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# (U) An Assessment of the U.S.-Russia Nonstrategic Nuclear Weapons Balance

William A. Chambers
John K. Warden
Caroline R. Milne
James A. Blackwell

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INSTITUTE FOR DEFENSE ANALYSES
4850 Mark Center Drive
Alexandria, Virginia 22311-1882

(U) About This Publication

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(U) For More Information:
MG William A. Chambers, Project Leader
wchamber@ida.org, 703-845-2133

(U) ADM John C. Harvey, Jr., USN (Ret), Director, SFRD
jharvey@ida.org, 703-575-4530

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# (U) Executive Summary

(U) The Institute for Defense Analyses (IDA) conducted this research for the Office of the Secretary of Defense Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy. The research objectives are to 1) characterize the asymmetries between the nonstrategic nuclear forces and postures of the United States and Russia; 2) evaluate the importance of key U.S.-Russia nonstrategic nuclear weapon (NSNW) imbalances; and 3) assess the implications for U.S. strategy, policy, and capabilities. This paper is an unclassified version of a more detailed classified paper.

### (U) Context: Plausible U.S.-Russian Conflict with the Potential for Limited Nuclear Employment

(U) Russian decision-makers may consider two rationales by which they could coerce the United States and its allies by employing limited nuclear strikes. First, Moscow could attempt to achieve a primarily psychological effect, suggesting the potential for further escalation. Second, Moscow could attempt to achieve an instrumental benefit by using nuclear weapons to improve the correlation of forces in a conflict. While Russia may choose to take incremental action, its doctrine leaves open the possibility of skipping to a massed nuclear strike without gradually escalating.

### (U) The Balance: Russian and U.S. NSNW Capabilities and the Role of These Capabilities in Their Respective Strategies

(U) Russia maintains significant numerical superiority in nonstrategic warheads and delivery systems and is likely to retain that margin for the foreseeable future. In contrast, current U.S. nonstrategic warhead options consist of only gravity bombs that can be delivered by dual-capable aircraft (DCA): the B61-3 and the B61-4, both of which will soon be replaced by a single warhead, the B61-12.

(U) Russia is more likely than the North Atlantic Treaty Organization (NATO) to encounter situations in which the employment of nuclear weapons could help it overcome operational challenges. Russia has nuclear capabilities that can be deployed forward with units expecting contact or launched from the sanctuary of its territory. Its capabilities can be employed somewhat discriminately, to effectively limit civilian casualties, lasting environmental effects, and collateral damage to Russian forces and territory. These diverse

options, combined with deficiencies in Russian conventional forces, mean that General Staff planners may recommend nuclear employment to achieve Russia's objectives.

(U) For Russia, "nonstrategic nuclear weapons" can, at least in theory, be meaningfully distinguished from strategic nuclear weapons, which gives Moscow a potential way of attempting to manage escalation by manipulating tacit limits on the means of nuclear warfare. Russian military writing distinguishes between "regional" war, where regional strikes with NSNW could enable Russia to destroy U.S. and NATO forces and impose economic costs, and a "strategic" or "global" nuclear war that cannot be rationally fought because of its costs.

(U) The United States and NATO do not have established NSNW employment concepts to counter potential Russian theories of victory. NATO NSNW are often viewed as symbolically important to burden sharing and alliance coupling, rather than as a warfighting capability that contributes to deterrence.

(U) In recent years, Russian behavior and military investments have driven efforts to better operationalize U.S.–NATO NSNW options. The United States has set out to update its strategy and plans, prioritize greater conventional-nuclear integration, and improve coordination between USTRATCOM and USEUCOM. The United States also has fielded a new strategic capability that could be used to strike theater targets—a low-yield warhead on a limited number of Trident D5 missiles—and begun an analysis of alternatives for a nonstrategic nuclear-capable sea-launched cruise missile (SLCM-N). However, significant gaps remain in planning and exercising U.S. NSNW.

### (U) Assessment: How Much Does the NSNW Balance Matter?

(U) In many instances of plausible Russian nuclear employment, Moscow's assessment of the balance of nonstrategic nuclear forces will be peripheral. If Moscow judges that the asymmetry of stakes is such that the United States and its allies have no—or very little—tolerance for nuclear risk, then the NSNW capabilities balance would not be very important. The following, however, are plausible mechanisms by which perceptions of a NSNW imbalance could impact Russian, U.S., and allied decision-making:

(U) *First, Moscow may assess that it has more options for tacit limitation of theater nuclear conflict that enable advantageous nuclear employment with manageable escalation risk.* Russia could consider NSNW concepts that reduce collateral damage and civilian casualties or draw a distinction between nuclear war at sea and nuclear war on land. These limitations would attempt to create a dilemma for NATO: either fight a limited theater nuclear from a disadvantage, or attempt to redefine—and expand—the tacit rules of theater nuclear warfare, risking escalation and potentially political division in its alliance.

(U) *Second, Moscow may assess that it can take advantage of greater operational readiness and conventional-nuclear integration in a contest of nuclear brinksmanship.* Russia's NSNW posture and planning provides it potential advantages in nuclear brinksmanship relative to NATO. During a crisis or conflict, Russia has options to load NSNW on assets that are close to or engaged in combat, such as submarines, surface ships, and ground units. After conducting an initial demonstration strike, Russia could tell the United States that it has issued broad pre-authorization for forward-deployed forces and nuclear-armed missile brigades to conduct follow-on strikes in response to NATO nuclear retaliation. This may allow Moscow to credibly issue threats that leave something to chance and thus have the potential to effectively coerce the United States and NATO.

(U) *Third, Moscow may think that the costs of a theater nuclear war fought with NSNW are bearable and to its advantage, making it more likely to take nuclear risk and, if necessary, conduct nuclear strikes.* If Russia assesses that the United States would hesitate to employ its strategic nuclear forces, then a key calculation for Russia would be to assess the downside of having to fight a broader theater nuclear war with NSNW. Russia would consider both how the employment of NSNW would affect the correlation of forces and the likely costs for Russia. NATO's limited NSNW force make it possible that Moscow could assess that the costs are bearable and would result in an outcome favorable to Russia.

(U) *Fourth, the United States and its NATO allies may assess that any of these potential Russian NSNW advantages are important, affecting their own resolve to stand against Russian nuclear coercion in a crisis or conflict.* Perceptions in Washington and allied capitals about the NSNW balance could impact crisis and conflict outcomes, regardless of whether they are founded on accurate perceptions of Russia's capability, perceptions, or likely behavior. If NATO perceives that Russia has a meaningful NSNW advantage—or if NATO perceives that Russia perceives that it has an advantage—NATO may be more restrained along the crisis-conflict spectrum.

