' military utility. Likewise, the wavering response of NATO to Turkish requests for conventional deployments in the run-up to the 1991 and 2003 Iraq wars, the ongoing tension between Turkey and the EU over the former's membership in the Union, and the bitter legacy of Turkish-U.S. relations in the Bush administration have raised questions in Ankara about NATO's commitment to its security that would be seriously exacerbated by the removal of TNW from that country.

Thus, the issue of maintaining the American security “umbrella” in the absence of TNW should be handled with utmost care, especially where “new” members of NATO and Turkey are concerned. The congressional strategic posture commission underscored the importance of this issue in its recently released report, indicating that, “All allies depending on the U.S. nuclear umbrella should be assured that any changes in its [nuclear] forces do not imply a weakening of the U.S. extended nuclear deterrence guarantees. They could perceive a weakening if the United States (and NATO) does not maintain other elements of the current arrangement than the day-to-day presence of U.S. nuclear bombs.”³⁰

To shore up the NATO commitment absent TNW, some experts have suggested, for example, conducting real operational contingency planning for a Russian conventional attack on the Baltics. At the same time, it is necessary to keep in mind that an attempt to create a more tangible security commitment, whether in the form of deployment of conventional forces or explicit contingency planning for response to a potential Russian attack, is likely to be seen in Moscow as an increase in the level of threat from NATO. There is real danger of sliding into a classic security dilemma—an attempt to defend against potential Russian threat could be regarded as a threat in itself.

The reliability of extended deterrence depends, in the end, on the political commitment of the United States and its having sufficient power to intervene. Even a limited presence of U.S. troops, who would be put at risk in case of a serious conflict, can serve as a tangible and unambiguous guarantee of American involvement. The presence or absence of a small number of nuclear bombs adds

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

little, if anything, to these parameters. Moreover, the nuclear component of extended deterrence could employ out-of-area weapons, as was noted above.

Paradoxically, Turkey's case might prove less difficult to manage than that of Eastern European members of the alliance. For one thing, some opinion polls have found Turks more opposed to continuing deployments of nuclear weapons on their territory than the public of other NATO countries.³¹ Moreover, addressing other issues in Turkey-EU and Turkey-U.S. relations could make it easier for Turkey to live without TNW. For Turkey's confidence in its European allies, nothing looms larger than its long-stymied effort to join the EU. While little progress on this front seems likely in the near future, other efforts that convinced Turkey of Europe's interest in a close relationship would be welcome. President Obama's outreach to Turkey, including his recent visit, should serve as a first step in a continuing effort to repair the breach in U.S-Turkish relations that occurred during the Bush years. The more this effort progresses, the more likely that Turkey would neither object to the removal of U.S. TNW nor have the inclination to launch its own nuclear weapon program.

A shift in the U.S missile defense system to better protect Turkey would also go a long way toward strengthening security assurances to that country. Such guarantees could prove particularly important should the threat from Iran continue to grow. As Gottemoeller has indicated, "It is worth emphasizing that if the Iranian nuclear program continues apace ... then NATO countries will require enormous energy and leadership to shift from the status quo."³² On the other hand, further alterations to the Conventional Forces in Europe treaty, particularly its related flank limitation agreements (see below), could make Turkey more reluctant to part with TNW.

In addition, based on interviews with several knowledgeable European diplomats, if U.S. TNW were withdrawn, a continuing role for NATO's NPG would be essential to demonstrate the vitality of U.S. security commitments, as well as to preserve cohesion by giving non-nuclear members of NATO a voice in all aspects of alliance's defense planning.

TNW Politics in the United States. Domestically, the Obama administration has several higher arms control and nonproliferation priorities than addressing the TNW issue, in particular the negotiation and ratification of a START replacement treaty and mounting a second bid to ratify the Comprehensive Nuclear Test Ban Treaty. Indeed, it has already made clear that it will not take up the TNW question with Moscow until the START negotiations are complete. In addition, the administration will defer any decisions on TNW until it completes its nuclear posture review later this year.

³¹ See, for example, "Nuclear Weapons in Europe: Survey Results in Six European Countries," a study coordinated by Strategic Communications for Greenpeace International, May 25, 2006.

