**EXAMINING RUSSIA’S NUCLEAR STRATEGY AS IT APPLIES TO EUROPE AND ITS IMPLICATIONS FOR NATO**

A Masters Thesis

Presented to

The Graduate College of

Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science, Defense and Strategic Studies

By

Harrison Menke

May 2015

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**ABSTRACT**

The recent downturn in NATO-Russian relations has prompted analysts to question Russia’s military strategy in Europe. Due to its deficiencies in conventional weapons, Russia will be forced to primarily rely on nuclear weapons should NATO and Russia come into conflict. Thus, it becomes necessary to scrutinize Russia’s nuclear strategy at a regional level. This report assesses Russia’s regional nuclear strategy for Europe. In doing so, it examines Russian military documents, military exercises, force procurements, and official statements. This research pays particular attention to three main questions: 1. How is Russia’s nuclear force posture developing in the near and medium term? 2. Can Russia contain conflict escalation after limited nuclear usage? And 3. What implications does Russia’s limited use strategy have for NATO? Indeed, as relations worsen it has become exceedingly necessary for NATO to fully evaluate how it may expect Russia to use its nuclear weapons, both politically and militarily, during a major crisis.

**KEYWORDS**: Russia, regional nuclear strategy, non-strategic nuclear weapons, limited nuclear use, nuclear de-escalation

This abstract is approved as to form and content

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I dedicate this thesis to my beautiful soon to be wife Samantha. I owe all of my accomplishments to your encouragement and loving support. Undoubtedly, I would not be where I am today without you.

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**INTRODUCTION**

**A Primer**

Due to rapidly deteriorating relations between the North Atlantic Treaty Organization (NATO) and the Russia Federation, it has become necessary to reevaluate characteristics of the security situation in Europe. Due to Russia’s lagging conventional weaponry, the essential foundation of Russia’s European defense strategy is based on its substantial nuclear arsenal. Therefore, it is essential to examine Russia’s nuclear weapons in a regional context, as these weapons may expectedly play a pivotal role in any major crisis between NATO and Russia.

This thesis argues that Russia has a well-designed nuclear strategy at the regional level, decoupled to a certain degree from its global nuclear policy. This report scrutinizes the character of this strategy by assessing Russian views on nuclear weapons through analysis of official regime documents, nuclear procurements, regional military exercises, and official statements. This thesis pays special attention to primary Russian sources, particularly from government publications, well respected analysts, and direct statements from the Russian leadership. By investigating each piece of Russia’s nuclear program, a clearer representation of the complete strategy becomes discernible.

In doing so, this report seeks to shed light on two crucial critiques of Russian policy. First, does the Russian leadership believe it effectively can contain escalation during a limited nuclear war? Secondly, what impact, if any, will Russia’s conventional weapons program have on its regional nuclear strategy? Finally, this research will seek to determine what implications Russia’s posture will have for NATO.

This report bases its arguments on the belief that relations between NATO and Russia are worsening. Indeed, surveys from the Levada Center in Russia show 71% and 81% of those polled have negative feelings toward the West and the US respectively (44% a year ago).[[1]](#footnote-1) At the center of this study are seven mainstream assumptions outlined by Alexei Arbatov, described to be universally accepted by the Russian leadership.

|  |
| --- |
| • Russia is surrounded by enemies led by the US. |
| • The US is using the pro-democracy opposition inside Russia to subvert the  regime. |
| • The US with its allies may invade Russia anytime. |
| • The West plans to use military power to seize Russia’s natural riches. |
| • Russia will use its own technologies to rearm its military. |
| • Russia’s allies are the Shanghai Cooperation Organization or SCO nations  together with Belarus, Armenia and possibly Syria. |
| • Nuclear weapons are the cornerstone of Russian security, while calls for nuclear  disarmament are a malicious US swindle. |

According to Arbatov, these viewpoints are widely held as fact in Russia today.[[2]](#footnote-2) This reality can be described as a ‘siege mentality,’ a mindset that assumes the very existence of the state is constantly under threat from a multitude of aggressors. This has perhaps been demonstrated best, or at least most recently, by leadership assertions that the entire crisis in Ukraine has been a ploy by the West to contain and strangulate Russia.[[3]](#footnote-3)

What Arbatov’s seven truths depict is a very insecure and suspicious Russia, both within the elite and the wider Russian public.[[4]](#footnote-4) According to official statements from the top of the regime, this sense of vulnerability, coupled with NATO infrastructure advances and military advantages, are the chief driving force behind Russian nuclear force posture. This report does not seek to challenge this assumption. However, eliminating state susceptibility is likely not the lone motivating factor for Russia’s force posture, as it appears this rationale is only one of many instigating factors.

Indeed, Russian threat perceptions are not narrow, but boundless. Moscow considers itself to be in a quasi-conflict with NATO on a multitude of levels since the Yugoslavia campaign, most notably in third party states where information and popular revolution are the primary weapons.[[5]](#footnote-5) At a more strategic level, Russia is quite concerned over NATO infrastructure expansion, ballistic missile defense (BMD), the conventional weapons imbalance, and space weapons. Both individually and collectively, these threats are perceived to create a highly destabilizing and threatening neighborhood for Russia. Thus, Russia must react. As Vladimir Putin stated in 2014 before a Security Council meeting,

“We will react appropriately and proportionately to the approach of NATO’s military infrastructure toward our borders, and we will not fail to notice the expansion of global missile defense systems and increases in the reserves of strategic non-nuclear precision weaponry.”[[6]](#footnote-6)

At the core of Russia’s “appropriate and proportional response” are nuclear weapons. As a senior US defense official commented,

“There are aspects to their nuclear doctrine, their military activities that we find very troubling. If you read recent Russian military doctrine they are going in the other direction, they are actually increasing their reliance on nuclear weapons, the role in nuclear weapons in their strategy.”[[7]](#footnote-7)

Therefore, this paper seeks to investigate Russia’s nuclear strategy as it applies to the regional level, focusing on Europe. It is this report’s hypothesis that by the end of this research a distinct and perceptible regional nuclear policy can be distinguished. Should this proposition prove correct, it is obvious that such a policy would have great significance for NATO’s future policy and planning.

**A Note on the Likelihood of Conflict**

It should be noted that this report does not suggest that war, especially nuclear war, is imminent between NATO and Russia. A decision to go to war is driven by complex and multifaceted political, economic, military, diplomatic, and even personal drivers and decisions, which are often unpredictable. Indeed, as history continues to remind us, war is often unintended; the consequence of a progression of increasingly inimical actions and reactions. While this report does not dismiss the notion that these drivers are absolutely crucial to understanding the future of Russian-NATO relations which could conceivably spark a nuclear war, it falls outside the scope of the paper to acutely scrutinize NATO-Russian relations and the likelihood of conflict.

Rather, this report accepts Arbatov’s thesis that Russian leaders consider the probability of conflict is growing and that nuclear weapons are the mainstay of Russian defense. Subsequently, this research centers on current Russian thinking on nuclear weapons’ utility during a period of extreme tension with NATO in Europe. The intention is to study Russian nuclear structure and strategy in a regional context, assessing how and why these weapons may be employed under certain conditions and what benefits the Russian leadership hopes to gain by their usage. Indeed, President Putin cannot simply conduct a successful nuclear operation without first planning, building, and testing these weapons and their accompanying doctrine. Thus, while observing Putin and the upper echelon of the Russian leadership’s perceptions on nuclear weapons is critical, it is by no means the singular method of understanding Russian nuclear strategy.

**CHAPTER ONE: NUCLEAR WEAPONS AND RUSSIAN   
STRATEGIC CULTURE**

It was once said Russia is a riddle wrapped in a mystery inside an enigma. Its regional perceptions and agenda are only slightly less opaque, but some constants can be established. At the core of Russia’s policies, whether it is economic, political, or military, is the innate conviction that Russia must remain a great regional, if not a world power. Nuclear weapons and more broadly the military are key enablers of this commitment. Throughout Russia’s history its strategic culture has placed enormous importance on the military as an institutional base and legitimizing symbol of Russian statehood and power.[[8]](#footnote-8)

A strong nuclear deterrent is a prerequisite for preserving Russia’s status as a great power during today’s period of growing instability and conflict. This need has become much more acute as Russia’s leaders’ have fundamentally denounced the notion of a unipolar international system in which a coalition of Western powers dominates global affairs. During his remarks to a Valadi Club meeting in 2014, President Putin clearly laid out Russia’s position. “This period of unipolar domination has convincingly demonstrated that having only one power center does not make global processes more manageable… The unipolar world turned out too uncomfortable, heavy and unmanageable a burden even for the self-proclaimed leader.”[[9]](#footnote-9) Indeed, Putin regularly proclaims that the unipolar model of the world has failed. “Peoples and countries are expressing more and more loudly their will to determine their destiny by themselves, to preserve their civilization and cultural identity, which comes into conflict with attempts by certain countries to keep their dominance in the military sphere, in politics, finance, economy and ideology,” Putin proclaimed in 2014.[[10]](#footnote-10)

Russia views the world from a framework where multiple state powers compete for influence across the globe. Each regional power dominates a zone of special interest, which it strives to dominate and expand. As an influential center of power, Russia needs to field a strong and confident military force to protect its zone and exert authority over its sphere of interest.

For Russia, its regions are clearly defined. President Boris Yeltsin stated in 1993 that these zones included the entire Commonwealth of Independent States (CIS).[[11]](#footnote-11) More recently, then President Dimitri Medvedev asserted, "there are regions in which Russia has privileged interest. These regions are home to countries with which we share special historical relations and are bound together as friends and good neighbors."[[12]](#footnote-12) Medvedev’s statement also points to the former Soviet states and to the ethnic Russians living there. Rather than whole countries (such as those nations of the Warsaw Pact), Russia’s zones of interest include various politico-military, economic, historic, and cultural areas within bordering states. These zones contain its allies of the Collective Security Treaty Organization (CSTO), regions in Ukraine such as Crimea and Novorossiya, well as areas that host ethnic Russians or Russian speakers.

Medvedev went on to state that it is a priority to defend the “lives and dignity” of Russians living abroad.[[13]](#footnote-13) This is the foundation of Russia’s legal framework for operations outside the state. Should a Russian be endangered, Moscow has the responsibility to act. In 2014 President Putin actually expanded this base, his so-called “Russkiy Mir” (Russian World), to include “[O]ur compatriots, Russian people, people of other ethnicities, their language, history, culture, their legitimate rights. When I say Russian people and Russian-speaking citizens, I mean people who sense that they are a part of the broad Russian world, not necessarily of Russian ethnicity, but everyone who feels to be a Russian person.”[[14]](#footnote-14) Putin concluded that these groups are entitled to a range of protection, including the right to self-defense, no matter where they reside.[[15]](#footnote-15)

For Russia, these strategically valuable areas help augment Russian defenses vis-à-vis outside aggressors. Russia’s narrative, described by NATO Deputy Secretary General Ambassador Alexander Vershbow as a false narrative, perpetuates the vision of a humiliated Russia, whose weakness has been capitalized on by the West since the end of the Cold War.[[16]](#footnote-16) Indeed, the fear in Russia is that NATO constantly seeks to limit Russian political, economic, and military influence in nearby territories to make it susceptible to interference. To Russian diplomats, this effort began during the NATO enlargement process (which, according to former Ambassador to Russia Michael McFaul, had been stopped due to Putin’s policies) and continues today with the expansion of military infrastructure in Eastern Europe.[[17]](#footnote-17) In these terms, NATO expansion is equivalent to encirclement and has triggered enduring fears of outside powers strangling Russia and marginalizing its position as a great world power.

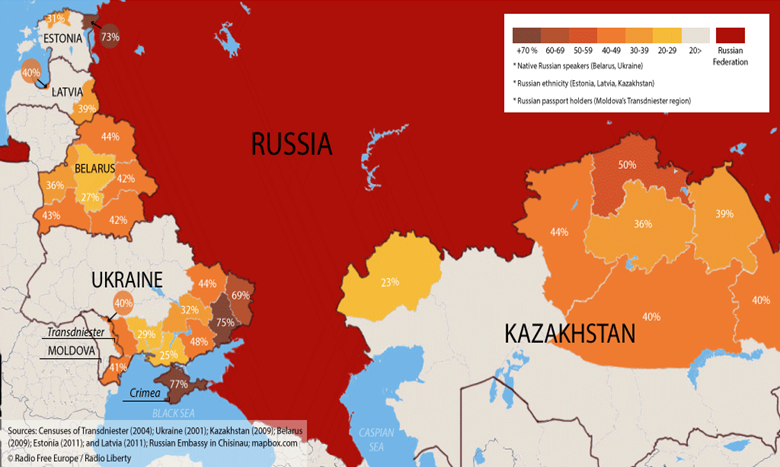


Figure 1: Ties to Russia. Denotes concentrations of Russian citizens, ethnic Russians, and native Russian speakers who live outside the Russian Federation.[[18]](#footnote-18)

In Russians’ eyes, NATO’s expansion into its sphere of interest, particularly Ukraine and Georgia, could only mean the West has seen Russia as an adversary or worse, a weak state that can no longer defend its vital interests.[[19]](#footnote-19) In Russian strategic culture and history, the latter could only be followed by the certain destruction of the state and regime. Moreover, weakness would only encourage aggression from adversaries looking to expand their influence and seize vital resources. As noted by then Defense Minister Serdyukov in 2009,

“Strategic circumstances are characterized by attempts of the US administration to achieve global leadership, by US expansionism in regions close to Russia, and by growing American and NATO military presences there. American policy is aimed at gaining access to raw materials, energy and other natural resources of the CIS countries. The processes resulting in expulsion of Russia from the space of its traditional interests are actively supported.”[[20]](#footnote-20)

Incidentally, NATO policies have triggered historical uncertainties regarding the security of the Russian state to outside forces. Russian elites regularly draw on history to reinforce the feeling of vulnerability along Russia’s western front, utilizing examples from Hitler’s Barbarossa to Napoleon’s ill-fated march on Moscow.[[21]](#footnote-21) This has engineered a rather staggering sense of siege mentality in Moscow. As Stephen Blank remarks, “Russia truly believes that it exists in a state of permanent siege or conflict with all of its interlocutors and neighbors.”[[22]](#footnote-22)

Consequently, the Russian leadership has rejected a position of weakness, instead basing its policies on a need for demonstrating resolve and aggressiveness. As one analyst wrote in the official military journal of the General Staff, *Voyennaya Mysl* (Military Thought), “Only those who are weak are attacked; the strong are never assaulted. Those who are weak, but show their strength, are attacked less frequently than those who are strong but are unable to appropriately show their strength and make the impression of their weakness.”[[23]](#footnote-23) Indeed, the military plays a central role in negating any perceived sense of weakness. “Military capability, especially nuclear capability, should be sufficient if we want to be at a [safe] level or even merely independent,” former Defense Minister Sergei Ivanov was quoted as saying. “No one likes the weak, no one listens to them, everyone abuses them, and when we have parity, others talk to us differently.”[[24]](#footnote-24)

In order to preserve its place as a major regional center of power, Russia revived a need for an assertive foreign policy and strong military, both of which instill a strong sense of patriotism, pride, and standing in the world. However, although Russian conventional forces are superior to any country that borders it (outside of China) they cannot guarantee Moscow the ability to conduct its foreign policy effectively without failure should Russia’s interests come into conflict with NATO. Due to its conventional weakness, lower economic potential, and declining population, Russia has chosen to rely on its nuclear weapons for this role. As Vladimir Putin wrote in a *Foreign Policy* article, “Being Strong,”