## (U) Implications for U.S. and NATO Strategy, Policy, and Capabilities

(U) Moscow could assess that it has an important advantage in NSNW that makes it more likely to take nuclear risk and conduct nuclear strikes. But it is also possible that Russia's calculations, particularly in choosing to initially cross the nuclear threshold, would be influenced even more so by its perception of an asymmetry of stakes and the political weakness of NATO. Gaining a better understanding of how Russian political and military leaders are likely to weigh costs and benefits should be a U.S. priority. In reality, there will always be some uncertainty, requiring the United States and NATO to hedge. If the NSNW imbalance is determined to be an important factor in Russian decision-making, there are a number of ways that the United States and NATO could adjust their nuclear policy, capabilities, and posture to strengthen deterrence. The following are three mechanisms:

(U) *First, the United States and NATO can further dismantle the distinction between "strategic" and "nonstrategic" nuclear forces.* The United States and NATO have already begun to break down the distinction through their declaratory statements, which frequently argue that there is no such thing as a "tactical" nuclear weapon and that a response with strategic forces would be on the table if Russia employed a NSNW. The United States arguably took an additional step in this regard by deploying a low-yield warhead on a limited number of Trident D5 missiles, which provides an option of threatening a strike against a regional military target with a strategic delivery system. Going further, the United States could argue that the correct distinction that should be drawn is between nuclear-capable long-range ballistic missiles and other types of delivery systems or between systems that have exclusively a nuclear role and those that are dual-capable.

(U) However, Russia may not judge this approach to be credible. It is easy for the United States to say that any nuclear attack would be strategic and justify an escalatory response, but would be harder, once the nuclear threshold had been crossed, for the United States to respond in a way that would involve heightened risk of catastrophic escalation.

(U) *Second, the United States and NATO can pursue additional nuclear capabilities to offset Moscow's perceived NSNW advantage.* The nonstrategic SLCM-N under consideration has the potential to improve U.S. theater nuclear posture. If the United States has additional nuclear weapons deployed in the theater, under the planning prerogative of the USEUCOM commander and with appropriate command and control arrangements, Russia may perceive that a nuclear response to its limited nuclear employment is more likely, on a quicker timeframe. In addition, deployment of the SLCM-N could challenge Russia's belief that it has a clear advantage in a broader theater nuclear war. The United States would not need a one-for-one match for every Russia system, but it would need capabilities sufficient to 1) offset the military advantage that Russia might expect to gain by employing nuclear weapons and 2) impose enough harm on Russia—in a way that Moscow would find credible—to offset what Russia might expect to gain through theater nuclear employment.

(U) An alternate approach is to upgrade NATO DCA planning, posture, and capability. NATO would be more credible if it fully operationalizes its DCA capability. Improvements made through NATO consensus would have the added benefit of demonstrating greater cohesion. But generating consensus could be challenging, and if an attempt to improve NATO's posture leads to bickering and no action, the message to Russia would be counter-productive.

(U) For any approach that focuses on strengthening the U.S.–NATO NSNW posture, one challenge is the tension that comes with a deterrence strategy that attempts to break down or redefine the distinction between "nonstrategic" and "strategic" nuclear weapons. Pursuing additional capabilities, and doing the work necessary to justify them, is likely to reinforce Moscow's perception that distinguishing between "strategic" and "nonstrategic"

nuclear forces is a viable escalation management strategy.

(U) *Third, the United States and NATO can attempt to shape Russian NSNW posture through arms control.* From the perspective of improving deterrence, reducing Russia's overall stockpile is less important than altering Russian NSNW posture in a way that reduces the likelihood of employment. The United States should seek NSNW arms control designed to disentangle NSNW, particularly those systems most worrisome from a U.S.–NATO perspective, from Russian planning. Potential approaches could include treaty limits that focus on the delivery systems and warheads that Russia is most likely to employ, agreed-upon bans on certain types of dual-use capabilities and geographic limitations on the deployments of NSNW.

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# (U) Table of Contents

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# 1. (U) Introduction

(U) Renewed competition has revived questions about the role of nonstrategic nuclear weapons in U.S. strategy regarding Russia. Since the end of the Cold War, the United States and Russia have significantly reduced their strategic nuclear arsenals through a series of bilateral treaties, while maintaining rough numerical parity in operationally deployed strategic delivery systems and warheads. At the nonstrategic level, Russia and the North Atlantic Treaty Organization (NATO) have also substantially reduced their deployed forces and overall stockpile through unilateral measures and some reciprocal steps, but the United States has not sought to maintain essential equivalence. In this paper, nonstrategic nuclear weapons (NSNW) are defined as U.S. and Russian nuclear forces not limited by the New Strategic Arms Reduction Treaty (START), regardless of the range or assigned mission of the delivery system, the yield of the warhead, or the target and intended effect of the nuclear strike.

(U) Russia possesses a larger, more diverse toolkit of NSNW weapons and maintains them at a higher level of operational readiness than equivalent U.S. and NATO forces. But does it matter? U.S. nuclear policy has four key objectives: 1) deter nuclear and non-nuclear strategic attack; 2) assure allies; 3) achieve objectives should deterrence fail; and 4) hedge against an uncertain future. In theory, the U.S.-Russia nonstrategic nuclear weapons balance could impact the U.S. ability to achieve each of these objectives, at least in some respect.[1] Most worrisome would be if Russia believes it has a NSNW advantage that provides it coercive leverage. If that were the case, Moscow would be more likely to pursue a more aggressive strategy in crisis,

[1] (U) There are other reasons that the United States may worry about Russian NSNW that are not the focus of this paper. For example, Moscow could combine its NSNW with its strategic nuclear forces to provide Russia with a high-end nuclear escalation advantage. If Russian NSNW were able to substantially increase the effectiveness of its counterforce strikes against U.S. intercontinental ballistic missiles (ICBMs), submarine-launch ballistic missile (SLBMs), and bombers or significantly improve Russia's ability to defend against U.S. counterforce strikes against its nuclear forces and other targets of significant value, it would have an important effect on both sides' perception of the strategic nuclear balance. However, Russian NSNW add little to Russia's ability to disarm U.S. nuclear forces, particularly ballistic missile submarine (SSBNs) at sea. And while nuclear-armed air and missile defenses do significantly improve Russia's ability to defend against U.S. strikes, such capabilities, at present, do not prevent the United States from holding at risk required targets in Russia with its strategic forces. Another potential concern relates to U.S. national security objectives that do not bear directly on countering Russian coercion. The United States, for example, seeks to prevent the proliferation of nuclear weapons to new countries or violent extremist organizations. In this regard, one of the reasons the United States may want to limit Russia's NSNW via arms control is to reduce the likelihood of theft or transfer to other state and non-state actors. IDA's analysis, however, focuses more narrowly on the political-military issues related to Russia's ability to threaten or conduct nuclear strikes with NSNW.

calculating either that the United States and/or its allies are likely to back down or that, if necessary, it has an option it can reach for—limited nuclear employment—to resolve the conflict on favorable terms.