³² Gottemoeller, "Eliminating Short Range Nuclear Weapons."

Although President Obama himself is said to be keen to tackle the issue of tactical nuclear weapons in Europe, key administration officials have publicly argued for very different approaches to the question. Ivo Daalder, the new U.S. ambassador to NATO, called for a quick and unilateral withdrawal of U.S. nuclear weapons before he entered government. Gottemoeller, before entering the administration, argued for a middle course: conducting confidence-building activities with Russia, then withdrawing the weapons but leaving the relevant human and technical infrastructure in place pending a move to a global ban on operationally deployed short-range nuclear weapons.³³ Gary Samore, the new White House WMD czar, recently declared that the administration need not tackle the issue until after the first round START follow-on negotiations are concluded.³⁴

If some in the Obama administration support withdrawal of the weapons once the arms control agenda allows the issue to come forward, some politically powerful figures outside the administration are taking the opposite point of view. The bipartisan congressional commission on the U.S. strategic posture in its report referenced above stressed the value of “extended deterrence” and said that this mission could force the United States to retain weapons it does not need for its own security. The report gave considerable weight to the opinion of those allies in Europe who consider these weapons essential to prevent coercion by Russia and Iran. It should be noted that recent studies and interviews with representatives of these countries challenge the accuracy of this representation of their countries’ views by the commission.³⁵ The strong emphasis on the argument that some European countries are staunchly opposed to the withdrawal of TNW is widely attributed to commission co-chairman James Schlesinger, who has been championing this theme of late.³⁶ Still, the political salience of this message, particularly among congressional Republicans is undeniable.

The U.S. public is also likely to be divided on the issue. Indeed, a recent public opinion poll indicates that Obama’s call for eliminating nuclear weapons has been greeted skeptically by the American public; on the other hand, keeping nuclear

³³ Gottemoeller, “Eliminating Short Range Nuclear Weapons.”

³⁴ Information in this paragraph, except for Gottemoeller, acquired through interviews with sources within U.S. government who asked to remain anonymous.

³⁵ For views on this issue contrary to those expressed in the commission report, see, for example, Lucacz Kulesa, *Reduce Nuclear Weapons in Europe to Zero and Keep NATO Strong (and Nuclear): A View from Poland*. PISM Strategic Files, No. 7, Polish Institute of International Affairs, March 2009.

³⁶ Schlesinger thinking was even more evident in his December 2008 report for the Secretary of Defense’s task force on nuclear weapons management, which stated, “[Dual-Capable] fighters and nuclear weapons are visible, capable, recallable, reusable, and flexible and are a military statement of NATO and U.S. political will. These NATO forces provide a number of advantages to the Alliance that go far beyond USEUCOM’s narrow perception of their military utility. Nuclear weapons in Europe provide a continuous deterrence element; as long as our allies value their political contribution, the United States is obligated to provide and maintain the nuclear weapon capability.” “Report of the Secretary of Defense Task Force on Nuclear Weapons Management—Phase II: Review of the DoD Nuclear Mission,” December 2008, p. 59.

weapons away from terrorists registers as a top security concern.³⁷

Thus, when the issue becomes ripe for decision, it is likely to provoke considerable controversy in Washington. Given such political constraints, it is likely that the Obama administration will not want to act unilaterally, but rather will seek to take action in the context of the upcoming decisions on a new NATO Strategic Concept—the first such document in a decade. Indeed, NATO has been preparing for this task for some time having authorized in 2007 an internal review of nuclear deterrence requirements for the twenty-first century.³⁸ Working through this process would allow the United States and selected other allies (most likely the United Kingdom and, to a lesser extent France) to find means for reassuring the most concerned states that their Article V protections will remain intact without the forward deployment of TNW. Some European sources indicate that the United Kingdom in fact has been pushing for such discussions to take place, but has been held back by Germany, which wants to postpone any discussion until after its September 2009 national elections.

Given that questions about TNW in many ways serve as a proxy for broader concerns about the direction and vitality of the alliance, it makes sense to discuss them as part of the Strategic Concept decisions. Doing so will also allow the Obama administration to delay any public discussion of the matter until after the completion of the START replacement treaty and the administration's internal nuclear posture review. When it does open such a public engagement, it would be wise to frame the move domestically as an effort to work with Russia to ensure that the most vulnerable weapons are secured from potential terrorist threat.