“In a world of upheaval there is always the temptation to resolve one’s problems at another’s expense, through pressure and force. It is no surprise that some are calling for resources of global significance to be freed from the exclusive sovereignty of a single nation. This cannot happen to Russia, not even hypothetically. In other words, we should not tempt anyone by allowing ourselves to be weak. We will, under no circumstances, surrender our strategic deterrent capability. Indeed, we will strengthen it. We will not be able to strengthen our international position or develop our economy or our democratic institutions if we are unable to protect Russia… This is an indispensable condition for Russia to feel secure and for our partners to listen to our country’s arguments.”[[25]](#footnote-25)

Indeed, nuclear weapons epitomize strength, power, and world status, and perhaps stand as the best way to make the world “fear,” or at least respect, Russia again. Their matchless ability to cause colossal destruction coupled with the exclusivity of possession greatly increases an owner’s military strength as well as world prestige. For Russia, the international respect derived is desperately desired, as nuclear arms are one of its last vestiges of a great power. Despite Russia’s relative weakness compared to other major powers, nuclear weapons allow Russia to maintain a “special relationship” and quasi-parity with the United States and NATO in military terms. More broadly, nuclear weapons empower the Kremlin through the ability to preserve its geopolitical status and project power in its vital spheres of interest often unimpeded.[[26]](#footnote-26)

Today, it is undeniable that Putin personally, and the regime more generally, place excessive emphasis on nuclear modernization and developments vis-à-vis NATO as a point of pride and importance. Putin himself stated in a 2006 address to top managers of the nuclear weapons industry that “Our country’s nuclear potential is of vital importance for our national security interests. The reliability of our ‘nuclear shield’ and the state of our nuclear weapons complex are a crucial component of Russia’s world power status.”[[27]](#footnote-27) Earlier in 2003, Putin admitted that “the main foundation of national security in Russia remains, and will remain for a long time to come, nuclear deterrence forces.”[[28]](#footnote-28)

To be sure, nuclear weapons have become embedded in Russian strategic culture as visible symbols of Russian power, both militarily and politically. For example, to showcase the physical transfer of power, a highly visible ceremony is held in which the outgoing president passes the *Cheget* (nuclear briefcase) on to the incoming president-elect. High ranking Russian leaders often personally observe nuclear weapons exercises. In 2005 Putin actually rode in a Tu-160 nuclear-capable long-range bomber during a training exercise (the bomber launched the conventionally armed Kh-555), an act that was well received by the Russian public, in order to “show unlimited power – his and the awesome bomber.”[[29]](#footnote-29)

Even the Orthodox Church supports the nuclear program. The land-based nuclear forces have their own patron saint, Saint Barbara, and church officials regularly speak about the need for nuclear deterrence.[[30]](#footnote-30) During a 2007 interview, Putin went so far as to link religion and nuclear weapons in Russia, stating “These themes are closely connected because both the traditional faiths of the Russian Federation and Russia’s nuclear shield are two things that strengthen Russian statehood and create the necessary conditions for ensuring the country’s internal and external security.”[[31]](#footnote-31) Clearly, some of the leadership’s actions and overtures are meant to bolster domestic support for the leadership’s decision to focus on nuclear deterrence, but also to solidify the conviction that these weapons are a godsend, preserving the status and safety of the Russian state and its citizens.

Thus, it is apparent that nuclear weapons will continue to remain a priority and play a large role for Russia.[[32]](#footnote-32) Nuclear weapons bolster Russia’s status on several levels, including globally, regionally, and domestically. As Russia continues to “rise from its knees,” nuclear weapons will remain symbols of greatness and power, and highly visible physical examples of Russian strength and self-reliance. According to the chief of the Russian General Staff, Valeri Gerasimov, this point is without contestation. “Support for our strategic nuclear forces to ensure their high military capability combined with...growth of the military potential of the general forces will assure that [the United States and NATO] do not gain military superiority over our country,” Gerasimov told reporters in February 2015.[[33]](#footnote-33)

**CHAPTER TWO: RUSSIAN DOCTRINAL WRITINGS**

**2014 Military Doctrine of the Russian Federation**

The 2014 Military Doctrine is the principal document guiding Russian military actions, including its nuclear policy. The newest iteration specifically states that nuclear deterrence will remain important and function to prevent nuclear war, as well as conventional large-scale and regional wars.[[34]](#footnote-34) In order to prevent conflict, Russia must maintain “global and *regional stability and nuclear deterrence potential* at an adequate level (emphasis added).”[[35]](#footnote-35) Moreover, the 2014 doctrine specified deterrence was both nuclear and non-nuclear in nature, and the nuclear forces must guarantee “the infliction of unacceptable damage” to an aggressor under any conditions.[[36]](#footnote-36)

Nuclear weapons can be employed, “…in response to use against it and (or) its allies by nuclear and other weapons of mass destruction, as well as in the case of aggression against the Russian Federation with the use of conventional weapons when the very existence of the state is under threat.”[[37]](#footnote-37) This is nothing novel, as the section is the language verbatim form the 2010 doctrine. Despite some discussion regarding a change in Russia’s doctrine to include a preventative/preemptive clause, it seems Russia’s leaders have instead chosen to continue with the status quo and ultimately not upgrade nuclear weapons’ role in security planning.

The inclusion of non-nuclear deterrence along with the authors’ decision not to officially increase reliance on nuclear weapons could signal that Russia is becoming more capable, or at least confident, in its ability to employ conventional weaponry effectively in certain situations. With the inclusion of non-nuclear deterrence into the doctrine along with Russia’s recent success in Crimea, it is reasonable to assume that Russia is becoming more assured in the usability and deterrence power of its conventional arsenal. However, Ukraine’s military capabilities are modest compared to NATO’s. While Russia could count on its improved military to dispatch a relatively weak opponent like Ukraine, Georgia, or even the Baltic States, significant questions remain about whether it could seriously challenge the brunt of NATO forces. Thus, although non-nuclear deterrence is clearly an emergent instrument for Russia, nuclear weapons will remain the bedrock of its security policy, specifically against NATO.

Yet some analysts have concluded that the document’s non-nuclear divergence indicates a desire to become less reliant on nuclear weapons. Russian arms control expert Nikolai Sokov made the assertion that the change in language in the earlier 2010 doctrine suggested that Russia is becoming more assured of its conventional weapons’ ability to deter and defeat.[[38]](#footnote-38) Sokov went on to observe that the new emphasis on conventional weapons was “an admission that nuclear weapons are not very usable…deterrence based on useable weapons is much more efficient.”[[39]](#footnote-39)

However, history indicates that official Russian doctrine is typically less definite than advertised. As Russian defense expert Pavel Podvig explains, public Russian doctrine has hardly been “the Bible of [Russia’s] military and political leadership” as Moscow has never had a “tradition to use doctrine as a real guidance… [decisions are made] in the heat of the moment.”[[40]](#footnote-40) Furthermore, Russia has a past of being extremely cautious and secretive about its intentions. As established by recently released Warsaw Pact military plans, the Soviet Union had a clear no first use (NFU) pledge but planned to use nuclear weapons preemptively anyway.[[41]](#footnote-41)

(Ret.) Major-General Vladimir Dvorkin, chief research officer at the Institute of World Economy and International Relations and former head of the Defense Ministry’s 4th Central Research Institute, took the argument a step further. In Dvorkin’s view, military doctrines since 1993 have been “partial” and “fragmentary,” making it nearly impossible to fully evaluate Russian nuclear policy.[[42]](#footnote-42) This is consistent with former Defense Minister Sergei Ivanov’s statement to Russian news agencies in 2003, when he candidly stated that Russia is typically less than totally transparent when it comes to official texts. “What we say is one thing. That sounds cynical, but everything that we plan does not necessarily have to be made public. We believe that from the foreign policy viewpoint it is better to say that. But what we actually do is an entirely different matter...”[[43]](#footnote-43)

Additionally, in 2010 the Russian government released two documents, one to be made open and one to be classified. The classified text, “The Foundations of State Policy in the Area of Nuclear Deterrence to 2020,” was to include “the use of nuclear weapons as an instrument of strategic deterrence.”[[44]](#footnote-44) According to an interview conducted with Yuri Baluyevskiy, former chief of the Russian Armed Forces General Staff, the 2010 classified document which codified specific conditions for nuclear use is still in effect.[[45]](#footnote-45) “And I am convinced, - no, I know for sure, - that it speaks about everything: about our potential enemies, our partners, system of nuclear deterrence, and use of strategic nuclear forces (SNF) during a special period," Baluyevskiy stated.[[46]](#footnote-46)

The most observable and significant change in the updated Military Doctrine was a much more explanatory discussion with regard to NATO, particularly the United States, resulting in a serious tonal shift toward the West as an adversary. As Olga Oliker wrote in a *Washington Post* article, the document is a signal to friends and enemies alike that Russia is settling in for a long siege, preparing to rally its resources and not to back down.[[47]](#footnote-47) Indeed, the 2010 document stated that NATO only had the “desire” to create a military alliance with global strike functions and “intentions” to move military infrastructure toward the Russian Federation in a “potential” effort to expand the alliance.[[48]](#footnote-48) The 2014 doctrine states that NATO is now actively implementing all of these things. Additionally, the document promises that Russia will oppose efforts by others to “attain military superiority” over Russia.[[49]](#footnote-49) Russia attributed several other capabilities, to NATO, such as the ability to place weapons in space, Global Prompt Strike, hypersonic weapons, and missile defense structures, as potential dangers and threats.[[50]](#footnote-50)

It is also worth noting that the 2014 document follows its 2010 counterpart by postulating that the likelihood of local and regional conflicts is growing.[[51]](#footnote-51) Indeed, of its listed external and internal threats, the majority consist of local or regional concerns. While Russia does discuss global issues (nuclear proliferation, terrorism), the majority of the document is focused on military contingencies along Russia’s periphery. Coupled with the addition of NATO as a significant and immediate military threat, it is obvious that Russia considers its security to be most vulnerable in its near-abroad region, most specifically Eastern Europe.

**The 2003 Urgent Goals for the Development of the Armed Forces of the Russian Federation**

Although dated, the Urgent Goals for the Development of the Armed Forces of the Russian Federation gives insight into Russian defense and security thinking as the authors and main facilitators, such as Sergei Ivanov and Vladimir Putin, still occupy top leadership positions in Russia.[[52]](#footnote-52) When describing the document, Russian political scientist Sergei Karaganov stated the Urgent Goals are "not a doctrine, but a collection of ideas from the Defense Ministry on this and that–a mix of rhetoric, of new ideas and old ones."[[53]](#footnote-53) Therefore, in between the document’s often contradictory statements lay concrete indications as to how the Russian political-military leadership views nuclear weapons in a regional context, as the document discusses the features of nuclear weapons usage in-depth.

The document points to two major trends: actions by NATO, spearheaded by the US, are endangering Russia and wars are de-evolving from large-scale global confrontations to regional and local conflicts located along Russia’s boundary. Indeed, the document went on to underscore that these threats could trigger nuclear tensions.[[54]](#footnote-54) Moreover, the document boldly stated “Neither can we rule out the possibility of pre-emptive use of military force if the interests of Russia or its allied obligations require it.”[[55]](#footnote-55) While not outright mentioning nuclear weapons, it is certainly noticeable that at the time, Russia’s conventional weaponry was far too weak to conduct such operations.

The document then shifted discussion to an apparent official vote of confidence to the strategy of limited nuclear use. According to the authors, in peacetime the nuclear forces are tasked with “…prevent[ing] power politics and aggression against Russia or its allies;” in wartime its role is de-escalation of aggression.[[56]](#footnote-56) De-escalation would result by terminating hostilities on conditions acceptable to Russia and impair the adversary’s capability to a target Russia.[[57]](#footnote-57) This could only be accomplished by the nuclear forces maintaining the “ability to inflict retaliatory damage of such proportion that would effectively challenge the feasibility of attaining the aims of a potential aggression” through damage that is “subjectively unacceptable to the enemy as it outweighs the advantage the aggressor seeks to gain from the use of its armed force.”[[58]](#footnote-58) This significant text gave acceptance to the notion of using limited nuclear strikes to achieve goals during conventional war. Although this was not necessarily “formal” acceptance, the amount of discussion devoted to nuclear de-escalation and limited nuclear usage signals that the Russian political-military leadership views nuclear attacks a practical instrument to terminate hostilities.

**The Concept of Nuclear De-escalation**

De-escalation refers to a strategy which accepts the actual use of a nuclear weapon(s) to demonstrate resolve and to raise the stakes of a conflict much higher than an adversary would be willing to accept in a war. Rather than risk outright global nuclear war, the aggressor would back down, terminating the conflict on terms favorable to Russia. According to the 2003 Urgent Goals for the Development of the Armed Forces of the Russian Federation, “ de-escalation of aggression is forcing the enemy to halt military action by a threat to deliver or by actual delivery of strike of varying intensity with reliance on conventional and (or) nuclear weapons.”[[59]](#footnote-59)

Writing in a *Voyennaya Mysl* article in 1999,Major-General V.I Levshin, Colonel A.V. Nedelin, and Colonel M.E. Sosnovskiy, the architects of the de-escalation concept proposed that the Russian nuclear forces should divide deterrence into two semi-independent subsections: deterrence of major nuclear aggression (global level deterrence through the threat of massive retaliation delivered from strategic nuclear weapons) and deterrence of conventional aggression (regional level through the threat of limited nuclear usage by NSNW).[[60]](#footnote-60) In explaining the latter division, the authors expounded that Russia could employ a limited nuclear strike to circumvent an adversary’s battlefield advantages and return the situation to the status quo. In other words, Russia would escalate to de-escalate.

“Fulfilling the de-escalation concept is understood to mean actually using nuclear weapons both for showing resolve as well as for the immediate delivery of nuclear strikes against the enemy…It seems to us that it will be more advantageous to the enemy to stop military actions.[[61]](#footnote-61)

De-escalation assumes that strategic deterrence is not a viable option for limited regional conflicts, as states are often unwilling to commit to a massive nuclear war over limited objectives. For example, during NATO’s intervention in Yugoslavia, Russia found it had little to no leverage over theater-level intrusions, as its strategic nuclear threats were hallow in the face of localized conventional non-contact warfare. This was validated best when President Boris Yeltsin miserably complained to his staff, “Why aren’t they [NATO] afraid of us?”[[62]](#footnote-62) To be sure, the de-escalation authors recognized this dilemma. As they noted,

“…it is far from always advisable to perform missions of deterring and repelling aggression using only strategic nuclear weapons. Under certain conditions the most effective regional deterrence can be ensured by means which on the one hand would be powerful enough to inflict significant damage on the aggressor and thereby to carry out the real threat, and on the other hand not so powerful that the effect of self-deterrence and of their nonuse arises.”[[63]](#footnote-63)

Simply put, the threat of a Cold War style massive nuclear response to a Yugoslavia-like operation was not and is not a credible response. Thus, the authors advanced the theory of nuclear de-escalation, in order to create a nuclear threat that would be taken seriously at regional or local levels of conflict. For Levshin, Nedelin, and Sosnovskiy, limited nuclear usage by means obviously restrained in nature could bypass an “…avalanche-like escalation of the use of nuclear weapons to the very exchange of massive nuclear strikes with strategic nuclear systems.”[[64]](#footnote-64) Indeed, this thesis was again postulated in a 2013 *Pravda* interview with right wing hawk Gen. Col. (in reserve) Leonid Ivashov, who openly stated Cold War massive retaliation was no longer a practical strategic instrument.