(U) Regardless of Russia's crisis calculations, Russia could also be more likely to employ nuclear weapons in a conflict if its leaders believed that the nonstrategic nuclear weapons balance made it more likely that it could achieve important political and military objectives while managing escalation risk. For example, Moscow may judge that its employment of nuclear weapons would lead to paralysis in NATO, thereby producing either no nuclear response, a response that is feckless, or a response with NATO nonstrategic nuclear forces—gravity bombs delivered by dual-capable aircraft (DCA)—that would be too slow or too ineffective. It may also judge that the United States would hesitate to respond with a strategic system for fear of escalation.

(U) The 2018 Nuclear Posture Review and other ongoing discussions about the future of U.S.-Russia arms control have expressed continued concern about Russian NSNW. However, the nature and meaning of the U.S.-Russia NSNW imbalance requires additional scrutiny. The imbalance is often touted as a challenge, but what kind and how serious is left open to interpretation. This paper attempts to build on existing analysis by placing the NSNW issue in the context of renewed U.S.-Russia competition, analyzing the various facets of the U.S.-Russia NSNW imbalance, exploring ways that the imbalance could have troubling consequences for the United States, and presenting options that the United States could pursue to improve its position.

# 2. (U) Research Approach

(U) The Institute for Defense Analyses (IDA) conducted this research for the Office of the Secretary of Defense Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy. The research objectives are to 1) characterize the asymmetries between the nonstrategic nuclear forces and postures of the United States and Russia; 2) evaluate the importance of key U.S.-Russia NSNW imbalances; and 3) assess the implications for U.S. strategy, policy, and capabilities.

(U) To meet these objectives, the IDA research team assessed current and projected U.S. and Russian nonstrategic nuclear postures, from both material (NSNW warheads and delivery vehicles) and non-material (strategy, doctrine, readiness, exercises, training, and planning) perspectives.

(U) The core IDA study team was Major General (retired) William A. Chambers, Mr. John K. Warden, Dr. Caroline R. Milne, and Dr. James A. Blackwell. The study also benefitted from the input of Admiral (retired) John C. Harvey, Dr. Michael Fitzsimmons, and Dr. Victor A. Utgoff.

(U) This paper is an unclassified version of a more detailed classified paper.

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# 3. (U) Context: Plausible U.S.-Russian Conflict with the Potential for Limited Nuclear Employment

(U) Moscow is cognizant of the West's overall military superiority and the catastrophic potential of war with the United States and NATO and therefore is likely to avoid direct military confrontation, if possible.[2] But if Russia does engage in conflict, it will likely be because it views its stakes as extremely high—perhaps because of domestic political and economic pressures or a perception that a successful war would substantially improve Russia's regional and global standing—thus making intra-conflict deterrence extremely challenging. In this circumstance, the United States would likely also have significant stakes, including the future credibility of NATO and other U.S. security guarantees.

(U) Despite the high stakes, a conflict in Europe—even one in which the future of the Baltics and Kaliningrad were in the balance—would not necessarily be existential for either Moscow or Washington. The fact that both have large, survivable strategic nuclear arsenals would ensure that a conflict that escalated to large-scale nuclear war would be far costlier to each country than anything they may hope to gain. As a result, the two sides would be competing over the terms of cessation of hostilities rather than seeking complete capitulation. Each would attempt to minimize wartime costs, while positioning themselves to maximally benefit from the post-conflict peace. Stakes would matter a great deal in the costs each side would be willing to endure to achieve their preferred outcome, but so would each side's perception of its political and military standing during the conflict.

(U) Each side's incentive to maximize postwar benefits while minimizing wartime costs means that a future U.S.-Russia conflict is likely to be a competition over preferred limits on violence.[3] Washington and Moscow will each seek to establish tacit conditions of warfare that allow them to achieve its objectives at the lowest cost, while deterring the other side from escalating. Most important, Washington and Moscow would attempt to avoid a large-scale nuclear war. In a low-level conventional conflict, both sides may, for example, withhold attacks on the other's territory in an attempt to keep a conflict local and limited. In a more serious conventional

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[2] (U) There is, however, some concern about the erosion of U.S. and NATO military advantage and Russian leaders' belief that Russia is catching up.

[3] (U) John K. Warden, "Limited Nuclear War: The 21st Century Challenge for the United States," *Livermore Papers on Global Security* 4 (July 2018).

conflict, the United States would be unlikely to accept such a limitation, which would provide Russia a significant military advantage in a conflict near its border. The United States, on the other hand, would seek to maintain a different limitation: exclude the employment of nuclear weapons. However, there are plausible conditions where Russia may see such a limitation as detrimental to its interests.

(U) Moscow would evaluate potential employment of nuclear weapons in the context of limited war and escalation management. Political and military leaders would weigh likely costs and likely benefits in the fog of war and with their own biases. They will attempt to project probable U.S. and allied reactions and likely consequences, considering both the costs of retaliation and backlash and the risk that the conflict will spiral out of control. It is difficult to predict the recommendations that the General Staff would make or the course of action the Russian president would choose in various wartime circumstances. But based on Russian nuclear policy, doctrine, exercises, and capabilities, it is clear that there are circumstances that Russia would at least seriously contemplate employing nuclear weapons to achieve a more favorable conflict outcome.

(U) In general, Russian decision-makers may consider two rationales by which they could coerce the United States and its allies via limited nuclear strikes.[4] First, Moscow could attempt to achieve a primarily psychological effect. In manipulating the risk of nuclear escalation, or conducting a nuclear demonstration or limited nuclear strike, Moscow would attempt to induce fear in U.S. and allied leadership and populations. Moscow would attempt to demonstrate that its stakes are far higher than NATO's and suggest that even more costly follow-on nuclear strikes are forthcoming if they do not back down. Second, Moscow could attempt to achieve an instrumental benefit by using nuclear weapons to improve the correlation of forces in a conflict. Russia could employ nuclear weapons against key targets in an attempt to alter the local or theater military balance, making it more likely that it can negotiate an accord from a position of strength. This type of nuclear attack would also produce a psychological and suggestive effect, but it would not be its primary purpose.

(U) Thinking about potential psychological and instrumental benefits is apparent in Russian concepts for the employment of nonstrategic nuclear weapons. Russia would likely initially seek to coerce by suggestion of further escalation, conducting a demonstration strike to cause the United States and NATO to change course and creating uncertainty about further escalation. If that failed, Moscow might proceed to limited or massed NSNW strikes. The goal would be to change the U.S. and allied decision calculus by affecting their assessments of the operational balance, imposing economic costs, or affecting public morale, while limiting the potential for a massed U.S.–NATO nuclear response.[5] Russia may attempt to inflict a dosed level of deterrent damage to limit U.S.–

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[4] (U) *Ibid.*

[5] (U) Michael Kofman, Anya Fink, and Jeffrey Edmonds, *Russian Strategy for Escalation Management: Evolution of Key Concepts* (Arlington, VA: CNA Corporation, April 2020).

NATO casualties to reduce the likelihood of provoking retaliation in anger.[6] However, it is also possible that Moscow instead may calculate that inflicting casualties is to its advantage.