V. Possible Options to Restart Reductions of TNW

Even if the deadlock within NATO on the future of forward-deployed TNW could be resolved, however, Russia appears uninterested in engaging in a dialogue on reducing stocks of these weapons. The chances are negligible that Russia will agree to address Western concerns about its substrategic nuclear weapons at all. The probability that it will agree to exchange 5,000 of its substrategic weapons to 500 U.S. substrategic weapons is practically zero.

The Russian position can change only if its convenient lethargy is shaken and the balance of parochial politics can no longer be maintained. Accomplishing this would require radical action on part of the West that would make it politically difficult for Russia to avoid a substantive response and that would force at least some interest groups (the Foreign Ministry, for example) to advocate some form of reply.

³⁷ Council for a Livable World, "Poll Shows Support for Obama Nuclear Policies, But," May 22, 2009 available at <http://blog.livableworld.org/story/2009/5/22/12145/5635>.

³⁸ *Final Communiqué*, NATO, Ministerial meetings of the Defence Planning Committee and the Nuclear Planning Group, Brussels June 15, 2007.

Defining the Area of the Possible

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

Thus, the main focus of reductions, at least in the foreseeable future, are short-range American and Russian nuclear weapons that do not have a clear-cut, tangible military mission. On the Russian side, this involves nuclear weapons for tactical aircraft and perhaps shorter-range SLCMs; for the United States this would mean its gravity bombs, including first and foremost those deployed in Europe. For longer-range weapons, at best, it might be possible to subject them to transparency measures, at least until considerably deeper reductions in the overall nuclear stockpiles of both parties have been made.

Scope of Possible Agreement. Three approaches to action on these weapons appear to be available:

- The “Bush approach,” which emphasizes political or legal obligations to reduce arsenals, without extensive verification measures. This approach was embodied in the 1991 PNI and the 2002 SORT Treaty;
- A “transparency package” that involves declarations of stockpiles, as well as perhaps, locations of storage facilities. These measures may or may not involve limited reductions (the United States and Russia will likely continue unilateral limited reductions anyway);
- A full-scale legally binding and verifiable treaty. Such a treaty will be difficult to negotiate, but it will pave the way to subsequent measures to completely eliminate and ban nuclear weapons for short-range systems.

The “Bush approach”—embodied in PNIs and SORT—has exhausted itself for all practical purposes. It helped facilitate reduction of nuclear arsenals to the extent that parties involved had intended to make these reductions anyway, but it has failed to provide the predictability and verification necessary for durable and stable arms control regimes. In large measure, the problems the international community faces with regard to TNW were created by the deficiencies of the PNIs and the unwillingness of the George H.W. Bush administration to pursue a verifiable legally binding treaty on TNW. Similar shortcomings inherent to SORT have made negotiation of a new treaty to replace START I necessary.

The “transparency package” appears the most achievable under the current circumstances. At stake is not the formal (quantitative) TNW balance, but rather the predictability of the situation. Transparency measures can help achieve that and set

the stage for subsequent, negotiated verifiable reductions. To the extent that Russia still perceives a need to retain longer-range sub-strategic assets and probably seeks to leverage the short-range variety to obtain concessions from the United States and NATO, transparency will not fundamentally alter its plans. Thus, while it is likely to balk at reductions, it could be persuaded, under the right circumstances and with right inducements, to share information about these weapons. The same is true for the United States, whose planning will not be seriously affected by the provision of data.

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

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

Thus, transparency measures, while a palliative, can help lower the political profile of Russian TNW and begin to reduce concerns among NATO countries about their possible military role. To a large extent these concerns are caused by the almost complete uncertainty with regard to the number, types, and deployment pattern of these weapons, which, in turn, result in worse-case planning. The controversy over suspected relocation of nuclear warheads for land-based short-range missiles to Kaliningrad Oblast in 2001 is an illustration of this situation. Transparency measures can also help pave way to more radical and far-reaching measures in the future.

Taking the First Step. Given Russia's resistance to any action on TNW without a quid pro quo, two options appear available for shaking the intransigence of Moscow current position:

- A "grand package" of TNW and CFE, and

- Unilateral withdrawal of U.S. TNW from Europe.