“Relying on strategic nuclear forces no longer meets reality. Yes, strategic nuclear forces played the role of a deterrent factor when we had equal potentials of conventional arms with Americans. Today we lag behind them, therefore, to deter large-scale aggression, tactical nuclear weapons will have to play the role of the deterrent."[[65]](#footnote-65)

Essentially, the concept was seen as an appropriate response, filling the void between the upper-tiers of conventional fighting and massive, global nuclear war. The limited use of a nuclear weapon would make absolutely clear that Russia was willing to raise the stakes without inflicting damage that would force a massive retaliatory strike. As Richard Weitz notes, “Initiating nuclear use would underscore the seriousness with which the Russian government viewed the situation and might encourage the other side to de-escalate the conflict and pressure its allies into making concessions.”[[66]](#footnote-66) Thus, Russian leaders seem to believe limited nuclear usage could localize and terminate a conflict on advantageous terms, as an adversary would not be willing to escalate due to their lack of will to continue at such raised stakes, choosing instead to return to the status quo. Alexei Arbatov summed up the concept best when he stated,

“The key strategic mission of the Russian Federation is to rule out the possibility of NATO’s unpunished series of selective missile and air strikes of long duration…It would be justified if Russia made a selective nuclear strike with [non-strategic nuclear weapons] against the facilities that serve for the aggression… Then the other side will have to face a difficult dilemma: to stop the aggression and accept the defeat, or to respond with a nuclear strike, which will be followed by escalation up to the level of strategic nuclear exchange with devastating consequences for everybody. Since there is no better option, in the foreseeable future this will be an affordable and credible concept of expanded nuclear deterrence.”[[67]](#footnote-67)

In order to circumvent immediate massive escalation, thinkers on de-escalation argued that non-strategic nuclear weapons (NSNW) should be considered the primary means. The strikes, weapons used, and target sets are all shaped by the situation and the need to inflict the required damage/unacceptable damage to end hostilities. There are various ‘rungs’ for limited nuclear use which Russia can advance to achieve the required effect as listed below[[68]](#footnote-68):

* Demonstration: Single demonstrative strike against desert or water areas or minor sparsely manned or entirely unmanned military facilities.
* Intimidation-Demonstration: Single nuclear strikes at transportation hubs or engineer installations, to localize area of military operations and reduce efficiency of invading troops at the operational or operational-tactical level without causing high losses.
* Intimidation: Multiple strikes against the main force in a single operational sector to change balance of forces and/or eliminate an enemy breakthrough to the operational depth of defenses.
* Intimidation-Retaliation: Concentrated strikes at enemy theater of operation force groupings within the limits of one or several adjacent operational sectors if a defense operation takes an unfavorable turn. Objectives: to remove the threat of a rout of a friendly force, to resolutely change the balance of forces in an operational sector, to eliminate an enemy breakthrough of a defensive line held by an operational-strategic large unit.
* Retaliation-Intimidation: Massed strike against an aggressor’s armed forces through a theater of operations, to rout it and achieve a radical change in the military situation in one’s favor.
* Retaliation: Delivery of a massed strike or strikes at the adversary within the limits of an entire theater of war (if necessary, involving military-economic targets of the aggressor) characterized by the maximum use of all forces and assets and coordination with strikes launched by the strategic nuclear forces, if these are going to be employed.

Essentially, by breaking the long revered nuclear taboo, Russia would frighten the enemy into submission. As Richard Weitz notes, “The selective strike would seek to exploit the inevitable ‘shack and awe’ effect associated with nuclear use to cause the targeted decision makers to weigh the risks of nuclear devastation more heavily.”[[69]](#footnote-69) The adversary would then be forced to weigh the advantages of continued hostilities, as additional detonations could follow.

Should a demonstrative strike fail, Russia can advance along the escalation rungs. This includes group strikes, or “intimidation-demonstration: single strikes against selected, specific military targets,” concentrated strikes, or “Intimidation: a group of strikes against the main grouping of enemy forces,” and massive strikes, or “Intimidation-Retaliation: intended to be a massive strike in order to radically shift the balance of power in the theater.”[[70]](#footnote-70) As noted by Col. (Ret.) A.L. Khryapin and Col. V.A. Afanasyev, senior research associate and deputy director for the Center for Military-Strategic Studies of the General Staff of the Russian Federation, these attacks are to be conducted if demonstration fails in order to “rout an aggressor.”[[71]](#footnote-71)

The military establishment was quick to adopt the de-escalation strategy. In the same year Levshin, Nedelin, and Sosnovsky outlined the concept, Colonel-General Evgenii Maslin, former head of the 12th GUMO, referred to de-escalation during his introduction to a study on the future of Russian nuclear forces as if “it was already a well-known to nuclear strategists.”[[72]](#footnote-72) In 2009, then Commander of the Strategic Missile Troops, Lt. General Andrei Shvaychenko, acknowledged actual employment of nuclear weapons has remained a strategic reality in Russia’s military planning. According to Skvaychenko,

“In peacetime, they are intended to ensure deterrence of large-scale nonnuclear or nuclear aggression against Russia and its allies. In a conventional war, they ensure that the opponent is forced to cease hostilities, on advantageous conditions for Russia, by means of single or multiple preventive strikes against the aggressors’ most important facilities. In a nuclear war, they ensure the destruction of facilities of the opponent’s military and economic potential by means of an initial massive nuclear missile strike and subsequent multiple and single nuclear missile strikes.’’[[73]](#footnote-73)

Three years later, Gregory Vilegzhanin, Deputy Chief of the Ministry of Defense’s 46th Central Scientific Research Center, wrote that due to present day circumstances, Russia must maintain a variety of NSNW in order to defeat an aggressor and (or) its withdrawal (forced capitulation) from a regional conflict.[[74]](#footnote-74) Both Vilegzhanin and Skvaychenko’s thinking directly reflects the de-escalation school of thought. Indeed, as Andrei Zagorski points out, thinking in terms of nuclear de-escalation has become common place, as standard formulas related to the strategy have seemingly migrated from one defense analyst’s article to another, as if copied from unpublished documents that make the official military doctrine operational.[[75]](#footnote-75)

Escalation control remains the most dubious factor of de-escalation, as it is difficult if not impossible to assume how an adversary may react to an initial nuclear launch, no matter how restrained. Each advancement up the ladder presupposes that each time, Russia will be in control of the escalation and often ignores the possibility of quick enemy advancement along the escalation ladder. However, de-escalation has internal logic and despite the inability to accurately forecast how an adversary may react, Russian strategists remain confident in de-escalation as both an operational and political means of victory. Given NATO’s large lead in the conventional military sphere and their apparent weakness in NSNW (given numbers suggest Russia outnumbers NATO NSNW 10-1), it is reasonable to assume that de-escalation will remain a staple of Russian security policy for the foreseeable future. Thus, the Russian military leadership believes that a risk adverse NATO, especially United States, will be unwilling to continue hostilities should the nuclear threshold be crossed.

**Doctrinal Consistencies**

Despite the variance in age and situation at the time of publication, the aforementioned documents’ core components are remarkably consistent. All accept that the region is becoming increasingly unpredictable and the likelihood of conflicts occurring within Russia’s periphery is on the rise. Rather than concentrate on Cold War style global nuclear war, each document acknowledges the increased risk posed to Russia by local and regional conflicts.

At the center of Russia’s doctrinal concerns is NATO, particularly actions which the Russian leadership views as hostile and intended to upset strategic stability. Russia’s alarm is mounting, leading Moscow to specifically name NATO and its activities a major threat to the Russian state. In an increasingly conflictual environment, each document insists that Russia must reevaluate its security policy.

Each document has been quite consistent about the need to maintain, and if necessary, use nuclear weapons. Although the official Military Doctrine refrains from explicitly referring to de-escalation, repeated references to the need to guarantee “the infliction of unacceptable damage” to an aggressor fits neatly in the de-escalation conceptual framework. This is specifically applicable against NATO, as a single nuclear attack against a remote military outpost could be enough to be unacceptable to the 28 member alliance. Thus, although not necessarily codified, de-escalation and nuclear usage remain an implicit theme throughout official documents.

Indeed, it is clear from the documents that the Russian leadership sees limited nuclear use as a useable instrument of policy. Colin S. Gray once wrote that even nuclear war is not devoid of the need for operational strategy, defined as the “sensible, politically directed application of military power in thermonuclear war.”[[76]](#footnote-76) Russia, particularly the General Staff, firmly accepts this assessment. By employing either a strategic or NSNW against a lightly populated military target, the Russian leadership believes it can coerce an enemy force to capitulate by breaking the opponent’s, in this case NATO’s, political resolve to sustain further casualties.[[77]](#footnote-77)

A limited strike would theoretically force an advancing adversary to sue for peace out of concern that the conflict may escalate into all-out nuclear war; in essence, an aggressive form of Thomas Schelling’s ‘rock the boat’ intimidation brinksmanship theory.[[78]](#footnote-78) To Yuri Fedorov, this forced predicament is essential for victory. “Analysis of Russian military writings… confirm that Russian military planners see limited use of nuclear weapons either tactical or strategic as the only way to challenge an enemy by an awful dilemma: either to stop military operations and recognize defeat, or to respond by a nuclear strike, which would be followed by an escalation up to the strategic nuclear exchange with catastrophic consequences for all.”[[79]](#footnote-79)

However, the Kremlin’s plans to successfully limit escalation are uncertain, and could instead push Russia’s adversaries down a much more volatile path. Indeed, the 1993 Military Doctrine acknowledged that “any, even limited, use of nuclear weapons in warfare even by one of the parties may provoke a massive use of nuclear weapons and lead to devastating consequences.”[[80]](#footnote-80) Should a potential adversary believe a Russian limited nuclear strike is inevitable, the attacker may decide to preemptive destroy Russian nuclear strike options. At the very least, Russia assumes the very shock of a nuclear strike will compel an adversary to simply give up without drastically increasing the level of hostilities. These complications led Yuri Fedorov to conclude that nuclear weapons cannot perform the mission of deterrence against aggression at the regional level.[[81]](#footnote-81)

In order to circumvent an immediate progression to global nuclear war, Russian thinkers have repeatedly stressed the importance of specified damage along with the ability to increase damage if necessary. As Nikolai Mikhailov, then First Deputy Defense Minister of the Russian Federation, noted in 1999,

“This strategy boils down to the threat of using nuclear weapons against any aggressor at a scale ensuring unacceptable damage to such aggressor. The amount of damage should be such as not to provoke the aggressor into escalating the use of nuclear weapons without a justified reason. In other words, the point at issue is a limited use of strategic nuclear forces adequate to the threat.”[[82]](#footnote-82)

Others have also emphasized Russia’s ability to de-couple (to a certain degree) regional and global nuclear war. For strategic military thinkers Khryapin and Afanasyev, maintaining a two-tier basis (global and regional level deterrence) allows the Russian military to maintain a much more flexible response to changes in the military-political and military-strategic level.[[83]](#footnote-83) Regional level deterrence is within the overlapping concept of strategic deterrence, which includes global deterrence. Regional deterrence, as defined by Khryapin and Afanasyev, is the “use of conventional and, if necessary, nuclear weapons, primarily non-strategic, in any regional wars started against the Russian Federation or its allies.”[[84]](#footnote-84)

This is in stark contrast to global level deterrence, which is defined as the threat of “massive use of strategic conventional (precision guided) or nuclear weapon systems that would cause a potential adversary unacceptable damage with the costs that would be too great and would outweigh any potential military gains.”[[85]](#footnote-85) Thus, by inflicting predetermined “unacceptable damage” to an aggressor, as outlined by the 2014 military doctrine, the Russian leadership believes it can contain escalation from immediately intensifying to an apocalyptic global nuclear exchange. This line of thinking is consistent with military rhetoric and military doctrine, which envision two closely linked forms of conflict that can be conceptually separated by a limited or massive usage of nuclear weapons.

Perhaps most importantly, rather than completely de-couple global and regional nuclear war, the Russian strategy encourages the threat of greater punishment should the aggressor fail to cease hostile actions. In order to confine escalation Russia must make absolutely explicit its stakes in a conflict and its willingness to advance to higher levels of escalation, resembling intra-war deterrence, although this in and of itself cannot guarantee a jump in escalation. Levshin, Nedelin, and Sosnovskiy insisted that the implicit threat of greater escalation was a key attribute of the de-escalation strategy. “A phased, intimidating employment of [NSNW] in combination with a demonstration of readiness to employ SNW [strategic nuclear weapons] may become the most powerful inducement for an aggressor to scale down military operations.”[[86]](#footnote-86) Sergei Brezkun, far right-wing professor at the Academy of Military Sciences and former Senior Researcher at Russia’s VNIIEF, agreed, noting that a NSNW or INF range weapon strike against an uninhabited area on the territory of an aggressor would “instantly sober” any adversary.[[87]](#footnote-87)

While it is clear that Russian military thinkers have spent a great deal of time trying to conceptualize how to limit escalation, it is uncertain as to whether de-escalation will be successful in keeping a nuclear conflict localized. Such an action would be highly problematic and carry significant risks of backfire. Yet despite these challenges, nuclear weapons remain a core component of Russia’s regional warfighting strategy.

It should be noted that a major theme in the documents was the development of greater confidence in the conventional forces, suggesting a desire to move away from nuclear usage. However, it is unlikely that the Russian military could withstand a major NATO onslaught in the European theater of operations. According to Grigori Vylegzhanin, Deputy Chief of the FBU Depart of the “46th Central Scientific-Research Institute of the Russian Federation Ministry of Defense,

“Considering the existing condition of the SON's [General Purpose Forces] weapons and military equipment as well as NATO's enormous actual superiority over Russia in number of conventional weapons and the overwhelming superiority in combat potentials, one can assume that in a regional war in the Western Strategic Sector the use of NYaOs [NSNW] will be required to repel enemy aggression. The use of strike groupings equipped with non-strategic nuclear weapons in the SON complement is an important asset in parrying the substantial superiority of the probable enemy in the numerical complement and level of equipping of the general purpose forces, and also an effective instrument for countering threats of a regional nature.”[[88]](#footnote-88)

According to Jacob Kipp, Vylegzhanin’s views on NSNW are by no means isolated. Rather, they “reveal deeper sensitives within the security elite concerning the nuclear-conventional balance.” Due to Moscow’s limited options, a military intervention on the Russian periphery by a powerful NATO force would likely necessitate the use of Russian NSNW. “At this time, this class of weapons is an instrument for deterring potential conflicts at the regional level and for this reason a crucial area of the Russian Federation's military-technical policy…” Vylegzhanin wrote.[[89]](#footnote-89) Thus, at least in the near to medium-term, Russia will be forced to continually rely on nuclear weapons for deterring and fighting regional adversaries. However, Russia’s reluctant acceptance of conventional weapons is an encouraging indication that it could be willing to reduce the role of its nuclear weapons in its security policy moving forward, despite the fact Russia still lags significantly behind NATO in all factors related to waging a successful military campaign.

**CHAPTER THREE: REGIONAL RUSSIAN NUCLEAR FORCE POSTURE**

Like during the days of the Cold War, military procurement data serves as one of the most important instruments analysts had in evaluating a state’s military posture. As James Quinlivan and Olga Oliker of the RAND Corporation state, “the most serious indicator of Soviet intentions was the development and procurement of military systems that gave insight into the willingness and methods of using force.”[[90]](#footnote-90)Although times have changed, observing procurement and deployment data is still perhaps one of the most valuable rubrics to gauge how a nuclear force is evolving. Indeed, (Ret.) Major-General Vladimir Dvorkin agreed, noting that other methods, such as declaratory documents, are an inefficient means of studying Russian nuclear policy.[[91]](#footnote-91) Like Quinlivan and Oliker, Dvorkin contends that examining the state development programs that support the nuclear deterrent are much more telling of Russia’s nuclear policy and posture.