(U) Psychological and instrumental rationales for nuclear employment are not mutually exclusive. For any concept of nuclear employment, Russian decision makers and military planners are likely to consider both potential benefits. Planners are more likely to recommend and leaders are more likely to choose nuclear strikes when they expect to achieve important psychological and instrumental effects, and when the alternative of continuing a conventional campaign is particularly unpalatable.

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[6] (U) Dave Johnson, "Russia's Conventional Precision Strikes Capabilities, Regional Crises, and Nuclear Thresholds," *Livermore Papers on Global Security 3* (February 2018), 16, 25, 71-72; Kofman, Fink, and Edmonds, *Russian Strategy for Escalation Management*, 34-41.

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# 4. (U) The Balance: Russian and U.S. Nonstrategic Nuclear Weapons Capabilities and the Role of These Capabilities in Their Respective Strategies

(U) In evaluating the NSNW balance materially—the number and variety of U.S. and Russian nonstrategic warheads and delivery systems not accountable under the New START Treaty—Russia maintains significant superiority and is likely to retain that margin for the foreseeable future. Russian NSNW are also more varied, with components across its military outfitted with NSNW. In contrast, current U.S. nonstrategic warhead options consist of only gravity bombs that can be delivered by DCA: the B61-3 and the B61-4, both of which will soon be replaced by a single warhead, the B61-12.[7]

## A. (U) NSNW Delivery Systems and Posture: Russia

(U) Russian nonstrategic nuclear weapons capabilities include air-to-surface missiles, short-range ballistic missiles, depth charges, and gravity bombs for medium- and tactical-range bombers and naval aviation; anti-ship, anti-submarine, and anti-aircraft missiles and torpedoes for surface ships, submarines, and coastal defense; atomic demolition and man-portable nuclear mines; and Moscow's antiballistic-missile system. These are a combination of legacy capabilities that are holdovers from the Cold War and new delivery systems and warheads that have recently been fielded or are expected to achieve operating capability during the next decade.

## B. (U) Nonstrategic Nuclear Weapons in Russian Strategy: A Tool to Coerce While Managing Escalation Risk

(U) Nonstrategic nuclear weapons are important because of how Moscow may employ or threaten to employ them to achieve political and military gains while managing the risk of escalation to large-scale nuclear war. By maintaining a diverse set of NSNW capabilities at a high degree of readiness, Russia has positioned itself such that, in an escalating crisis or conflict, it is more likely than NATO to encounter situations in which the employment of nuclear weapons would help it overcome operational challenges. Russia has options for conducting strikes against

[7] (U) This picture would change slightly if the United States followed through on plans to develop and field a new nuclear-capable, sea-launched cruise missile (SLCM-N) and accompanying warheads.

naval, ground, and air forces from a variety of delivery platforms. It has nuclear capabilities that can be deployed forward with units expecting contact or that can be launched from the sanctuary of Russian territory. It also has capabilities that can be employed somewhat discriminately, thereby limiting civilian casualties, lasting environmental effects, and collateral damage to Russian forces and territory. These diverse options, combined with deficiencies in Russian conventional forces, mean that General Staff planners may recommend nuclear employment to achieve Russia's objectives in an escalating conflict.

(U) However, in addition to the benefits, Russian military planners and, likely even more so, political decision-makers would also contemplate the costs and risks of nuclear employment, including potential reactions by the United States, its allies, and countries not actively participating in the conflict. Moscow is likely to seek a theory of nuclear escalation management that allows it to maximize instrumental and psychological benefits while minimizing the risk of retaliation, counter-escalation, and backlash. In other words, Moscow is likely to seek implicit rules for nuclear conflict that provide it coercive leverage in negotiating the peace that follows.

(U) For Russia, the category "nonstrategic nuclear weapons" is potentially useful from an escalation management perspective. Nonstrategic nuclear weapons are defined in this paper, and generally, by exclusion: any U.S. and Russian nuclear weapons that are not covered by the New START Treaty. But from an operational perspective, nonstrategic nuclear forces can also be defined by the basing location and range of the delivery vehicle used, the yield of the nuclear detonation, and even the mission or target of intended use.[8] Drawing on these various definitions, Russia may distinguish certain characteristics of weapon systems and concepts of employment in an attempt to tacitly limit the means of nuclear warfare.

(U) Russia maintains the distinction between strategic and nonstrategic nuclear weapons in its force posture and doctrine. Moscow may view the employment of theater-range nuclear weapons capabilities against certain military targets as "nonstrategic." Russian military writing distinguishes between "regional" war, where regional strikes with NSNW could enable Russia to destroy U.S. and NATO forces and impose economic costs, and a "strategic" or "global" nuclear war that cannot be rationally fought because of its costs.[9] In employing NSNW within the European theater, Russia's goal would be to deter the United States from counter-escalating to a conflict involving large-scale strikes with strategic nuclear weapons against Russian territory.

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[8] (U) Andrea Gabbitas, "Non-Strategic Nuclear Weapons: Problems of Definition," in Jeffrey A. Larsen and Kurt J. Klingenberger (eds.), *Controlling Non-Strategic Nuclear Weapons: Obstacles and Opportunities* (Colorado Springs, CO: USAF Institute for National Security Studies, June 2001), 23-38.

[9] (U) Johnson, "Russia's Conventional Precision Strikes Capabilities, Regional Crises, and Nuclear Thresholds," 16, 25, 71-72.

## C. (U) NSNW Delivery Systems and Posture: U.S.–NATO

(U) The only current U.S. NSNW capability is DCA and gravity bombs. The NATO DCA force is in the midst of an overhaul, with all host nations transitioning to modernized aircraft throughout the 2020s. The fifth-generation F-35A multirole strike fighter will assume the DCA mission for the United States, the Netherlands, Italy, and Belgium, while the F/A-18E/F is expected to replace legacy German aircraft. The F35A, combined with the B61-12, is expected to be far more capable of executing nuclear strikes against defended targets than current capabilities. The United States and NATO are also attempting to improve their DCA posture.

## D. (U) Nonstrategic Nuclear Weapons in U.S.–NATO Strategy: Political Instruments with Limited but Growing Operational Capability

(U) The overall NATO strategy has been to downplay both the distinction between strategic and nonstrategic nuclear weapons and the operational utility of NSNW. In certain senses, all nuclear weapons are alike—the crossing of the nuclear threshold for the first time since 1945 would be shocking no matter the means of delivery or yield of the weapon used. There is also some ambiguity over what nuclear weapons and delivery-platforms are "nonstrategic"—and even whether it would be apparent what platform is used to deliver a nuclear strike—and if strikes on certain classes of targets would constitute a "nonstrategic" or "strategic" attack. In any circumstance in which nuclear weapons are used, these definitions are likely to be contested. U.S. and NATO declaratory policy insists that any employment of nuclear weapons would be a "strategic" attack. In addition, many political leaders in NATO countries think of nuclear weapons primarily—and for some, almost exclusively—as political weapons rather than war-fighting capabilities and would instinctively object to a Russian attempt to legitimize tactical nuclear warfare.