Both options will be highly controversial within NATO, but the second one will be perhaps not as painful as the first.

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

Rose Gottemoeller, prior to assuming a senior position in the Obama administration, suggested that a new Conventional Armed Forces in Europe Treaty, together with a large package of confidence-building measures could go long way to reducing the perceived need in Russia to rely so heavily on nuclear weapons.³⁹ In Russia, similar proposals, although unpublished, were developed at IMEMO (the Institute of World Economy and International Relations of the Russian Academy of Sciences). Recent remarks by Sergey Kislyak, Russia’s Ambassador to the United States, also suggest that such an exchange is not unthinkable.⁴⁰

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

The Adapted CFE, which established national—as opposed to bloc—limits, has never entered into force, because the 1999 deal surrounding the treaty involved a political commitment by Russia to remove its forces and equipment from military bases in Georgia and Moldova. The controversy over whether these troops and equipment have been or should be withdrawn has prevented the Adapted CFE from entering into force. Russians have complained for years that NATO countries have not even started to ratify the Adapted CFE. Moscow strongly suspects that even if it complies with all conditions advanced by NATO, the agreement would still not be ratified. The issue of bases has become even more difficult, almost intractable, since the August 2008 war between Russia and Georgia, which has led Moscow to

³⁹ Rose Gottemoeller, “Russian-American Security Relations After Georgia,” Carnegie Endowment for International Peace, Policy Brief No. 67, October 2008.

⁴⁰ Daryl Kimball and Miles A. Pomper, “A Fresh Start? An Interview with Russian Ambassador Sergey Kislyak,” *Arms Control Today*, December 2008, http://www.armscontrol.org/act/2008_12/KislyakInterview.

recognize parts of Georgia as independent states and establish new permanent military bases there.

Finally, there is an issue of “flank limitations”—a provision that establishes a strict limit on the combined number of Russian troops in the northwest and in the south of Russia. That limit was originally intended to prevent the Soviet Union from amassing troops against countries like Norway and Turkey, but after the breakup of the Soviet Union and the division of the Soviet quota among new independent states, the Russian military has complained that the allocation left to Russia was too low. In fact, Russia violated the flank limitation *de facto* during the two wars in Chechnya, and NATO had to make a special exception to account for “temporary deployment” above the limit. The Russian military has indicated recently that it will not accept flank limitations ever again.

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

Given the urgency of Russian concern about the conventional forces balance in Europe as well as the need for transparency, it is possible that Russia could seriously entertain concessions on tactical nuclear weapons if NATO could reciprocate on CFE issues one way or the other. German Foreign Minister Frank-Walter Steinmeier offered a proposal along these lines during his June 10, 2009, visit to Moscow, stressing the need to “include sub-strategic and tactical nuclear arms in this disarmament process in order to finally dispose of the remnants of the Cold War kept in the territory of Russia and Europe.”⁴¹

The second option would address TNW *per se*, without linking them to other issues. Since Moscow links any move on TNW to the “withdrawal of all nuclear weapons to national territories,” Russian officials would find it difficult to ignore such a move by the United States and NATO. Furthermore, the United States continues to withdraw its TNW from Europe—including the withdrawal of nuclear bombs from the United Kingdom in 2008—but does not receive sufficient credit because these decisions are made and implemented in secret. Since reductions are conducted in piecemeal

⁴¹ “Germany Urges Revival of Major European Arms Treaty,” RT, June 10, 2009, http://www.russiatoday.com/meeting/2009-06-10/Germany_urgues_revival_of_major_European_arms_treaty.html.

fashion, they do not create the political momentum that could compel Moscow to respond.

The United States could accompany unilateral withdrawal by a statement, made on its own or in the context of NATO, disclosing basic information about its TNW stockpiles, and invite Russia to share the same information.

There is no guarantee, of course, that unilateral withdrawal of American TNW from Europe guarantees that Russia will change its position. Rather, it is intended to throw Moscow off balance and deprive it of the argument that has allowed it to stall. If implemented against the background of positive movement in other issue areas, such as strategic arms reduction, this tactic has a decent chance of success.