Russia has been actively modernizing both its strategic and non-strategic nuclear armaments. In his opening remarks at a 2014 meeting with the Defense Ministry Board, Putin indicated nuclear weapons development will remain the focal point of Russia’s rearmament program. “[W]e must develop all components of our strategic nuclear forces, which play a very important part in maintaining global balance and essentially rule out the possibility of a large-scale attack against Russia.”[[92]](#footnote-92) Indeed, Deputy Prime Minister Dimitri Rogozin recently reiterated that Russia will increase its nuclear weapons budget by 50% over the next three years, while upping its entire nuclear force modernization to an astonishing 100%.[[93]](#footnote-93)

**Strategic Arsenal Developments and Modernization**

Although NSNW will likely form an important element of Russia’s nuclear policy, a key to the de-escalation theory is the need to maintain a strong strategic nuclear force. According to the last New START Treaty update, Russian nuclear warheads have increased by 131 warheads to 1,643, one more than the United States.[[94]](#footnote-94) Moreover, the New START Treaty allows Russia the ability to equip multiple independent reentry vehicles (MIRV) to its missiles and develop new forms of mobile transports. As Andrei Kokoshin stressed, Russia now had the right to develop and deploy new weapon systems that in the interest of national security and strategic stability.[[95]](#footnote-95) This appears to include MIRV warheads, heavy ICBMs, and missile trains.

At the core of its current strategic deterrent is the ICBM fleet, which has been receiving new systems. President Putin promised that in 2015, “[T]he strategic nuclear forces will receive more than 50 intercontinental ballistic missiles [both ICBM and SLBM]. You can imagine what a powerful force this is.”[[96]](#footnote-96) In 2014, Defense Minister Sergei Shoigu announced Russia’s strategic forces received 38 ICBMs.[[97]](#footnote-97) Presently, Russia’s ICBM arsenal is made up of legacy R-36M2 (SS-18 Satan), UR-100UTTKhss (SS-19 Stiletto), and RT-2PM (SS-25 Sickle) and has been receiving modifications in order to prolong their service life. After Rogozin’s recent declaration that Russia will renew its forces by 100%, it seems likely these legacy systems will be phased out completely after 2020.[[98]](#footnote-98) The ICBM fleet in the near-term will be made up of RT-2PM2 Topol-M (SS-27 Sickle B) single warhead ICBMs and the road-mobile multi-warhead RS-24 Yars (SS-27 Mod 2).

However, recent official statements and press reports confirm that newer systems are already being developed. Russia is currently producing a new heavy ICBM to replace its Satan missiles, designated the Sarmat, due to be deployed around 2018-2020.[[99]](#footnote-99) According to the Commander of Strategic Missile Forces of Russia, Sergei Karakaev, this 100-ton liquid filled “monster” is planned to overcome any missile defense design.[[100]](#footnote-100) "The decision about the creation of the new silo-based missile system with a liquid-fuel heavy missile has been made. The complex will have increased possibilities in overcoming the prospective missile defense system of the United States," said Karakaev.[[101]](#footnote-101) About 46 missiles are expected to be deployed by 2020, while each missile will reportedly carry 10 heavy or 15 medium nuclear warheads.[[102]](#footnote-102) However, Deputy Minister of Defense Yuri Borisov told RSN Radio that the Sarmat could deliver payloads of up to 10 metric tons.[[103]](#footnote-103) This could indicate that the Sarmat is capable of carrying more warheads than previously thought.

Certainly, the missile’s aptitude to evade defenses and guaranteed ability to destroy hardened silos would bolster Russia’s counterforce capability, something the Russian leadership has pledged to do for some time. To be sure, (Ret.) General Vladimir Dvorkin told the media that he believes the Sarmat can only be used for “first-strike or counterforce attacks.”[[104]](#footnote-104) He went on to note that because the Sarmat was a fixed-site, liquid-fueled missile, that it was “not suitable for retaliatory strikes,” due to its vulnerability and long preparation time.[[105]](#footnote-105)

Additionally, Russia is also developing a new ICBM, the RS-26 Rubezh. Many of the Rubezh’s characteristics are kept closely guarded; however it is believed that the missile will most likely be MIRV’ed.[[106]](#footnote-106) One *ITAR-TASS* report explained that the Rubezh’s remarkable characteristics would essentially make any adversary think twice before confronting Moscow. “This [the Rubezh] would be enough to deter a possible aggressor and cool the hotheads among overly excited politicians, especially since Rubezh systems will have a range of 10,000-11,000 kilometers. Any inquisitive person can place a pair of compasses anywhere in Russia, for example beyond the Urals, and draw a circle of 11,000 kilometers to see what falls within their range.”[[107]](#footnote-107)

Rogozin also praised the missile’s capabilities, calling it a “missile defense killer... Neither current nor future American missile defense systems will be able to prevent that missile from hitting a target dead on.”[[108]](#footnote-108) Like the Sarmat, Russian elites argue that the Rubezh’s chief objective will be to break through NATO’s missile defense system and strike a wide variety of presumably military targets in a precise nature.

However, there has been speculation that the Rubezh may not be an ICBM at all. According to Russian nuclear forces expert Mark Schneider, the Rubezh is “[s]ometimes called a ‘reduced range ICBM’ in Russia, it appears to be an IRBM-range missile replacement for the Soviet-era SS-20 IRBM eliminated under the INF Treaty.”[[109]](#footnote-109) Indeed, Karakeav revealed in 2011 that the Rubezh was he called a “medium-class” solid-propellant missile “with a new type of payload.”[[110]](#footnote-110) Although Russian officials have vehemently denied that the Rubezh is in violation of its INF obligations, some intelligence reports suggest otherwise. As noted by Schneider, the Air Force’s National Air and Space Intelligence Center lists its range as about 5,500+ km (the next closest ICBM’s range is over 9,000+ km).[[111]](#footnote-111)

To be sure, the Rubezh appears to have the characteristics of an intermediate range ballistic missile. Rather than a “medium-class,” as suggested by Karakeav, it appears the Rubezh is much smaller than other ICBMs, such as the Topol or Yars.[[112]](#footnote-112) Indeed, Russian press reports note that the missile will be “substantially different” from the Topol/Yars and will be mounted in a much smaller transporter erector launcher (TEL).[[113]](#footnote-113) Perhaps most tellingly, Schneider and Keith Payne point out that the Rubezh has been tested only at minimal ICBM range (5,600 km) with a single warhead.[[114]](#footnote-114) During its MIRV’ed tests, the missile flew only around 2,000 km (a range prohibited by the INF Treaty).[[115]](#footnote-115) In its most recent test, the Rubezh flew around 2,000 km.[[116]](#footnote-116) As Russian missile expert Pavel Podvig concludes, this would likely put the Rubezh in a “gray zone,” with the missile still legally an ICBM but with the characteristics of an IRBM.[[117]](#footnote-117)

With regard to the missiles themselves, it is quite clear Putin’s weapon programs are focusing heavily of mobility and maximum warhead upload through MIRVs. This suggests the Russian leadership is apprehensive about two threats: the survivability of its forces against an overwhelming first strike and the possibility of warhead interception by a missile defense shield. In order to sustain a high level of weapon survivability, nearly all Russia’s ICBMs are road-mobile and MIRV’ed. Due to the New START Treaty’s system flexibility, MIRV and increased types of mobility systems are now permitted.

This has allowed the Kremlin to drastically shore up any survivability concerns by reestablishing new systems. For example, Putin has endorsed the reintroduction of a new rail-mobile system, dubbed the Barguzin, based on Soviet-era missile trains in response to deployment of NATO’s missile shield.[[118]](#footnote-118) According to an unnamed source, one regiment of the Barguzin will include six Yars or Yars-M MIRV’ed missiles, and a division will include five trains (regiment) and should become operational around 2019 (expected to stay in service until at least 2040).[[119]](#footnote-119)

Yet ICBMs only represent one third of Russia’s strategic triad and two thirds of its warhead stockpile. Putin added in his Defense Ministry address that, “We must continue modernizing our strategic aviation and put the two missile-carrying submarines Vladimir Monomakh and Alexander Nevsky on combat duty. In the medium term through to 2021, we need to complete the transition to entirely modern arms for our ground-based nuclear forces, modernize the entire fleet of upgraded Tu-160 and Tu-95ms bombers, and also develop a new generation strategic bomber in 2023.”[[120]](#footnote-120)

In December 2014, Russia accepted its third Borei-class SSBN. Each Borei is armed with 16 Bulava SLBM (SS-N-30) that can deliver 6-10 warhead missiles per missile well over 9,000 kilometers. By 2020, the Defense Ministry plans on having eight Borei-class subs.[[121]](#footnote-121) Furthermore, the Russian navy has received the new Liner missile, an enhanced RSM-54 Sineva missile, which can hold 9-12low-yield warheads (in this case around 100 kt) aboard the legacy Delta IV strategic submarine.[[122]](#footnote-122) According to the Russian press, the Liner’s mission is to pierce through NATO BMD. *RIA Novosti*, now *Sputnik News*, insists that the Liner is equipped with either ten small-sized warhead units capable of penetrating through NATO’s BMD, eight small-sized warhead units but with a higher capacity for missile defense penetration, or four medium-sized units with missile defense penetration capacities, all with varying yield.[[123]](#footnote-123) Russian officials expect the missile to remain in service until 2030 or longer. However, it is unclear whether the submarines can be preserved for this long, particularly as Russian subs take on much more extensive sea patrol schedules.[[124]](#footnote-124)

The strategic bombers will also get a facelift. Both the Tu-95MS (Bear) and Tu-160 (Blackjack) strategic bombers have been undergoing extensive modernization.[[125]](#footnote-125) According to Russian press reports, this should allow the aircraft to remain in service to 2020-2025, perhaps even 2030.[[126]](#footnote-126) In addition, Russia has accelerated plans to test and field a new long-range strategic bomber.[[127]](#footnote-127) Known as the PAK-DA, the aircraft should be in service by 2023 and will have advanced stealth capabilities, however it will not be hypersonic.[[128]](#footnote-128) The PAK-DA’s armaments will include new nuclear-capable long-range cruise missiles.[[129]](#footnote-129) These cruise missiles will be different from the Kh-102 nuclear-capable cruise missiles currently being used by the Tu-95MS and Tu-160s. According to Boris Obnosov, the General Director of Tekhnicheskoe Raketnoe Vooruzhenie, a new hypersonic missile for the bomber “has already been produced, but flies for only a few seconds,” but series production of the missile will begin in 2020.[[130]](#footnote-130)

**Non-Strategic Modernization and Deployments**

NSNW systems have not been neglected, and are intended to play the leading role in Russian regional security strategy.[[131]](#footnote-131) Indeed, according to former Rocket and Artillery Forces of the Army (RViA) Vladimir Zaritsky the nuclear capacities of the General Purpose Forces (GPF) remain highly capable. Zaritsky pointed out that on “systems, which possess nuclear weapons of short and medium range…these [weapons] were, are and will remain sufficiently reliable…I would also like to stress that RViA combat units are capable of accomplishing any nuclear strike missions against the enemy under any operational conditions, any time and under any weather conditions.”[[132]](#footnote-132) This feeling of confidence was apparent in a *Pravda* report which announced that Russia’s numerical and operational NSNW superiority over NATO gave Moscow a major military advantage in the region.[[133]](#footnote-133)

Currently, the exact number of NSNW is unknown. Some experts assess that Russia maintains an arsenal of approximately 2,000 medium-range and tactical nuclear warheads, not including munitions for other nuclear munitions such as nuclear artillery. However some reports suggest much higher numbers. Alexei Arbatov estimates that there are 500 tactical nuclear aircraft missiles and bombs for 120 Tu-22M medium-range bombers and for 400 Su-24 frontal aviation bombers, and around 300 aircraft missiles, free-fall bombs and depth charges for naval aviation in the composition of 180 Tu-22M, Su-24, Be-12 and Il-38 aircraft. More than 500 tactical nuclear weapons are assigned to anti-ship, antisubmarine, and air defense roles. There are also depth charges and torpedoes of ships and submarines, including up to 400 nuclear long-range sea-launched cruise missiles of the attack submarines. Approximately 100 nuclear warheads are attributed to the interceptor missiles of Moscow's A-135 missile defense system and another 630 to the S-300 air defense missiles and other national air defense systems.[[134]](#footnote-134) According to Russian officials, the majority of NSNW have been reassigned to the Ministry of Defense 12th Main Directorate (12th GUMO, which is responsible for the storage, transportation, and disposal of nuclear warheads) centralized storage facilities scattered throughout Russia.[[135]](#footnote-135)

The core of the Russian ground force’s NSNW development is the advanced 9K720 Iskander (SS-26 Stone) road-mobile ballistic missile system, which is currently replacing the aged OTR-21 Tochka-U (SS-21 Scarab) in the Russian army.[[136]](#footnote-136) Due to the phasing out of the Tochka-U the army needed a follow-on nuclear system to fulfill the nuclear mission assigned to the Land Forces’ RViA, defined by the Russian military as the “…the primary means of fire and *nuclear destruction* of the enemy during conduct of combined-arms operations (combat actions) (emphasis added).”[[137]](#footnote-137)

The Iskander’s nuclear role has been confirmed several times over. Then-commander of Rocket Forces and Artillery of the Russian Land Forces, Lieutenant-General Sergei Bogatinov commented during an interview on a popular Russian radio show *Echo Moskvy*, “We do not keep in secret that we have tactical nuclear weapons and that we have special warheads both for Tochka missile complex and Iskander missile complex.”[[138]](#footnote-138) That same year, Deputy Defense Minister General Popovkin again acknowledged the missile is nuclear capable.[[139]](#footnote-139)

From official announcements, it is clear the Russian political-military leadership view the Iskander as having considerable military value. As Prime Minister Dimitri Medvedev told a group of defense sector executives in 2012, “In short, the Iskander-M is clearly among the most effective weapons in its class and we consider it to be much better than its foreign analogues. It should form the core of the Land Forces’ missile group.” [[140]](#footnote-140) Major General Mikhail Matvievsky, chief of Strategic Missile Forces and the Artillery of the Russian Ground Forces, agreed, saying “Iskander is...one of our strongest weapons; the guarantor of our security.”[[141]](#footnote-141)

The most complicated aspect of the Iskander missile complex is the suspicion that the ground launched cruise missile (GLCM) version, the Iskander-K, is in violation of the INF Treaty which prohibits ground launched ballistic and cruise missiles ranging between 500-5,000 km. Although the Iskander-K is said to have a range of 500 km, some reports suggest this number could be upwards of 2,000 km.[[142]](#footnote-142) Indeed, the State Department’s 2014 Compliance Report assessed that Russia’s GLCM was in violation of the treaty while Ash Carter has also argued that Russia is violating the INF with a GLCM, however did not specifically mention the Iskander-K.[[143]](#footnote-143)

For Russia, the treaty limits its ability to hold certain assets at risk in deeper sections of Europe, particularly command and control sites as well as key air bases. This restriction has been viewed as problematic by the Russian leadership, who has threatened to unilaterally withdraw from its INF obligations. This is exactly what President Putin told Russian lawmakers in 2014 stating, “The United States unilaterally withdrew from the Strategic Offensive Reductions Treaty, and that was that...They claimed that they abrogated this treaty for reasons of their own national security. And we will do exactly the same, when we consider it beneficial and necessary to secure our interests.”[[144]](#footnote-144)

Currently Russian political and military leaders have stated that both Iskander variants are under the 500 km INF threshold. But, according Zaritsky, Russia can extend the range of these missiles, with relative ease. “The current version of Iskander is in full compliance with the INF Treaty, but should the Russian leadership decide to pull out of the agreement, we will immediately enhance the capabilities of the system, including its range," Zaritsky said.[[145]](#footnote-145) Militarily speaking, the decision to extend both Iskanders’ range is purely a political decision. Should Russia assess that the INF Treaty is no longer advantageous, it appears the GPF could have INF ranged missiles rather quickly.