(U) In recent years, Russian behavior and military investments have driven some action by the United States and NATO to better operationalize NSNW options for the purpose of deterring limited nuclear employment by Russia. The 2018 Nuclear Posture Review highlighted the challenge of deterring limited nuclear employment by Russia with nonstrategic and low-yield nuclear weapons. The United States has begun developing a warfighting concept that aims to: 1) achieve limited objectives in a war with Russia while deterring nuclear escalations; 2) restore nuclear deterrence if it fails in a limited way in the course of such a conflict; and 3) deter catastrophic, large-scale nuclear war even in a U.S.-Russia conflict that involves a series of limited nuclear exchanges. To achieve these objectives, the United States has set out to update its strategy and plans, prioritizing greater conventional-nuclear integration and improved coordination between USTRATCOM and USEUCOM. It has also fielded a new strategic capability that could be used to strike theater targets —a low-yield warhead on a limited number of Trident D5 missiles—and begun an analysis of alternatives for a nonstrategic nuclear-capable sea-launched cruise missile (SLCM-N).

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# 5. (U) Assessment: How Much Does the NSNW Balance Matter?

(U) The nonstrategic nuclear weapons balance matters insofar as it is likely to affect U.S., allied, and adversary behavior during various stages of conflict. Critically, all plausible scenarios for Russian nuclear employment are not tied to Moscow's perceptions of the NSNW balance. Russia has an integrated strategy for achieving its objectives in a conflict with the United States and NATO, using a variety of military tools. If Russia thinks that it can achieve its objectives with non-nuclear forces alone, backed by the threat of nuclear escalation, that will no doubt be an attractive path. Alternatively, Russia may choose to employ nuclear weapons, but do so because of a view that there is an asymmetry of stakes in the conflict and that the United States and NATO are unwilling to run nuclear risks. In this case, Russia may order a single nuclear strike as a demonstration, or a dosed set of strikes designed to waken NATO to the risk of pressing further.

(U) In many instances of plausible Russian nuclear employment, Moscow's assessment of the balance of nonstrategic nuclear forces will be either irrelevant or peripheral to its decision-making. If Moscow, for example, judges that the asymmetry of stakes is such that the United States and its allies have no—or very little—tolerance for nuclear risk, then the NSNW capabilities balance would not be very important. A similar logic applies to U.S.–NATO attempts to restore deterrence after Russia has employed nuclear weapons. If what is required to restore deterrence is simply demonstrating that the United States and NATO are willing to run nuclear risk by responding with nuclear weapons and imposing some costs on Russia, then having almost any usable capability will achieve the objective.

(U) In judging the importance of the balance, the key questions, therefore, are:

- What are the ways the imbalance of nonstrategic nuclear forces capabilities and posture could impact Russian, allied, and U.S. decision-making?
- How important are NSNW imbalances relative to other decision-making factors?

(U) The following are plausible mechanisms by which perceptions of a NSNW imbalance could impact Russian, U.S., and allied decision-making:

*(U) First, Moscow may assess that it has more options for tacit limitation of theater nuclear conflict that enable advantageous nuclear employment with manageable escalation risk.* Russian strategists consider it important to have multiple nonstrategic nuclear options along the escalation ladder to maintain "combat stability"—a concept akin to U.S. thinking about intra-war

deterrence.[10] There are a number of ways that Russia may plausibly attempt to manipulate the tacit rules for nuclear employment to its advantage. It is not enough to think solely about limitation based on theater nuclear war or NSNW as a category. Instead, Russia may attempt to further constrain the tacit rules of limited nuclear warfare, seeking advantage in a particular area while further reducing escalation risk. Russia could, for example, consider NSNW concepts that significantly limit collateral damage and civilian casualties by employing only low-yield weapons and argue that such strikes are consistent with international law. Alternatively, Russia may attempt to draw a distinction between nuclear war at sea and nuclear war on land. The point of these limitations would be to create a dilemma for the United States and NATO: either accept the limitation on theater nuclear war and fight from a disadvantage, or attempt to redefine—and expand—the tacit rules of theater nuclear warfare, risking escalation and potentially political division in its alliance.

(U) With a diverse set of NSNW options, there are likely more possible situations in which Moscow would assess that it could employ a limited number of nuclear weapons to change the correlation of forces and achieve important political and operational effects. Furthermore, because NATO NSNW are at a lower state of operational readiness and may require burdensome political consensus-building to employ, Russia may calculate that it can consolidate political and military gains before the United States and NATO can respond with nuclear strikes of their own. For Russia, a theater nuclear war under such limitations would result in much more manageable cost than a theater nuclear war in which both sides are likely to expend all their NSNW.

(U) The challenge posed by Russian NSNW is exemplified in the Russian Navy's capabilities and planning for nuclear war at sea. Moscow may very well choose to employ nuclear weapons at sea because it thinks the risk of blowback and escalation is far lower than other NSNW employment concepts. Indeed, the concept of limited nuclear war at sea harkens back to the Soviet days.[11] Russia could fashion nuclear strikes in a way that would not harm civilian population or critical infrastructure and result in limited ecological damage and relatively few non-military casualties.

(U) Faced with Russian nuclear use at sea, the United States would face a dilemma. If it responded proportionally, by conducting nuclear strikes against Russian assets at sea, it would cede an advantage, first, because U.S. naval forces are more important to U.S. operational success than Russian naval forces and, second, because the United States does not have NSNW optimized for attacks on naval targets. If, on the other hand, the United States responded with strikes against Russian forces on land, it would likely result in far more significant civilian casualties, collateral damage, and ecological harm, potentially causing its retaliatory strikes to be judged by allies or

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[10] (U) David S. Yost, "Russia and Arms Control for Non-Strategic Nuclear Forces," in Jeffrey A. Larsen and Kurt J. Klingenberger (eds.), *Controlling Non-Strategic Nuclear Weapons: Obstacles and Opportunities* (Colorado Springs, CO: USAF Institute for National Security Studies, June 2001), 125; Kofman, Fink, and Edmonds, *Russian Strategy for Escalation Management*, 27.

[11] (U) Desmond Ball, "Nuclear War at Sea," *International Security,* 10:3 (Winter 1985-1986), 26-28.

third-parties as disproportionate. It would also open itself up to Russian NSNW strikes against targets in Europe and the United States, which would be particularly worrisome given Russia's far larger NSNW arsenal.

*(U) Second, Moscow may assess that it can take advantage of greater operational readiness and conventional-nuclear integration in a contest of nuclear brinksmanship.* Both before and after it has crossed the nuclear threshold, Moscow is likely to attempt to manipulate nuclear risk to convince NATO to accommodate its interests. In a contest between NATO and Russia, both Washington and Moscow may have difficulty making nuclear escalation threats credible, both because of the enormous downside risk of reaching a large-scale strategic exchange and because of the significant cost of even a limited regional nuclear war. One strategy, therefore, will be to practice nuclear brinksmanship by issuing threats that leave something to chance.[12] If a leader can credibly convince its opponent that initial nuclear employment or further significant nuclear escalation may occur if the opponent takes certain actions, and that the leader has limited or no ability to restrain nuclear escalation, the threat will be more credible.