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

1. Reduction of TNW stockpiles could be negotiated in conjunction with the next stage of strategic arms reduction (beyond the current talks on START I replacement). A link between the two issues was recently admitted by Konstantin Kosachev, Chairman of the International Affairs Committee of the State Duma, who listed “tactical nuclear weapons deployed on high-precision cruise missiles” as one of the four most important issues that need to be resolved at strategic arms reduction talks.⁴² This option implies that START talks would switch from focusing on reductions of delivery vehicles (the approach practiced since SALT I in the 1970s) and, in an indirect fashion, of deployed warheads, to reductions of the entire stockpile of warheads, including both deployed and non-deployed. Transitioning to a new approach will be difficult, as noted earlier, but also highly desirable, as this would be the first time that nuclear weapons themselves (rather than their delivery vehicles) would be subject to reductions and transparency measures. As was also noted above, TNW cannot be tackled through reduction of delivery vehicles because all of them are dual-capable.
2. Since Russia has many more TNW warheads than the United States, it is possible that initially it should be allowed a higher limit for non-deployed (stored) warheads or perhaps no limit on non-deployed warheads would be established. This would help to address Russian resistance to asymmetric reductions. Such an approach should not be a serious security problem for NATO, however, as warheads kept in storage would be subject to verification and thus any secret deployment would become impossible.

⁴² “Peregovoram po SNV Mozhet Pomeshat PRO SShA v Evrope” [American Missile Defense in Europe Could Hinder START Talks], RIA-Novosti, May 19, 2009.

Eventually, equal aggregate ceilings could be established for all nuclear weapons for each country. In that case, Russia would have a strong incentive to reduce its TNW (both short- and long-range substrategic systems) as a matter of priority limiting it to perhaps a few hundred in a fairly short period of time. It is highly likely that the United States would also want to preserve a limited number of nuclear SLCMs, which could be used for protection of Japan if necessary.

3. It is likely that at that stage Russia would also want to bring the nuclear arsenals of the United Kingdom, France, and China into the arms control process. That the current stage of negotiations should be the last one that is conducted on a bilateral basis has been a long-standing position of the Russian military. Similarly, in the above-referenced 2007 interview General Verkhovtsevo of the 12th GUMO said that Russia would agree to begin talks on reduction of TNW only if the United Kingdom and France joined. While arsenals of the “smaller” nuclear weapons states will still remain far smaller than those of the United States and Russia, they could be included into the process in a limited and indirect manner. Among the possible measures are the following: (1) a freeze on the number of nuclear weapons, both deployed and non-deployed, (2) basic transparency measures with regard to the smaller nuclear arsenals, and (3) limits on modernization. If possible, elementary verification measures, such as visits to facilities and bases associated with nuclear weapons would be desirable, as well. China is likely to become the greatest obstacle to agreement on such measures.
4. Negotiation of a verification regime for nuclear warhead stockpiles, strategic and tactical, as well as deployed and non-deployed, would be a further step. These measures should include warhead storage facilities, both central and at military bases, and provide for confirmation of numbers (declared in a data exchange) and possible movement of warheads in and out of storage (by implication, this will also be an important confidence-building measure, as it will provide early notification of possible deployment of warheads), as well as at production and dismantlement facilities to confirm elimination of warheads.

It is advisable to begin the discussion of such Stage II measures as early as possible, perhaps using Track Two and One-and-a-Half level meetings, to create a “critical mass” of political and technical solutions to the issues that should be addressed in negotiations of a legally binding and verifiable treaty.

VI. Conclusion

As the above analysis makes clear, reducing and eventually eliminating TNW, including U.S. deployments in Western Europe, is a topic of enormous complexity, where competing views of numerous actors must be recognized and addressed. On the positive side, however, NATO’s on-going development of its Strategic Concept provides a mechanism for finding consensus on this issue in the West, while the numerous on-going arms control discussions with Russia provide opportunities for

dialogue and inter-issue bargaining that could lead to creative solutions to the TNW problem that both sides find advantageous.

Germany's active engagement on these issues and innovative ideas for addressing them are contributing importantly to their eventual resolution. It is hoped that the concepts outlined above can provide a general roadmap and additional options for Germany's continuing involvement in this critical area of nuclear arms control and disarmament.

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