By 2016 Russia will have 120 Iskander-M launchers and an unrevealed number of Iskander-K systems, armed with two missiles each, spread across all military districts.[[146]](#footnote-146) However, most of the deployments will be “facing the West,” in or *around* Russia’s periphery.[[147]](#footnote-147) For example, Zaritsky said Russia could place Iskanders in Belarus in response to NATO’s missile shield. “Under the right conditions and with the corresponding agreement of Belarus, it is possible,” *Itar-Tass* quoted Zaritsky. “Any action inevitably causes a reaction. And this is just the case with the elements of US air defense in the Czech Republic and Poland.”[[148]](#footnote-148) President Alexander Lukashenko of Belarus was less definite, but did not rule out the possibility. "We should meet with the president of Russia and talk it over. I mean whether or not to deploy tactical nuclear weapons in Belarus," he said.[[149]](#footnote-149) Interestingly, the idea has gained popularity among Russian intellectuals, as many stress that placing NSNW in Belarus is no different than the US nuclear sharing agreement with NATO members."[[150]](#footnote-150)

Perhaps most conflictual has been the threat to place the Iskander in Kaliningrad. During a 2011 speech to the nation, then President Medvedev proclaimed, “[I]f the aforementioned measures prove to be insufficient, the Russian Federation will deploy, along its western and southern borders, advanced offensive systems capable of destroying the European component of the missile defense system. This will include deploying Iskander missiles in Kaliningrad. Other measures aimed at neutralizing the European component of the US missile defense system will also be prepared and implemented if necessary,” however it appeared Medvedev never followed through.[[151]](#footnote-151) The inconsistency was again reinvigorated in 2013 when Defense Ministry spokesman Igor Konashenkov announced, “Iskander rocket complexes are indeed standing armed with the rocket and artillery divisions in the Western Military District.”[[152]](#footnote-152) A high level defense official reaffirmed this fact, telling *Izvestia* that the missiles were in Kaliningrad “for some time.”[[153]](#footnote-153) Since December, there have been two military “snap” checks where Iskanders were sent to Kaliningrad.[[154]](#footnote-154)

Clearly, the Iskander is viewed by the Russian leadership as a decisive response to perceived threats, figuring heavily into their regional nuclear posture. As Stephen Blank notes, “Should Russia divine a threat in Europe, it reserves the right to place these missiles in Kaliningrad from where it could threaten Poland and even Germany as well.”[[155]](#footnote-155) Moreover, the Iskander systems can be arranged to credibly threaten Norway, the Baltic States, Romania, and Turkey as well.[[156]](#footnote-156) Indeed, even Putin acknowledged the Iskander’s strategic potential, telling a Q&A session with journalists, “…in its segment, Iskander is the most effective weapon in the world.”[[157]](#footnote-157)

While the Iskander is featured prominently in this strategy, it is by no means Moscow’s only option. Indeed, Moscow has been supplementing its air and sea-based NSNWs as well. Currently, Russia is phasing out its 500 or so Su-24M (Fencer) for the much more sophisticated Su-34 (Fullback). Additionally, then-commander of the Russian air-force, Colonel-General Alexander Zelin, stated that the Su-34s would have a strategic nuclear mission and would carry long-range cruise missiles.[[158]](#footnote-158) According to Russia’s Air Force commander-in-chief Lieutenant-General Viktor Bondarev, Russia currently has 50 Su-34s and by 2020, that number will increase to 150-200.[[159]](#footnote-159)

Moreover, Russia’s operational-tactical bomber, the Tu-22M (Backfire), is currently being upgraded as well. Due to its distance limitations (allowing it not to be counted under New START) the plane can only operate around Russia’s immediate sphere of power. As noted by Russian Air Force spokesman Colonel Vladimir Drik, by 2020 at least 30 will be upgraded to allow for greater range during nuclear strike missions.[[160]](#footnote-160) In February of 2012 the Russian Air Force received its first enhanced Tu-22Ms, now designated Tu-22M3M. Despite the Tu-22s relatively old age, the Russian air force certainly sees a high level of value in the weapon. According to a *RIA Novosti* military commentator Ilya Kramnik, one of the main objectives of the Tu-22M3M will be the destruction of sea-based targets, primarily US aircraft carriers.[[161]](#footnote-161) This will be aided by a new anti-ship cruise missile, the Ragduga Kh-32, which will replace the Kh-22 (AS-4 Kitchen).

Finally, Russia is also modernizing its NSNW submarines. Vice Admiral Oleg Burtsev, then Deputy Chief of the Russian Navy, went so far as to state “…the role of tactical nuclear weapons on multipurpose nuclear submarines will increase.”[[162]](#footnote-162) Russia has recently deployed its stealthy Project 885 Yasen-class multi-purpose nuclear submarine, the mainstay of Russia’s NSNW submarines. The Yasen-class is the Russian navy’s answer to US attack ships and aircraft carriers or in vital sea-lanes. The Yasen can be equipped with the nuclear capable 3M10 Granat (SS-N-21).[[163]](#footnote-163) According to one Russian press report, the Yasen can carry 28 Granats capable of reaching 3,000 km with up to a 200 kiloton nuclear warhead.[[164]](#footnote-164)

The Yasen can also be equipped with the new Kalibr, and other versions of the Klub family missiles, which is designed for precision strikes against ground targets. The Kalibr is nuclear capable and could be used to strike ground targets as far as 3,000 km away. In effect, this capability could partially provide Russia an INF-range missile (albeit launched from sea). Armed with either the Granat or Kalibr (and accompanying Klub family missiles), the Yasens give Russia’s a stealthy submarine which can employ NSNW to destroy targets on a battlefield (aircraft carrier or base) at INF distances, or along NATO’s westernmost states (such as the US, Canada, and Britain). Indeed, according to a source in the Russian Defense Ministry, “These [the Yasen’s] supersonic, highly maneuvering missiles are designed for strikes on aircraft carriers of the enemy if the latter poses a direct threat to Russia’s security. The missiles can also be launched at the most important costal facilities.”[[165]](#footnote-165)

It should be noted that there has been much controversy as to whether Russian boats actually carry NSNWs. In 1991, the presidents of the United States and the Soviet Union, and later the Russian Federation, made pledges to remove tactical nuclear weapons (TNWs) and nuclear SLCMs from all surface ships and multi-purpose submarines (however, the pledges apparently did not include long range cruise missiles).[[166]](#footnote-166) Known as the Presidential Nuclear Initiatives (PNI), these reductions were nonbinding and unilateral. Since 1991, Russian officials have regularly publicized that Russia has met most of its commitments.

However, in 2004 then Foreign Ministry spokesman Alexander Yakovenko announced Russia was no longer bound to fulfill its PNI requirements.[[167]](#footnote-167) This was followed by a flurry of official comments which hinted Russia had probably reversed at least some of its PNI assurances. In 2006, whether a careless blunder or Freudian slip, former Minister of Defense Sergei Ivanov reported to President Putin that Russia did in fact have nuclear armed multi-purpose submarines. “Today, eight nuclear submarines are at sea on operational patrol or in transfer. Of these, five are strategic submarines and three – multipurpose [attack] submarines, but all they have nuclear weapons on board. Boats vary in tasks - intercontinental, I mean, and multi-purpose- but on board each of them is a nuclear weapon.”[[168]](#footnote-168) As noted, this statement could have been certainly been incidental. Former head of the 12th GUMO (where Russian NSNW warheads are stored) reaffirmed Russia did not have NSNW aboard surface ships and submarines, but “if necessary, they will be there again, in that no one should be in doubt.”[[169]](#footnote-169) However it should be noted that an official member of the 12th GUMO would hardly contradict Moscow’s official line. His admission that they could quickly be reequipped to naval forces is telling that clearly, Russian nuclear and naval officials have certainly discussed, if not actually carried out, placing NSNW back onto naval systems.

Yet Ivanov’s statements were followed up by others. In 2009, chief of the Russian military’s General Staff General Nikolai Makarov declared will keep its NSNW, which he believed were a necessary utility to counter NATO’s conventional capabilities.[[170]](#footnote-170) Likewise, the navy’s Vice Admiral Oleg Burtsev also stated he saw low-yield NSNW playing a “key role” in the future.[[171]](#footnote-171) He went on to state the increasing range and precision of tactical nuclear weapons made them an important military asset.[[172]](#footnote-172) “The range of tactical nuclear weapons is growing, as is their accuracy. They do not need to deliver high-yield warheads, instead it is possible to make a transition to low-yield nuclear warheads that could be installed on the existing types of cruise missiles.”[[173]](#footnote-173)

More recently, Deputy Prime Minister Dmitri Rogozin reported to President Putin that the Yasen-class submarines would create a reliable nuclear shield against any threat. "We see the presence of a nuclear potential can cool the fervor of any aggressor located at any point in the world," he said during his speech at the 2014 Navy Day celebration in Severomorsk, the home of Russia’s Northern Fleet.[[174]](#footnote-174) In effect, it has become quite clear that Russia intends to increase the destructive power of its multi-purpose submarine fleet, augmenting their patrolling vehicles with nuclear warheads.

Legally, Russia has the right to abandon its PNI assurances. Because the PNIs are non-binding and not subject to any codified agreements, Russia could arm its multi-purpose Yasens with NSNW. While this would certainly draw criticism from the West, it would not be considered unlawful. Likewise, there are no restrictions of any kind on long-range submarine-launched cruise missiles.

Thus, the Russian General Staff insists that it is well within its rights to augment its navy with all manner of nuclear armament, particularly if it sees NATO actions as specifically hostile toward Russian interests. Speaking to the navy, Putin emphasized that the navy would develop new ship projects that would be “universal in terms of armament, control, and communication systems.”[[175]](#footnote-175) According to a *Pravda* report, this would mean that long range strategic cruise missiles could to be equipped to any vessel. “…[I]t actually means the destruction of the US military strategy and a qualitative change in the balance of power in Russia's favor. From now on, any vessel of the Russian Navy - not only submarines, but also surface ships - become carriers of strategic weapons. Why strategic? Because equipping such miracle missile with a nuclear warhead is only a question of time and political will of the Kremlin.”[[176]](#footnote-176)

Russia also intends to at least retain the ability to arm its surface ships with NSNW at any time. In 2012, the Naval Commander-in-Chief, Admiral Vladimir Vysotkii, noted that the new French Mistral ships Russia was to receive could be armed with “specialized warheads.”[[177]](#footnote-177) Aleksandr Mozgovoy later judged that in all likelihood Admiral Vysotkii was referring to NSNW.

It is unquestionable that the Russian military considers NSNW weapons to be the mainstay of Russia’s regional nuclear policy. The Russian navy recognizes that sea-launched nuclear cruise missiles would be an ideal weapon for facing NATO’s navy, particularly given the prolific use of precision conventional assets employed from aircraft carriers during both Iraqi conflicts. Indeed, according to interviews conducted by Nikolai Sokov, in the event of a direct clash Russian officials admit that they simply cannot beat the US Navy without reliance on these weapons.

More generally, force modernization trends suggest that NSNWs’ main objective is to buttress deficiencies in the Russian military. For example, according to a report in *Zvezda Online*, the Iskander system provides a long-range strike capability against specific NATO’s military capacities, such as bases along Russia’s periphery, missile defense architecture, long-range artillery, command, control, and communications centers, and in the case of the Iskander-K, sea-based systems.[[178]](#footnote-178) Likewise, improvements to nuclear capable systems Tu-22M and multi-purpose submarine systems directly bolster Russia’s ability to respond to US conventional military advantages under a variety circumstances, particularly NATO’s highly advanced naval assets. During a June 2012 conference held by the Serpukhovo Strategic Rocket Forces Military Institute on the “Methods of Selecting Indicators of the Effectiveness of Defeating enemy Facilities Using Nuclear Weapons and Strategic Non-Nuclear Weapons,” the Klub family missiles should be employed to strike an enemy’s critically important facilities to “ disorganize the adversary’s governmental and military command and control… to create conditions for preventing or stopping aggression against the Russian Federation, and to defeat the adversary, to include as part of a coalition.”[[179]](#footnote-179)

Regardless of the mission, NSNW will likely continue to play a pivotal role in the military planning of the Russian Federation. The superiority in numbers and lack of matching response options further increases Moscow’s confidence, as Russian can employ a variety of strike options NATO simply cannot match.[[180]](#footnote-180) As a popular Moscow weekly euphorically exclaimed, “The Russian tactical nuclear arsenal dominates Europe…”[[181]](#footnote-181) Rather than having, “no discernible missions assigned to them,” as some analysts suggest, NSNWs act as Russia’s most visible means of defending its interests, ameliorating Russian forces to a level which can frustrate, if not terminate, confrontational NATO military operations by destroying predetermined and particular target sets.

**Low-Yield Nuclear Weapons**

If NSNWs form the foundation of Russia’s regional nuclear policy, then damage limitation must be emphasized. If a threat to employ nuclear weapons close to one’s own borders or the ability to target specific sites is to be credible, low-yield nuclear weapons are likely to be considered. Crispin Rovere and Kalman A. Robertson perfectly articulated the perceived need for low-yield nuclear weapons by arguing,

“…low-yield weapons are more ‘usable’, on aggregate, than other kinds of nuclear weapon. Unlike nuclear weapons of higher yields, low-yield weapons make nuclear conflict more likely by weakening the firebreak that separates conventional and nuclear war. As the yields of nuclear weapons approach those of conventional weapons, the probability of conventional conflict escalating to the nuclear level increases…Low-yield weapons are sought principally to deter conventionally powerful rival. In other words, they are designed specifically as first strike weapons, to be used against conventional forces.”[[182]](#footnote-182)

Thus, in order to more credibly threaten the use of nuclear weapons, low-yield designs must be adopted. Indeed, as Pavel Felgengauer wrote, “Nuclear pressure will once again become an effective instrument of policy if the threat of nuke strikes can become more realistic…. It is assumed that a ‘precision strike’ of this kind will not result in immediate nuclear war.”[[183]](#footnote-183)

In 1999 the Russian press reported that President Yeltsin approved hydronuclear field experiments.[[184]](#footnote-184) Russia has long supported hydronuclear testing for its nuclear stockpile, or, according to Russians, a test with a nuclear yield of a very small yield (mg or less) up to 0.1 ton (100 kg) yield.[[185]](#footnote-185) Between 1958-1989, Nikolai Mikhailov catalogued about 85-89 hydronuclear experiments and simulated nuclear explosions at the Novaya Zemlya test site were still being conducted in 2006.[[186]](#footnote-186) Despite some criticism, some Russian experts assert hydronuclear testing is not a violation of the 1996 Comprehensive Test Ban Treaty.[[187]](#footnote-187) Moreover, Russia could, “conceal low-yield tests in large underground chambers.”[[188]](#footnote-188)

Due to the speculative nature of hydronuclear testing, experts within the US intelligence community are divided over whether Russia is conducting experiments to develop new low-yield or clean nuclear weapons. For example, a *New York Times* article asserted, “Experts agree that hydronuclear tests can have some use in the design of new nuclear arms, although the extent is debated.”[[189]](#footnote-189) However, the sheer number of Soviet/ Russian tests indicates that Moscow values the tests in a way the US does not.[[190]](#footnote-190) Due to the emphasis on hydronuclear tests, there was surely some significant weapons-related data produced.[[191]](#footnote-191)

Indeed, statements from Moscow have only increased Western analysts concerns. In the late 90s then Defense Minister Igor Sergeyev said Russia must develop “weapons based on new physical principles” to offset American military might. "We have the necessary scientific and technological potential ... to unveil experimental new types of deterrent weapons within the next few years” to “demonstrate the uselessness of the national missile defenses developed by the United States in order to neutralize Russia’s strategic nuclear potential,” Sergeyev told the military paper *Krasnaya Zvezda*.[[192]](#footnote-192) Mikhailov reached the same conclusion in a 1996 article, which argued that in order to deter NATO "Russia could develop new-generation battlefield nuclear arms with relatively low capacity and reduced side effects. It could manufacture 10,000 high-safety nuclear warheads with a yield (TNT equivalent) ranging from dozens to hundreds of tons, designed for theater missiles, front-line aviation and anti-aircraft complexes.”[[193]](#footnote-193) These new weapons, Mikhailov reasoned, would increase the usability of nuclear weapons, obscuring the longstanding divide between nuclear and conventional strikes.