(U) In this regard, Russia's nonstrategic nuclear weapons posture and planning provides it potential advantages in nuclear brinksmanship relative to NATO. During a crisis or conflict, Russia has options to load NSNW on assets that are close to or engaged in combat, such as submarines, surface ships, and ground units. It could visibly take weapons out of storage, deliver them to units, and even issue pre-authorization for NSNW strikes. After conducting an initial demonstration strike, Russia could tell the United States that it has issued broad pre-authorization for forward-deployed forces and nuclear-armed missile brigades to conduct follow-on strikes in response to NATO nuclear retaliation. The likelihood of Moscow actually providing such a pre-authorization is uncertain, but Russia's posture gives it an option to credibly threaten that it has. NATO nonstrategic nuclear forces provide no such option. Weapons are kept under strict positive control, NATO nuclear planning and execution decisions are deliberate and centrally controlled, and NATO does not plan for flexible, pre-authorized NSNW employment. In addition, NATO DCA, because of their basing and likely operational concepts, do not make for as credible a risk manipulation option as Russian submarines and surface ships, which are sent out with greater autonomy and may face tactical-level use-or-lose pressures when engaged in combat.

(U) This situation may allow Moscow to credibly issue threats that leave something to chance and thus have the potential to effectively coerce the United States and NATO. After having crossed the nuclear threshold, Russian political leaders have the option of pre-authorizing follow-on nuclear employment—or falsely claiming that they have done so—then warning the United States and NATO that they must back down or face certain nuclear escalation.

*(U) Third, Moscow may think that the costs of a theater nuclear war fought with NSNW are bearable and to its advantage, making it more likely to take nuclear risk and, if necessary, conduct*

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[12] (U) Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 2008), 92-125; Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1980), 187-203.

*nuclear strikes.* At the threshold of nuclear use, and even more at each subsequent step up the escalation ladder, Moscow would have to consider the downside of pressing further. At these decision-points, Moscow would assess the likelihood and consequence of various NATO responses and subsequent paths that the conflict could progress. It is possible that, even if the initial decision to cross the nuclear threshold is informed more by an assessment that NATO lacks willingness to run nuclear risk, subsequent decisions would be more influenced by an assessment of the balance of NSNW capabilities. If Russia assesses that the United States would be hesitant to employ its strategic nuclear forces, then a key calculation for Russia would be an assessment of the downside of having to fight a broader theater nuclear war with NSNW.

(U) In evaluating the potential consequences of a theater nuclear war, Russia would consider both how the employment of NSNW would affect the correlation of forces and the likely costs for Russia, including loss of personnel and forces, non-military casualties, lasting environmental harm, and economic and reputational consequences. For many of these factors, NATO's limited NSNW force could make it more likely for Moscow to assess that the costs are bearable and would result in an outcome favorable to Russia. This would be particularly true if Russia assessed that it could preempt a significant portion of NATO NSNW before they are employed—a distinct possibility because of their low operational readiness and deployment at known locations. An additional factor in Russia's calculus is likely to be the asymmetry of targets for nonstrategic nuclear weapons. In a major war with NATO over the Baltics, Russia would have no shortage of key operationally relevant targets throughout Europe and in surrounding waters, while the United States and NATO may have few ways to target Russian forces not located on Russian territory. As a result, the United States may be in the unenviable position of having to conduct a large number of nuclear strikes against targets in Russian territory to have an equivalent military effect, which would have a significant risk of escalation, or limiting its strikes to targets outside Russian territory, which would have a far less consequential impact.

(U) The present situation is a notable contrast to the Cold War. Like Russia, the Soviet Union had plans to initiate a theater nuclear war if it thought NATO nuclear use was imminent or it faced the prospect of decisive military defeat. The Soviet Union—and for its part, the United States—sought concepts for limited nuclear war that would allow it to generate a coercive advantage in a theater nuclear war while managing escalation, but it appears, based on post-Cold War analysis of Soviet assessments, that Soviet planners were unable to come up with a satisfactory plan.[13] In contrast to today, U.S. nuclear weapons were deployed ubiquitously with NATO forces across Europe and integrated with Supreme Allied Commander Europe (SACEUR) conventional planning. As a result, Soviet planners calculated that even a limited nuclear exchange in Europe would cause massive humanitarian and economic destruction and significant harm to the Soviet military. Soviet planners also were not confident that they would be able to avoid escalation to a

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[13] (U) John G. Hines, Ellis. M. Mischulovich, and John F. Shull, *Soviet Intentions 1965-1985 Volume I, An Analytical Comparison of U.S.-Soviet Assessments During the Cold War* (McLean, VA: BDM Federal, Inc., September 25, 1995).

strategic nuclear war. Today, Russian military planners and political decision-makers may not reach the same conclusions when they assess NATO's capabilities, postures, and likely courses of action.

*(U) Fourth, the United States and its NATO allies may assess that any of these potential Russia NSNW advantages are important, affecting their own resolve to stand against Russian nuclear coercion in a crisis or conflict.* Perceptions in Washington and allied capitals about the NSNW balance could have an important impact on crisis and conflict outcomes, regardless of whether they are founded on accurate perceptions of Russia's capability, perceptions, or likely behavior. If the United States or NATO perceives that Russia has a meaningful NSNW advantage—or if the United States perceives that Russia perceives that it has an advantage—the United States and NATO may be more restrained along the crisis-conflict spectrum. Similarly, if U.S. allies see the nonstrategic nuclear weapons imbalance as an important indication of U.S. capability or will, they may lose confidence in U.S. security guarantees. As a result, allies may seek alternate arrangements to provide for their security, including potentially accommodating Russia, pursuing their own independent nuclear weapons capability, or being less willing to oppose Russian coercion, either in peacetime or, even more likely, in conflict.

(U) The factors that most influence U.S., allied, and adversary perceptions of the NSNW balance may vary. If U.S. planners or decision-makers internalize that Russia has a NSNW advantage, they may be hesitant to run nuclear risk in a conflict, even if Moscow itself does not perceive that it has an advantage. It is also possible that allies may perceive that Russia has a NSNW advantage based not on a detailed assessment of the operational utility of NATO and Russian systems, but instead on an intuition about the benefit conferred on the side that has more numbers or a more diverse set of options. There is no strong evidence that allies have this perception today, but such a perception could develop, particularly in a crisis or after Russia has crossed the nuclear threshold. Part of the reason that the United States has sought rough parity in deployed strategic nuclear forces is so that allies are assured, not perceiving that Russia has an advantage—a similar logic could apply to nonstrategic nuclear weapons as well.