In a 1999 article in the army journal *Armeyskiy Sbornik* it was reported that, “For an effective impact across the entire spectrum of targets, strategic missile systems should be capable of conducting ‘surgical’ strikes over a wide spectrum of ranges in the shortest period of time with minimal ecological consequences. This is achieved by using highly accurate, super-low-yield nuclear weapons…”[[194]](#footnote-194) In December 2002, Mikhailov agreed and noted considerable work was being done to accomplish that mission. “The scientists are developing a nuclear ‘scalpel’ capable of ‘surgically removing’ and destroying very localized targets. The low-yield warhead will be surrounded with a super hardened casing which makes it possible to penetrate 30-40 meters into rock and destroy a buried target- force example, a troop command and control point or a nuclear munitions storage facility.”[[195]](#footnote-195) Nikol Voloshin, a senior official of the Ministry of Atomic Energy, announced rather than in development these weapons were currently in Russia’s arsenal. “The [nuclear] ammunition we have developed ranges in power from tons to megatons of TNT equivalence.”[[196]](#footnote-196) In 2002, (Ret.) Lieutenant-General and now a PIR Center consultant Vasily Lata confirmed Voloshin’s report. “We support the idea of testing nuclear weapons virtually, maybe even more than the US. We're creating new weapons that way."[[197]](#footnote-197)

Moreover, it appears Russian scientists could have actually produced pure fusion explosions. In 1999, Major-General Vladimir Belous wrote that Russia was working on such weapons at the Sarov (Arzamas-16) Nuclear Center.[[198]](#footnote-198) This seems to have been confirmed in 2013 by Evegeny Nikolaevich Avrorin, scientific director of the nuclear center (ZRFNC-VNIITF) in Snezhinsk (Chelyabinsk-70), who noted the site had developed a “peaceful nuclear explosives” at 99.85 fission free.[[199]](#footnote-199) It should be remembered that India’s nuclear tests which led to New Delhi’s nuclear weapons were also proclaimed as “peaceful nuclear explosions.”

The development low-yield warheads would greatly increase the usability of nuclear weapons. The use of a low-yield nuclear weapon could keep a conflict localized and rectify the debate around escalation control. Mikhailov and other nuclear scientists, military officers, and national security commentators noted that these new warheads would blur the line between conventional and nuclear war.[[200]](#footnote-200) According to Mikhailov, “Russia could change the perception of nuclear arms as weapons of mass destruction” where low-yield pinpoint attacks would not trigger a global war.[[201]](#footnote-201) Should Russia view it necessary to utilize a limited nuclear strike, low-yield nuclear weapons mounted on NSNW would be the most realistic option as the limited effects would discourage extreme escalation. According to Mikhailov, this reasoning was sensible and would increase Moscow’s ability to react to perceived threats.

“Today the consequences of the use of nuclear weapons are viewed as so horrific that no one will dare use them. As a result, a real nuclear war has become, in essence, impossible. Nuclear pressure will again become an effective political instrument if the threat of nuclear strikes is made more real. For that, it is necessary to have the possibility to inflict 'pinpoint,' low-yield nuclear strikes on military targets located anywhere on the globe. In so doing, it is assumed that such 'pinpoint' strikes will not bring about an immediate global nuclear war."[[202]](#footnote-202)

By “blurring” the conventional-nuclear line, Russia could effectively neutralize perceived US conventional advantages. This ‘quick fix’ would likely resonate with the Russian leadership, particularly the military.

The notion of developing super low-yield nuclear weapons has remained a serious discussion inside Russia. For example, articles appearing in *Voyenno-Promyshlenny Kurier (VPK)*, an official Russian military newspaper, called for the development of low and ultra-low nuclear warheads.[[203]](#footnote-203) Russian academics Victoria Saxon and Eugene Sapozhnikov argued that not only might Russia’s lag in high-tech weaponry be compensated by low-yield weapons, but that Russian troops needed to begin various exercises to better prepare for conditions of regional nuclear deterrence. “The only way to solve the problem of non-use of the SNF (megaton charges) in a qualitative superiority of the enemy will be the Russian Federation’s realization of this concept of nuclear deterrence at the regional level using high-precision nuclear warheads with low and ultra-low power.”[[204]](#footnote-204)

In addition to academic arguments, evidence suggests that the Russian military, particularly the navy, also remains interested in these weapons. According to an *Itar-Tass* report, the multipurpose Yasen can be equipped with “long-range cruise missiles that can potentially carry low-capacity tactical warheads.”[[205]](#footnote-205) In an *RIA Novosti* article, it was argued that in addition to the Liner standard 100 kiloton nuclear warhead, the SLBM could be armed with a next generation “sub-kiloton warheads having a yield of several dozens of TNT, which enables pinpoint targeting.”[[206]](#footnote-206) Moreover, a second *RIA Novosti* report indicated that Russia’s other SLBM, the Bulava, could also carry nuclear warheads with yields of up to 50 tons of TNT for pinpoint hits.[[207]](#footnote-207) This coincides with an interview given by Viktor Litovkin, deputy editor of the Russian military newspaper *Nezavismoye Voyennoye Obozreniye*, who stressed that the Bulava’s warheads would be at lower yields and capable of accurately hitting targets, with a deviation of no more than 20-30 meters.[[208]](#footnote-208) These reports would correspond with Mikhailov’s original assessments, as he believed in 2002 that it would take no more than 10 to 20 years before Russia would receive the “nuclear scalpel.”[[209]](#footnote-209)

To be sure, Mikhailov’s call for new nuclear weapons in the mid-1990s and early 2000s could have been simply a ploy to secure precious funds during the early days of the Russian Federation. Today, however, it is quite clear that Mikhailov’s call for these weapons resonated with a sizable portion of officials inside the Russian political-military establishment, particularly with those that see the need for advanced RND capabilities and low-yield nuclear warheads as beneficial. As a declassified CIA intelligence report concludes, “[j]udging from Russian writings since 1995 and Moscow’s evolving nuclear doctrine, new roles are emerging for very-low-yield nuclear weapons – including weapons with tailored radiation output- and there are powerful advocates for development of such weapons in the country’s military and weapons community.”[[210]](#footnote-210) More recently, Vice Admiral Oleg Burtsev, Deputy Chief of the Russian Federation Navy Main Staff, told *RIA Novosti* that “There is no need to carry a powerful warhead, and we can go over to *low-yield nuclear charges* that can be installed on existing models of cruise missiles (emphasis added).”[[211]](#footnote-211)

**Assessing Russia’s Force Posture**

Russia’s nuclear force posture remains multifaceted and complex. Today, Russian weapons developments, particularly its strategic systmes, are being built around the principal of survivability. This is achieved through a diverse set of modernized, highly mobile, MIRV’ed weapon systems that maximize the full upload potential of missile systems.

As previously cited, any attempt to marginalize Russia’s nuclear weapons is viewed as an attempt to degrade Russia’s prestige and power status. Feeling threatened by NATO BMD and highly precise conventional weapons Russia has focused its procurement efforts on solidifying the indomitability of its nuclear forces. This would be consistent with Russian doctrine and statements, which often argue that Russian actions are inherently defensive and responsive to outside threats. As Rogozin told a State Duma meeting, “They may experiment with conventional weapons on strategic delivery platforms, but they must bear in mind, that if we are attacked, in certain circumstances we will of course respond with nuclear weapons.”[[212]](#footnote-212) Statements such as these are often repeated by officials. Thus, it would appear Russia’s strategic strategy is based off a need to preserve a capable retaliatory strike.

However, its regional weapons are quite another story. It is quite clear that Russia’s regional assets are intended to shore up military deficiencies within the GPF. All weapons are highly precise and projected to destroy specific military targets, such as BMD sites or NATO naval assets. Their ability to quickly be positioned in theaters of war make them a valuable utility for the General Staff. In fact, Sergei Rogov, Director of the Russian Academy of Sciences Institute for USA and Canadian Studies, Colonel (retired) Valeriy Yarynich, Colonel-General (retired) Viktor Yesin, and Major-General (retired) Pavel Zolotarev went so far as to claim that “Russia is compelled to rely on tactical nuclear weapons as an instrument of nuclear deterrence.”[[213]](#footnote-213)

Moreover, Russia has reportedly been expanding the range of its capabilities to include targets sets within the strictly prohibited 500-5,000 km INF range. This has been allegedly accomplished both illegally (Iskander-K and Rubezh) and creatively with the use of SLCMs and ALCMs to compensate for a lack for missiles to cover territory at this range. The implications of such developments suggest Russia’s regional assets are intended to play a much more specified and offensive role. Likewise, it is clear that the Russian leadership is rethinking the need for several arms control treaties. Should Russia continue to perceive a need for these weapons, it is quite possible that treaties such as the INF and PNI will be discarded. As Evgeny Miasnikov, a senior research scientist at the Center for Arms Control, Energy, and Environment Studies in Moscow contended, "This move fits into Russia's policy towards arms treaties these days."[[214]](#footnote-214)

Additionally, it appears Russia is pursuing a hedging strategy with its NSNW. It is clear that Russia would like to rely primarily on its conventional arms for lower levels of conflict. However, in the event the GPF are overwhelmed, Russia retains the ability to quickly swap out non-nuclear warheads or nuclear equivalents due to the inherently dual-use nature of NSNWs. Thus, NSNW procurements enable Russia to purchase conventional systems while not forsaking its non-strategic nuclear shield. Should a conflict go poorly and the combination of conventionally armed Tu-223M3Ms, Su-24/34s, artillery, submarines, and Iskanders fail achieve victory, reinforcements can simply be augmented with nuclear warheads in order to conduct de-escalation strikes.

Finally, it is clear interest has remained high in low-yield, or clean, nuclear warheads since Mikhailov’s original push for low-yield nuclear weapons in the mid-1990s and evidence suggests that Moscow is developing low-yield nuclear warhead options. Indeed, in 2013 Igor Artamonov and Roman Riabtsev, members of the Russian Academy of Rocket and Artillery Sciences, supported the idea of Russia employing asymmetrical responses, specifically “the development of nuclear weapons of small and super-small yields,” to counter NATO non-contact warfare operations.[[215]](#footnote-215)

Moreover, should Moscow assess that it must intensify its reliance on nuclear weapons, it may be logical for the General Staff to pursue low-yield warheads in an attempt to make them more useable. Moreover, this would ease Russia’s escalation predicament, as a low-yield nuclear warhead with attributes that resemble conventional weapons would likely not trigger an immediate jump in the escalation ladder, an integral necessity for Russia’s policy of localizing nuclear war. As Mikahilov noted during his time as Director of the Sarov nuclear weapons laboratory, “Such weapons [low and super-low yield nuclear warheads] can be realistically utilized in the event of large scale military conflict involving the use of conventional arms or mass destruction weapons…”[[216]](#footnote-216)

It would not be inconsistent with Russian strategy to increase development for these weapons. Perhaps most importantly, judging by comments made in the Russian press, it appears low-yield warheads could be used for both tactical and strategic weapons systems, increasingly their usability on both a localized and global scale. It is obvious that the Russian military remains interested and capable to augmenting its current stockpile if necessary. Should the top echelon of the Russian political leadership deem low and super-low nuclear warheads a strategic necessity, it is likely that these weapons could be operationally deployed in a short amount of time.

**CHAPTER FOUR: NUCLEAR EXERCISES**

**Zapad 1999**

During a period of exacerbated tensions between Russia and NATO over the latter’s aerial strikes against Kosovo, Russia first operationalized its de-escalation theory during the major military exercise Zapad-99. Zapad-99 envisioned a massive intervention scenario by a NATO-like enemy against the Kaliningrad enclave.[[217]](#footnote-217) Although the Russian government vehemently denied the exercise was linked to the Yugoslavia operations, it became evident that this scenario envisioned NATO as the primary adversary. Indeed, after the maneuvers had concluded, then Minister of Defense Igor Sergeyev admitted that the intention was to test Russia’s defense against an attack that was similar to NATO’s Kosovo tactics.[[218]](#footnote-218)

An important element of these drills was the demonstration of the ability and the willingness to use nuclear weapons under certain conditions, in this case against an enemy conducting devastating air attacks with precision weaponry. The exercise incorporated three days of high-precision conventional strikes against a joint contingent of Belarussian and Russian forces, culminating in nuclear strikes. Russia responded to the threat of defeat with limited, demonstrative nuclear strikes from Tu-95 and Tu-160 strategic bombers utilizing air-launched cruise missiles (ALCM) "against the countries from whose territories the offensive was launched."[[219]](#footnote-219) According to Nikolai Sokov, this included US and continental European territory.[[220]](#footnote-220) “The exercise tested one of the provisions of Russia's military doctrine concerning a possible use of nuclear weapons when all other measures are exhausted,” Sergeyev told the press after the exercise concluded. “We did pursue such an option. All measures were exhausted. Our defenses proved to be ineffective. An enemy continued to push into Russia. And that's when the decision to use nuclear weapons was made.”[[221]](#footnote-221)

In *The Army of Russia: 11 Lost Years*, Alexander Golts explained that Zapad-99 directly operationalized the General Staff’s new de-escalation policy, resulting in limited nuclear usage becoming a key doctrinal response to repel aggression.

“…[O]ur General Purpose Forces at best would be able to stop enemy movements into our territory… terminating his aggression would only come with the use of nuclear weapons. With this goal in mind, strategic bombers would launch so-called demonstration strike using cruise missiles against target (sic) located in desert or sparsely populated areas of the enemy territory. After that the aggressor avoiding full-scale nuclear war, would move to negotiate. If this did not happen, then a strike would be launched to destroy hi strategic missiles with nuclear warheads. The General Staff did not plan past that point, as they themselves felt the onset of full-scale nuclear war would be the end of all things.”[[222]](#footnote-222)

Zapad-99 demonstrated to the General Staff and leadership that Russia had practical, asymmetric response options to perceived regional threats. Indeed, Zapad-99 marked a substantial shift from Soviet Cold War deterrence theory, which ruled out limited nuclear warfare in any formulation and favored massive employment of nuclear weapons on a global scale. Instead, as Jacob Kipp noted, “Nuclear forces would retain their deterrence capabilities and preclude their massed employment, but they could not exclude using advanced conventional weapons in a local armed conflict. What emerged was a focus on the impact of precision-strike systems on local wars and the employment of nonstrategic nuclear weapons in deterring such attacks… The overwhelming US lead in this area [conventional, high-precision stand-off weapons] suggests that the only effective Russian response is asymmetric deterrence based on conventional and nuclear forces.”[[223]](#footnote-223) For Russia, “a high degree of conventional forces’ asymmetry lowers the declared threshold for using nuclear weapons and raises the danger that nuclear weapons will be used, even in low-level conflicts.”[[224]](#footnote-224) Zapad-99 demonstrated that should NATO choose to interfere in Moscow’s vital interests, Russia had the capability, strategy, and will to respond with the credible threat to initiate a limited nuclear war.

**Security-2004 and Stability-2008**

The Security and Stability exercises were major military exercises that followed Zapad-99. Beginning in January of 2004, Security-04 was intended to test the Russian Armed Forces’ ability to fight and win conflicts of the future: limited and regional wars.[[225]](#footnote-225) Nikolai Sokov claimed that the regional conflict aspect of the exercises was inherently nuclear, as regional conflicts “… allows for limited use of nuclear weapons for the purposes of de-escalation and termination of conflict that cannot be won by conventional weapons alone.”[[226]](#footnote-226)

Throughout Security-04 Russian leaders emphasized that the enemy was not any one nation or bloc of nations, but rather terrorists and separatists. However, it became apparent that NATO and more specifically the US was the chief adversary due to the types of highly precise weapons used. Indeed, Deputy Chief of the General Staff Colonel General Yuri Baluevsky further solidified the assessment when he quipped, “…one does not fight Bin Laden with strategic missiles.”[[227]](#footnote-227)

During the final days of the exercise, nuclear missiles were called upon to defend the Russian Federation. 14 heavy bombers (Tu-160 and Tu-95MS) launched Kh-55 cruise missiles against targets in the Barents Sea (Kola Peninsula region) and the Astrakhan Oblast test range.[[228]](#footnote-228) Another contingency flew toward targets in the North Atlantic, but did not conduct missile launches.[[229]](#footnote-229) During the same time, successful tests of a SS-19 and a SS-25 (road-mobile) missile were conducted.[[230]](#footnote-230) The Russian navy also attempted to carry out several launches. However, the planned launch of an SS-N-23 from a Delta-IV (with President Vladimir Putin observing) failed.[[231]](#footnote-231) A second attempt was conducted the next day, yet the missile deviated from its course about 90 seconds after the launch.[[232]](#footnote-232)

What’s striking about Security-04 is the stark similarity of the launches to those carried out in a comparable, albeit smaller exercise in 2002. Both exercises demonstrated the ability to mix demonstrative nuclear strikes with concentrated strikes to “…prevent escalation of military aggression against Russia, including by use of nuclear weapons.”[[233]](#footnote-233) Even the left leaning Arms Control Association noted that the exercises “…mimicked one last seen in 1982, when the Soviet Union was at the height of its efforts to achieve nuclear war-fighting prowess and bolster its deterrent against the United States.”[[234]](#footnote-234) To be sure, a vital element of the de-escalation strategy is the ability to carry out nuclear strikes at any rung of the de-escalation ladder. Should a nuclear demonstration fail to force an adversary to withdraw, Russia must have the capability and the will to increase the threshold and successfully manage, if not totally control, the nuclear intensification.

Thus, each weapon used had a very specific role in Russian nuclear strategy. For example, Kh-55s initiated limited, demonstrative strikes against the adversary while the SS-19 and SS-25 conducted a more “intimidation” response. It’s likely this test was intended to replicate a conflict in which initial demonstrative nuclear strikes did not subdue an adversary, as more substantial raids were required to terminate hostilities on Russia’s terms.

Several months later in July, Russian and Belarusian troops conducted Union Security (connected to Security-04), a joint exercise that which reportedly had a “surprise factor” in part of the design.[[235]](#footnote-235) According to a report in *VPK*, the “surprise factor” was the virtual employment of battlefield nuclear weapons.[[236]](#footnote-236) Indeed, another report in *Nezavisimoye Voyennoye Obozreniye*, suggested that the General Staff’s plan incorporated limited nuclear strikes to fend off a blitz offensive by a NATO-like enemy. “In the view of specialists, this kind of development is typical for the use of nuclear weapons against invading troops.”[[237]](#footnote-237)

According to the *VPK* report, NATO’s conventional superiority coupled with its ability to quickly deploy tactical nuclear weapons to states close to Russia was a chief concern going in to the maneuver; a concern that could, in part, be alleviated by Russian NSNW usage.[[238]](#footnote-238) “All these weapons [conventional, tactical nuclear weapons, ballistic missile defenses] just may be moved closer to Russia - to the territories of NATO neophytes in the foreseeable future. Aware of that possibility, the Russian and Belarussian military ran Exercise Union Security in 2004, where they drilled nuclear tactical strikes at the superior forces of the enemy.”[[239]](#footnote-239) The introduction of nuclear weapons to secure the safety of the Union State should not be seen as unusual. Immediately after the later held Union Shield 2006 exercise concluded, Belarussian President Alexander Lukashenko said he did not rule out the possibility of the use of NSNW against threats to the Russian-Belarussian Union.[[240]](#footnote-240)

Russian again conducted military exercises in October 2008, dubbed Stability-2008, which what one Russian press report called a return to “major league status.”[[241]](#footnote-241) As with earlier exercises, the scenario involved a highly sophisticated and technologically advanced opponent who interfered in an escalating peripheral conflict.[[242]](#footnote-242)

As noted by Pavel Felgenhauer, the nuclear war component was unmistakable. “The composition of the forces and ministries that will be involved in the exercise does not leave any doubt—it’s a scenario of a nuclear war in which Russia and its ally Belarus will face the United States and NATO.”[[243]](#footnote-243) As the conflict transitioned to a regional war, the situation gradually worsened and climaxed with variety of strikes, some of which were nuclear. Indeed, the basis of the exercise was to “liquidate military conflicts and ensure strategic stability.”[[244]](#footnote-244) According to former chief of the main staff of the Strategic Missile Forces, Colonel General Victor Yesin, the main task of the exercise was to demonstrate Russia’s ability to inflict specific damage quickly against an advancing adversary. “It is necessary to be ready for possible turn of events when we have to use nuclear weapons. Maintenance of units of strategic troops in condition of high combat readiness can hinder use of such weapons against us. I think that this is the main task of the exercises, namely demonstration of high degree of readiness of the strategic forces for immediate reaction to aggression."[[245]](#footnote-245)

These strikes were conducted by a combination of strategic and non-strategic assets. Tu-160 and Tu-95MS bombers launched their maximum payload of cruise missiles against assigned targets.[[246]](#footnote-246) Groups of bombers also patrolled strategic areas, such as the Sea of Japan while two Tu-160s flew to Venezuela and back.[[247]](#footnote-247) The bombers coordinated with the navy, which launched Sineva and Bulava missiles against targets in Kamchatka.[[248]](#footnote-248) According to *Krasnaya Zvezda,* an official newspaper of the Ministry of Defense, the naval goal of the exercise was the “…comprehensive working out of tasks of using formations of the Northern Fleet including the *maritime strategic nuclear forces* in conditions of an armed conflict in the interests of *strategic and regional deterrence* (emphasis added).”[[249]](#footnote-249) For a nation whose naval deterrent had regularly failed to successfully launch its weapons, this was a surprising delegation of responsibilities. What’s more, this indicated that the strategic maritime forces, both in its 2008 and future form, were envisioned to play a large role in both strategic and regional nuclear conflicts.

Finally, Russia conducted ICBM strikes to conclude the exercise. As one analyst described it, “In a grim finale, commanders launched three intercontinental ballistic missiles - the type that can carry multiple nuclear warheads - in a clear signal of the drastic end-game the Kremlin might consider should its conventional forces not hold.”[[250]](#footnote-250) This was confirmed by Air Force Chief General Alexander Zelin, who noted strategic bombers and other nuclear capabilities would be used to enforce peace and stability.[[251]](#footnote-251) Indeed, throughout the exercise nuclear weapons were tasked with conducting a variety of missions. From precision nuclear strikes with cruise missiles to a conflict ending retaliatory strike, the nuclear component played a prominent role in imposing deterrence on both a global and regional level while compelling a cessation of hostilities by all parties.

**Zapad and Ladoga 2009**

Ten years after Zapad-1999, Russia again tested the theory of limited nuclear strikes. During the overlapping Zapad and Ladoga maneuvers in 2009, Russian and Belarussian forces were again confronted with a NATO-like enemy offensive against Kaliningrad and Belarus. Moreover, Lieutenant-General Sergei Skokov, Chief of the Main Staff of the Russian Ground Forces, confirmed the enemy would be utilizing the same strategies employed by the US during the 2003 Iraq campaign.[[252]](#footnote-252) This included highly mobile enemy forces utilizing network centric warfare along with highly precise conventional forces from standoff assets.[[253]](#footnote-253) According to Dimitri Medvedev, the exercises were to be “purely defensive.”[[254]](#footnote-254)

Zapad-2009 simulated a minority uprising in Belarus which expanded into a regional conflict. During the exercise, Russian strategic bombers were used to launch strikes against advancing forces. Tu-160, Tu-95, Tu-22M3, and Su-24M aircraft conducted live fire strikes with precision systems. According to the official press release, the strikes used “combat and special weaponry,” which could arguably be interpreted as nuclear munitions.[[255]](#footnote-255) Additionally, the Strategic Missile Forces conducted operations during the same period, practicing “operations control in scenarios involving conventional and nuclear warfare," a Strategic Missile Force spokesman said.[[256]](#footnote-256)

More specifically, Polish press reports stated Russian troops conducted *offensive* operations as well. This involved cross border raids targeting gas pipelines, storming a Polish beach, and launching a demonstrative nuclear strike against Polish territory.[[257]](#footnote-257) These strikes could have been conducted by Tu-160 and Tu-95 strategic bombers, as these aircraft were featured during the exercise.[[258]](#footnote-258) But the nuclear strike could have also been carried out by other assets. For example, Tu-22M3s and Su-24Ms took part in Zapad-2009, while Stephen Blank concluded that naval nuclear strikes supported the ground troops during the maneuver.[[259]](#footnote-259)

Indeed, regional analysts concluded that the exercises were highly provocative and unusual. According to Estonian defense analyst Kaarel Kass, the exercise could only be pointed at NATO. “The scope of the exercises, the weaponry used, the troops involved and the scenario rehearsed all indicated unequivocally that Russia is actually rehearsing a full-scale conventional strategic military operation against a conventional opponent. A look at the map makes it clear that there are no other conational forces in the region than those of NATO member states.”[[260]](#footnote-260) The fact that strikes, consistent with the concept of using nuclear weapons to de-escalate a conflict were used against NATO allies reveals a high level of confidence by the General Staff in the usability and practicality of nuclear attacks in a conflict with NATO.

**Vostok 2010 and 2014**

Despite taking place in the Far East, the Vostok exercises again demonstrated how the General Staff views the usability of the military’s nuclear component.[[261]](#footnote-261) Although Vostok-2010’s hypothetical enemy was not “any one concrete national or military-political bloc,” it was clear the only adversary that could challenge the Russian Federation on such a high-level was either the People Liberation Army or the Japanese-American military alliance.

Vostok-2010 was a test of Russia’s ability to use military force in order to impose regional stability during times of violent conflict. According to Jacob Kipp, the exercises were non-linear in nature; it included unsystematic activities from limited Special Forces operations to amphibious landings and massive surface and sub-surface fleet engagements, as well as combined-arms maneuvers to defeat an invading enemy force.[[262]](#footnote-262) Although it was postulated that China was the probable adversary, it appears the US-Japanese coalition was also accounted for. Indeed, before a “naval battle” trial commenced, naval officers informed the media that the tactical problem of the exercise was the destruction of “an American squadron.”[[263]](#footnote-263) Moreover, some of the exercise took place on Kuril Islands, an island chain whose ownership has been disputed by Moscow and Tokyo. Some Russian press reports noted the exercise began with massive attacks from the air, similar to those conducted in Yugoslavia and Iraq.[[264]](#footnote-264)

Much like the probable enemy, the nuclear component was definable as nuclear capable components were prominently featured in Vosotk-2010. During the course of the maneuver strategic Tu-95MS and Tu-22M3 bombers launched cruise missiles while two Tochka-U short-range ballistic missiles (SRBM) were fired against enemy targets. According to Roger McDermott, the launches appeared remarkably similar to a simulated tactical nuclear strike against enemy forces.[[265]](#footnote-265) The Russian military news website *VPK* confirmed McDermott’s suspicions, stating Vostok had indeed ended with a simulated a nuclear explosion.[[266]](#footnote-266) Likewise, the official newspaper of the Far East Military District also reported a nuclear test to “…suppress a large center of the separatists’ resistance and to achieve minimal losses of the attacking troops a low-yield ‘nuclear’ attack was mounted against the enemy.”[[267]](#footnote-267)

Other reports speculated that other nuclear devices had been tested. For example, Pavel Felgengauer reported that the S-300 air defense system, which he argues is nuclear-capable, demonstrated that it attacked both air and *land* targets during the exercise.[[268]](#footnote-268) Roger McDermott stated that a nuclear landmine, or nuclear “fougasse,” could have been tested to compensate for numerical inadequacy.[[269]](#footnote-269) Vostok-2014 observed a similar maneuver. Some of the main facets of Vostok-2014 were a simulated “sea-battle” in the Sea of Japan and an airborne invasion of the Kuril and Kakhalin Islands.[[270]](#footnote-270) This culminated with combined-arms repulsing a coastal attack, destroying a landing force, and cruise missile launches.[[271]](#footnote-271) As Roger McDermott concluded, the exercise was geared toward territorial defense; however it contained some offensive maneuvers and posited a “more than subtle warning” to NATO.[[272]](#footnote-272) This included major operations on the Kuril Islands, similar to Vostok-2010, implying a hypothetical conflict with Japan and its principal ally, the United States. According to press reports from *Vzglyad*, this could explain “why the notional enemy in the Pacific Ocean was referred to as representing a ‘leading NATO member,’ as well as sending a signal to the North Atlantic Alliance that Moscow remains concerned about NATO out-of-area operations and the strategic risks involved.”[[273]](#footnote-273)

During the course of the exercise, tactical and cruise missiles were launched from air, land, and sea platforms at more than 20 training ranges.[[274]](#footnote-274) Most significant was the incorporation of the Iskander-M SRBM system. Vostok-2014 represented the first time an Iskander-M ballistic missile was conducted in combat situations.[[275]](#footnote-275) According to the Ministry of Defense, all targets were successfully eliminated at an “important state” of the exercise, indicating a potential de-escalation mission.[[276]](#footnote-276) Indeed, this would be in line with Russian nuclear doctrine. However, it remains speculative at this point to propose that the Iskander-M launch was intended to be viewed as a simulated nuclear strike. Rather, the nature of the exercise points more strongly to a test of Russia’s rearmament program, in order to gauge the vitality of its conventional deterrent.

**Other Exercises and Trends**

The major exercises (Zapad-1999/-2009, Security-2004/Stability-2008, and Vosotk-2010/-2014) are far from the only drills that have incorporated nuclear strikes. In fact, Russia has had a held a plethora of strategic and regional nuclear simulations.[[277]](#footnote-277) During the recent Ukraine crisis, Russia tested a variety of nuclear vehicles and increased strategic bomber patrols, simulating nuclear strike operations over varying distances against specific targets. Likewise, the Iskander-M has continued to be highlighted, often working with strategic aviation units to “combine injury of critical facilities of a hypothetical aggressor using ground-based and air-based high-precision weapons.”[[278]](#footnote-278) As one observer remarked, recent exercises involving the Iskander and Tu-22M3M seem to serve as a reminder to outside observers that Russian doctrine envisions the use of NSNWs in certain scenarios of a conflict with NATO forces.[[279]](#footnote-279)

Russia’s nuclear demonstrations allow observers a unique opportunity to scrutinize Russian wartime strategy. First and foremost, Russian nuclear demonstrations are intended to clearly signal resolve, a key component of Levshin, Nedelin, and Sosnovsky’s de-escalation strategy. In order to ensure global deterrence during a limited nuclear exchange, V.A. Afanasyev and A.L Khryapin argue that it is absolutely vital for Russia to present a credible military threat “that is openly declared and in no uncertain terms made known to a possible aggressor.”[[280]](#footnote-280) In order to keep potential military and political challengers out of contested regions, Russian leaders have asserted “in no uncertain terms” the viability of its nuclear strike potential.