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# 6. (U) Implications for U.S. and NATO Strategy, Policy, and Capabilities

(U) The U.S.-Russia nonstrategic nuclear weapons balance is a small part of a larger picture. In order to defend U.S. interests in Europe, deter nuclear and non-nuclear strategic attack, assure allies, and achieve objectives should deterrence fail, the United States must comprehensively address Russia's potential perceptions of advantage in peacetime and in conflict. Russia has demonstrated its willingness to take risks—in Georgia, Crimea, and eastern Ukraine—and its current leader may remain in power until 2036. Moscow's calculation of its interests, the correlation of forces, and the relative stakes in potential clashes with NATO is most likely a continuous process. As a result, there is a potential that Russia may face a situation where it sees advantage to military aggression. Reducing the likelihood of Russian aggression and the potential for escalation should aggression occur ought to be the focus of U.S. and NATO posture, planning, and activities.

(U) There are a number of steps that the United States can take to alter Russia's perceptions. First, and most fundamentally, the United States and NATO could strengthen their conventional force posture in Europe to reduce Russia's inclination to pursue aggression against NATO countries, as has been argued for by the past three SACEURs. Second, the United States and NATO could alter Russia's perceptions of the likely benefit, cost, and risk of crossing the nuclear threshold and ensure that they have credible options for restoring deterrence and managing escalation if it does employ nuclear weapons. This could involve steps that range from ensuring that the United States and NATO have concepts for fighting and winning conventional campaigns with Russia that demonstrate limited objectives, to reducing the vulnerability of U.S. and NATO conventional operations to Russian nuclear strikes through dispersal, redundancy, and hardening, to strengthening norms against nuclear employment.

(U) The evidence presented in this paper shows that Moscow *could* assess that it has an important advantage in NSNW that makes it more likely to take nuclear risk and conduct nuclear strikes. But it is also possible, and potentially even more likely, that Russia's calculations, particularly in choosing to initially cross the nuclear threshold, would be influenced even more so by its perception of an asymmetry of stakes and the political weakness of NATO. It will be difficult to predict the degree to which each consideration would be paramount in the minds of General Staff planners and political decision-makers in a crisis or conflict. Nonetheless, a U.S. priority should be a better understanding of the key inputs and outputs of Russian military assessments for NSNW employment and how Russian political and military leaders are likely to weigh costs

and benefits in such situations. In reality, there will always be some uncertainty, requiring the United States and NATO to hedge.

(U) The difficult strategy and policy challenge comes when trade-offs are present, either because of tensions between approaches or limited resources. Assessing the key motivating factors in Russian decision-making, therefore, is an essential factor in determining what U.S. and NATO actions, at the margin, are most needed to strengthen deterrence. If asymmetry of stakes and NATO weakness are assessed to be the key driver, then U.S. and NATO political efforts to strengthen cohesion and resolve are most important. If, instead, the NSNW imbalance is determined to be a critical factor in Russian decision-making, or the United States and NATO simply want to further reduce a low likelihood that Russia may perceive an NSNW advantage, there are a number of ways that the United States and NATO could adjust their nuclear policy, capabilities, and posture to strengthen deterrence. The following are three mechanisms for countering the U.S.-Russia NSNW imbalance; they are not mutually exclusive, but there is some tension between the first two.

(U) *First, the United States and NATO can further dismantle the distinction between "strategic" and "nonstrategic" nuclear forces.* In certain senses, all nuclear weapons are alike—the crossing of the nuclear threshold for the first time since 1945 would be shocking no matter the means of delivery or yield of the weapon used. There is also some ambiguity over what nuclear weapons and delivery-platforms are "nonstrategic"—and even whether it would be apparent what platform is used to deliver a nuclear strike—and if strikes on certain classes of targets would constitute a "nonstrategic" or "strategic" attack. In any circumstance in which nuclear weapons are used, these definitions are likely to be contested. U.S. and NATO declaratory policy insists that any employment of nuclear weapons would be a "strategic" attack. In addition, many political leaders in NATO countries think of nuclear weapons primarily—and for some, almost exclusively—as political weapons rather than warfighting capabilities and would instinctively object to a Russian attempt to legitimize tactical nuclear warfare.

(U) The most direct way to counter a perceived Russian NSNW advantage is to define away the problem by convincing Russia that its attempt to maintain a tacit distinction between "nonstrategic" and "strategic" is not a viable escalation management strategy. The United States and NATO have already attempted to do this through their declaratory statements, which frequently argue that there is no such thing as a "tactical" nuclear weapon and any nuclear strike would be "strategic," fundamentally altering U.S. and NATO interests. The United States also consistently conveys that a response with its strategic forces would be on the table if Russia employed a NSNW against NATO. In addition, the United States arguably took an additional step in this regard by deploying a low-yield warhead on a limited number of Trident D5 missiles. This capability gives the United States an option of threatening a strike against a theater military target with a strategic delivery system, but in a way that would produce less collateral damage, making it more credible in certain circumstances. Russia, therefore, would have to consider the possibility that a distinction between "nonstrategic" and "strategic" delivery systems would quickly break down.

(U) To further contest the distinction between "strategic" and "nonstrategic," the United States could propose an alternate way to categorize nuclear weapons systems that is more to its advantage. For example, the United States could argue that the real distinction that should be drawn is between nuclear-capable long-range ballistic missiles, both land- and sea-based, and other types of delivery systems, or that the distinction should be between systems that have exclusively a nuclear role and those that are dual-capable. U.S. long-range bombers would, after all, be involved in conventional operations in a tactical role and have the ability to deliver nuclear weapons against tactical targets. By including bombers capable of delivering air-launched cruise missiles (ALCMs) and gravity bombs on the U.S. side of the ledger, the U.S.-Russia theater nuclear war imbalance would shrink. Furthermore, the United States and NATO could update their strategic documents using these definitions in their concepts of escalation management and regularly involve nuclear-capable bombers in NATO exercises. Going further, the United States could permanently assign (or provide continuously on a rotational basis) certain nuclear-capable bombers to USEUCOM for planning and operational control or develop and exercise plans for forward-deploying nuclear-armed bombers to Europe during a crisis. These posture changes, however, would each come with associated trade-offs. They would also only go so far in offsetting the diversity of NSNW options that Russia possesses.

(U) The key challenge for this approach is that Russia may not judge it to be credible. It is easy for the United States to say that any nuclear attack would be strategic and justify an escalatory response, but would be harder, once the nuclear threshold had been crossed, for the United States to respond in a way that would involve heightened risk of catastrophic escalation. If Russia believes that it can persuade the United States to withhold even tactical nuclear strikes with U.S.-based bombers by threatening retaliation against targets in the United States, then such U.S. threats will do little to enhance deterrence.

(U) *Second, the United States and NATO can pursue additional nuclear capabilities to offset Moscow's perceived NSNW advantage.* The United States has options to attempt to achieve these objectives with its current nonstrategic and strategic nuclear forces, but the DoD is nonetheless considering a supplemental SLCM-N to further strengthen deterrence and assurance. The SLCM-N has the potential to improve U.S. theater nuclear posture in two ways.

(U) First, SLCM-N could enhance deterrence by enabling a faster U.S. NSNW response. There are certain circumstances where Russia's thinking may be that it can employ nuclear weapons and consolidate an advantage before the U.S. and NATO decisively respond—by, for example, raising political pressure to prevent a U.S.–NATO response or moving in conventional forces to consolidate gains. If such scenarios are plausible, then it may be important to have a faster, theater nuclear response than could be provided by NATO DCA.[14] If the United States has

[14] (U) Further analysis is needed to uncover the extent to which such scenarios are plausible, how much the United States and NATO should worry about them, and whether existing U.S. strategic capabilities can be postured to deter such thinking (e.g., forward-deployed strategic bombers).

additional NSNW in the theater, under the planning prerogative of the USEUCOM commander and with appropriate command and control arrangements, Russia may perceive that a U.S. nuclear response is more likely, on a quicker timeframe. This would be particularly true if the SLCM-N was clearly integrated into USEUCOM planning, exercises, and operations.

(U) With SLCM-N forward deployed, Russia may also perceive that its attacks on U.S. naval assets would create tactical-level use-or-lose pressures. This could, in theory, cause Russia to worry more about inadvertently triggering U.S. nuclear escalation. But more important, it may cause Russia to hesitate to employ nuclear weapons against targets at sea, fearing that could lead to a quick U.S. response against targets in Russia.

(U) Second, deployment of the SLCM-N could challenge Russia's belief that it has a clear advantage in a theater nuclear war. If Russia is convinced that it can limit a theater nuclear war to only forward-deployed nonstrategic nuclear weapons, then it may assess that the risk is bearable. If the United States had a significant number of SLCM-Ns deployed in the theater, it may reverse this perception. The United States would not require a one-for-one match for every Russia system, but it would need capabilities sufficient to 1) offset the military advantage that Russia may expect to gain by employing nuclear weapons and 2) impose enough harm on Russia—in a way that Moscow would find credible—to offset what Russia may expect to gain through theater nuclear employment.

(U) To answer whether the SLCM-N would fulfill this function, the United States should consider the following:

- What is Russia likely to attempt to achieve militarily with nonstrategic nuclear weapons?
- What targets would the United States need to hold at risk with SLCM-N to make clear to Moscow that Russia would not be able to consolidate political and military gains after nuclear employment?

(U) In addition, the SLCM-N needs to be compared against alternatives, in particular the B61-12 delivered by DCA and long-range standoff weapons (LRSOs) delivered by bombers:

- How important is the theater/strategic distinction in U.S. and Russian thinking about escalation management?
- Is the U.S. threat to respond with B61s, ALCMs/LRSOs, or low-yield warheads on D5 missiles sufficiently credible to deter Russian employment of NSNW?

(U) Like with any DoD program, the benefits of the SLCM-N must be weighed against the costs to field a new system and potential operational trade-offs involved. It is possible, for example, that pursuing a SLCM-N would divert resources from needed improvements in the U.S. conventional posture in Europe and deploying SLCM-Ns on attack submarines would divert needed platforms and/or missile or torpedo tubes from conventional missions. If by strengthening nuclear deterrence, the U.S. weakened conventional deterrence, the pursuit of a SLCM-N would likely be counterproductive.

(U) Finally, SLCM-N is not the only option for improving U.S. NSNW posture. An alternate approach is to upgrade NATO DCA planning, posture, and capability. Much of Russia's perceived advantage in NSNW comes from the planning and readiness of its forces. If NATO fully operationalizes the DCA capability, it will be able to more credibly threaten a rapid response to Russian nuclear employment. These steps would challenge a Russian theory of coercion based on NATO being unable to reach consensus for a response under significant political pressure or responding too slowly to be operationally relevant.

(U) Improving NATO's DCA posture has potential advantages and disadvantages compared to pursuing a SLCM-N. On the plus side, any improvements made through NATO consensus would have the added benefit of demonstrating greater cohesion and resolve among the allies, resulting in an even larger deterrent effect than an improvement in U.S. capability alone. There also may be advantages if improvements to DCA would be cheaper and result in less conventional-mission trade-off than developing and deploying a SLCM-N. On the other hand, generating consensus within NATO for such improvements could be a challenge, and if an attempt to improve NATO's posture leads to public bickering and no agreed-upon improvement, the message to Russia would be counter-productive. Furthermore, from an operational perspective, DCA armed with gravity bombs have inherent limitations based on survivability and range compared to certain SLCM-N concepts.

(U) For any approach that focuses on strengthening the U.S.–NATO NSNW posture, one challenge is the tension that comes with a deterrence strategy that attempts to break down or redefine the distinction between "nonstrategic" and "strategic" nuclear weapons. If the United States assesses that there is a deterrence gap that needs to be filled, like it did in the 2018 NPR, then it has implicitly acknowledged that the distinction between "nonstrategic" and "strategic" matters. Pursuing additional capabilities, and doing the work necessary to justify them, is likely to reinforce Moscow's perception that distinguishing between "strategic" and "nonstrategic" nuclear forces is a viable escalation management strategy.

*(U) Third, the United States and NATO can attempt to shape Russian NSNW posture through arms control.* Discussion of NSNW arms control with Russia generally focuses on the imbalance in overall number of warheads, rather than specific capabilities or deployment concepts. However, from the perspective of improving deterrence, reducing Russia's overall stockpile is less important than altering Russian NSNW posture in a way that reduces the likelihood of employment. An overall cap that reduced Russia's NSNW by half or even two-thirds, for example, would allow Russia to retire its oldest capabilities, while maintaining its more modern, important capabilities, such as naval capabilities and ground-based, intermediate-range missiles, that are deployed at a fairly high level of readiness. Instead, the United States should seek NSNW arms control designed to disentangle NSNW—particularly those systems most worrisome from a U.S.–NATO perspective—from Russian planning. Potential approaches could include treaty limits that focus on the delivery systems and warheads that Russia is most likely to employ, agreed-upon bans on certain types of dual-use capabilities and geographic limitations on the deployments of NSNW.

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# Appendix B. (U) Abbreviations

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| ALCM | air-launched cruise missiles |
| DCA | dual-capable aircraft |
| DoD | Department of Defense |
| GLCM | ground-launched cruise missile |
| ICBMs | intercontinental ballistic missiles |
| LRSO | Long-Range Standoff Weapon |
| NATO | North Atlantic Treaty Organization |
| NSNW | nonstrategic nuclear weapons |
| SACEUR | Supreme Allied Commander Europe |
| SLBM | submarine-launch ballistic missile |
| SLCM-N | nuclear-capable sea-launched cruise missile |
| SSBN | ballistic missile submarine |
| START | Strategic Arms Reduction Treaty |
| USEUCOM | U.S. European Command |

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The 2018 Nuclear Posture Review points to the differential in U.S.-Russia non-strategic nuclear forces as driving a perception that Russia's "greater number and variety of non-strategic nuclear systems provide a coercive advantage in crises and at lower levels of conflict." This Institute for Defense Analyses paper characterizes the nature and meaning of asymmetries between non-strategic nuclear forces of the United States and Russia.

**15. SUBJECT TERMS**

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