In this sense Russian nuclear exercises are also a political tool. This was repeated several times over by former Defense Minister Sergei Ivanov. To be sure, the scheduling, volume, and style of Russia’s nuclear exercises indicates the Russian leadership sees political value in conspicuously demonstrating its capabilities. As arms control analyst Jeffery Lewis posits, these exercises act as a form of coerce diplomacy to warn other great power against interfering in Russian affairs. “I’m going to go ahead and invade Ukraine and you’re going to look the other way,” Lewis argued. “As long as I don’t call it an invasion, you’re going to look at my nuclear weapons and say I don’t want to push this.”

On a more strategic level, Russia’s exercises reveal a high level of threat perception with regard to NATO. Most exercises typically begin with a local crisis, which eventually deteriorates to Russia and NATO involvement. The opponents are always a NATO-like adversary intervening and committing aggression against Russia or its allies. The opponent is well armed, supported by advanced technology, and employs overwhelming conventional airpower which pushes Russian forces to the brink of collapse. Despite fighting valiantly the Russian GPF are ultimately forced to choose between defeat or escalating the conflict to a nuclear level. In all cases, Putin chose the latter, seeing nuclear employment as a practical option, typically employed through a limited salvo of air-launched cruise missiles via strategic or medium range bombers. As Dimitri Adamsky noted,

“During the exercises simulating conventional wars, the nuclear threshold was crossed at the final phase of the exercise when conventional attacks of the qualitatively or quantitatively superior enemy produced daunting situations. At that stage, not a general purpose, but the Long Range Aviation platforms attacked targets in the theater of operations, in proximity and in remote naval and ground theaters.”[[281]](#footnote-281)

But why have strategic bombers become the mainstay of de-escalation during exercises? According to Levshin, Nedelin, and Sosnovsky, de-escalation emphasized ground assets such as operational-tactical missiles or nuclear mines, as well as sea-based cruise missiles. As for why, the authors simply admitted that they believed such a strike would not involve or advance to the use of strategic nuclear weapons.[[282]](#footnote-282) However, in recent exercises, the only constantly tested system has been strategic bombers.

It is purely speculative as to why bombers have been unofficially assigned the mission of nuclear de-escalation, though two main postulations seem likely. The first is that bombers can essentially fill the void left by the lack of an INF range missile. Because of the INF Treaty, Russia is restricted on the distances its ground-based missiles can travel (missiles between 500 km-5,000 km are prohibited). By utilizing bombers in an INF role, Russia can fulfill its treaty obligations while retaining a de facto INF strike capability.

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|  | Table 1. Nuclear System By Appearance in Major Exercises. Found in Quinlivan and Oliker, 2011. | | | | | | | | | | | | | | | | | |
| Nuclear System | | | 1999 Levshin et. al. Article | | Zapad -99 | | | Security -04 | | Stability  -08 | | Zapad-09 | | | Vostok-10 | Vostok-14 | |
| Operational-Tactical | |  | |  | | |  | |  | |  | |  | | |  |
| Ground Force, Missile, Mine | | X | |  | |  | | |  | |  | | X, Unclear | | | X |
| Frontal and Naval Aviation | | X | |  | |  | | |  | | Unclear | | |  | |  |
| Operational-Strategic | |  | |  | |  | | |  | |  | | |  | |  |
| SLCM | | X | |  | |  | | |  | | Unclear | | |  | |  |
| Strategic Bomber | | X | | X | | X | | | X | | X | | | X | | X |
| Strategic | |  | |  | |  | | |  | |  | | |  | |  |
| ICBM | |  | |  | | X | | | X | | X | | |  | |  |
| SLBM | |  | |  | | X | | | X | |  | | |  | |  |

For another possible answer, some analyst speculate the tests could reflect a disconnect within the Russian General staff over the assigned roles of NSNW. While the Russian military generally acknowledges the need for NSNW, there has yet to be a single official document that openly discusses NSNW. Analysts such as Sokov, Adamsky, and Podvig contend the lack of clarity suggests the Russian military has little value for NSNW and does not have a fully conceived employment strategy.[[283]](#footnote-283) “Contrary to common assumptions,” Sokov argued, “short-range weapons do not appear to have a place in that strategy simply because potential targets are too distant... Short-range weapons (such as tactical land-based missiles of tactical aircraft) cannot reach these targets.”[[284]](#footnote-284) Sokov’s assumption was further strengthened by a candid statement from the former Chief of the Russian the General Staff, General M. Kolesnikov in the late 90s.

"The questions of nuclear (operational) planning and strategic forces employment are not affected at all by the state of other arms and armed services. As for tactical nuclear weapons use plans, they are essentially non-existent. The General Staff is not doing any planning for tactical nuclear weapons employment at all. That's why these weapons are called tactical, aren't they? We cannot foresee all the nuances of conceivable offensive or defensive operations. As soon as a situation occurs, we'll start the planning process. As for the new military doctrine, it refers only to circumstances for the particular potential use of strategic nuclear forces."[[285]](#footnote-285)

It is unclear whether or not Kolesnikov’s words still hold true. However, it is unlikely that distance is a chief reason for any potential rift in NSNW operational policy. Indeed, NSNW bombers and mobile missiles can quickly be positioned near theaters of operation, as was the case with the move to station Iskanders in Kaliningrad. This is likely the reason why Russian leaders insist that should relations with NATO worsen, NSNW can be placed in regions such as Belarus, and Crimea. This idea was asserted by Aleksandr Pikayev in 1994 when he reasoned,

“A potential theater of military operations can turn out to be outside Russia's borders or in Russian regions where storage of tactical nuclear weapons is impossible in peacetime due to political considerations. Therefore, we will have to stress those types of weapons which can be airlifted to the theater of military operations in a short period of time. Tactical nuclear warheads installed on short range ballistic missiles and also on aircraft air-to-ground tactical missiles will acquire special significance.”[[286]](#footnote-286)

Simply put, Sokov’s reasoning is questionable and an unlikely primary source of confusion over NSNW’s formal military role. Rather, Russian leaders undoubtedly recognize the military advantages of secrecy. Putin and the General Staff know that distance and INF considerations limit its strike potential. However, they equally realize bombers and mobile missiles can be moved and positioned to strike targets throughout Poland and the Baltics, Russia’s likely targets during a crisis with NATO, with relative ease. Moreover, it is unlikely that the Russian General Staff relies primarily on strategic bombers, and depending on the situation would likely utilize various other means of delivery, such as Iskander ballistic missiles or sea-launched cruise missiles. Indeed, these options have been practiced as well, albeit at a lesser extent.

Another key takeaway from Russia’s exercises is the type of targets Russia intends to prioritize during a crisis or conflict. From public information about these maneuvers, Sokov concluded that the main objective was counterforce, intended to shore up Russia’s conventional military deficiencies against military installations. Targets consisted of,

* Airbases and other military installations (command, communications, and support centers) in European NATO countries involved in simulated attacks against Russia and, in at least one case, in Japan. Due to the proximity to Russia and enthusiasm to host US military bases, Eastern European states were especially targeted. For Poland and the Baltic states in particular, it is clear that Russia intends retain the ability to hold at risk any part of these nations should hostilities occur.
* Undisclosed targets in the continental United States, as well as other bases outside the mainland. In 2003 and 2010, Russian heavy bombers simulated strikes against land targets in the Indian Ocean. Moreover, Russian air patrols have included US bases on Guam, Hawaii, and Alaska.[[287]](#footnote-287)
* Naval targets, including aircraft carrier groups in the Pacific Ocean and the Baltic Sea. Similar operations were simulated once in the Indian Ocean, Black Sea, and Mediterranean. Due to the declining nature of the Russian navy, nuclear weapons seem to be a “quick fix.” The Russian navy has been some of the strongest proponents for the retention of tactical nuclear weapons likely due to their unique quality of “leveling the playing field.”[[288]](#footnote-288)

Moreover, Russian exercises demonstrate the ability for Russian nuclear forces to advance quickly up the escalation ladder should demonstrative nuclear strikes fail to force an enemy to capitulate. Indeed, although outside observers have only a limited window into the Russian high command’s thinking, it is plausible to suggest that recent exercises have demonstrated Russia’s ability to “cause more pain” to an adversary, should it become necessary. As shown during the October 2002 drill, Security-2004 and Stability-2008 exercises, it appeared that when initial demonstrative nuclear strikes failed to achieve a cessation of hostilities more imposing, sometimes large-scale, attacks were carried out, presumably against the US homeland. At that point, assets from the strategic forces became involved, consistent with the de-escalation’s rung advancement (refer to figure 2 in chapter 2). This again brings into question whether or not the Russian leadership actually believes it can control regional nuclear conflicts from going global.

Russian exercises offer some insight into this quandary. As Dimitri Adamsky posits, Russian nuclear exercises operate in a strict conceptual framework, which often confine regional nuclear war from spilling over into global nuclear hostilities.

“Implicitly, it [the Russian General Staff during nuclear exercises] assumed that regional conventional wars would not involve values for which the adversary would tolerate the risk of even a single nuclear strike. Consequently, limited nuclear use would deter or terminate conventional hostilities, without escalation to a massive nuclear exchange. Scenario vignettes from all the exercises demonstrate that when a counter-attack by NSNW restores the status quo, the adversary terminated hostilities and did not turn to a nuclear retaliation.”[[289]](#footnote-289)

The General Staff’s postulation is highly dubious and incredibly precarious. Indeed, Russian’s strategy is seemingly built of its own internal assumptions about the enemies will to fight after witnessing and/or sustaining a nuclear strike. The addition of strategic assets in some of these exercises suggests the Russian leadership itself has doubts about its ability to contain nuclear escalation, and thus requires its global strike assets to maintain deterrence on a grander scale. It is uncertain if the Russian leadership views the addition of strategic bomber flights around North America and visible ICBM and SLBM preparations as a lever to establish intra-war deterrence, or for the actual employment of strategic strikes against target sets throughout the United States and NATO should deterrence on a appear hopeless.

Likewise, Russia could simply be a case of preparing for every situation. As Khryapin and Afanasyev point out, in order to maintain a an effective regional deterrence policy Russia must keep a potential aggressor in a state of uncertainty as to the scale, time, place, and other critical factors in the employment Russia’s nuclear forces.[[290]](#footnote-290) As noted in chapter one, this would be consistent with the school of thought established under Putin, which identifies a need to present an image of strength, power, and above all, the will to fight.

It should be noted that all suppositions are likely and not mutually exclusive. A critical component of de-escalation is the ability to threaten destruction on a larger scale. Maintaining a capable and reliable global deterrent supports this concept. Thus, Russia’s usage of regional and global nuclear assets could be a signal that Russia is capable of continuing to escalate the violence, exploiting the disparity interests in the conflict, should it become necessary to do so. If a demonstrative nuclear strike does not force an adversary to yield, Russia must be ready to escalate to a higher-level of strikes using the global strategic forces.

To Russians, the capability and willingness to commit to a nuclear war is a requirement for limiting regional conflicts after nuclear employment, as the threat of continued escalation essential shocks the opponent into considering submission as the superior alternative. This is particularly molded for a NATO opponent, as questions linger regarding their resolve in being able to absorb catastrophic casualties and continue with hostilities. Thus, Russia’s ability to “guarantee the infliction of unacceptable damage to an aggressor” enables it to fuse psychological and physical strategies into a single deterrence and warfighting policy. Alexander Radchuk, former advisor to the Head of the Russian General Staff, summarized this strategy best when he declared,

“Accomplishment of combat missions by the use of nuclear weapons is indeed possible…exactly because of the fact that political and psychological barriers that made that made such use practically unthinkable have been enfeebled as the threat of large scale nuclear war has almost disappeared. This allows recognizing that use of nuclear weapons is possible and in some cases expedient. That is why reliance on nuclear weapons and their planned modernization are not caprices or machinations of particular political figures and military commanders. This is a response to existing or, at least, distinctively perceived threats.”[[291]](#footnote-291)

Radchuk’s warning highlights perhaps the most resounding detail of Russia’s exercises. Despite increased spending on conventional weaponry, nuclear weapons remain Russia’s reliable response during a regional confrontation. Indeed, the use of nuclear weapons during operational-strategic exercises reveals a deeper reliance on weapons of de-escalation.[[292]](#footnote-292) As Radchuk noted, this development is not simply the whim of a particular leader or commander, but a staple of Russian defense policy. Moreover, the decision to use nuclear weapons is quite telling of the leadership’s worldview, as the Kremlin would rather authorize nuclear strikes than concede defeat. Therefore, attention to military exercises is absolutely central to understanding Russian regional nuclear employment practices, as they are essentially “practice runs” should an engagement require their use.

**CHAPTER FIVE: MAJOR DEBATES ON NUCLEAR WEAPONS**

**Recent Rhetoric by the Russian Leadership**

As shown during the course of this report, it is indisputable that the Russian leadership, both civilian and military, views nuclear weapons as Russia’s ultimate guarantor of security. This has been demonstrated time and again by references to the need to maintain nuclear weapons. To best understand the leadership’s view on nuclear weapons, President Putin’s words must be scrutinized. Indeed, throughout Russian history, policy is predominantly tied to a single personality who dominates the discussion. In the modern era, this individual is Vladimir Putin. Others, such as Medvedev, Rogozin, Foreign Minister Sergei Lavrov, and Ivanov reiterate Putin’s rhetoric in some variance.

Recently, Putin has done little to change his stance on nuclear weapons, particularly in a regional context. For example, when discussing the potential for war with Russia’s “partners,” in 2014, Putin stated that they “always need to be aware that it is better not to enter into any potential armed conflict against us.”[[293]](#footnote-293) Putin reasoned this was because Russia possessed a well-prepared and equipped nuclear force.

“Let me remind you that Russia is one of the world’s biggest nuclear powers. These are not just words – this is the reality. What’s more, we are strengthening our nuclear deterrent capability and developing our armed forces. They have become more compact and effective and are becoming more modern in terms of the weapons at their disposal. We are continuing this work to build up our potential and will keep doing so, not in order to threaten anyone, but so as to be able to feel safe, ensure our security and be able to carry out our economic and social development plans.”[[294]](#footnote-294)

In October 2014, Putin again referred to Russia’s nuclear potential, this time in reference to western sanctions. "We are hoping that our partners will understand the imprudence of attempts to blackmail Russia, [and] remember what discord between large nuclear powers can do to strategic stability."[[295]](#footnote-295) Furthermore, Putin has regularly referred to the need to counter NATO’s conventional weapons, particularly missile defense. During the G8 summit in 2006, Putin told reporters that “It is obvious that if part of the strategic nuclear potential of the United States is located in Europe we will have to respond.”[[296]](#footnote-296) When asked, Putin made it clear that this response would be nuclear. “What kind of steps are we are going to take in response? Of course we are going to acquire new targets in Europe."[[297]](#footnote-297)

Putin has continued to repeat that the need for nuclear weapons is increasing. Before a state armament meeting, Putin reaffirmed the requirement for nuclear weapons to deal with Russia’s most pressing issues.

“I am talking here above all about developing a rational range of attack systems, including a nuclear deterrent with guaranteed capability, modernized strategic and long-range aviation, and continued work on developing an aerospace defense system. We will need to do everything possible to make sure that we have reliable and guaranteed security. We have said repeatedly and warned in the past that we will have no choice but to take adequate countermeasures in order to guarantee our security...”[[298]](#footnote-298)

Perhaps more dubiously, Putin also noted that Russia has weapon systems that are highly secret. During a discussion with the Duma chiefs in Crimea, Putin mentioned that Russia was preparing a nuclear surprise. “Some things have already been disclosed; say in the area of strategic offensive arms, I mean nuclear deterrence forces. Some information remains secret, but we will disclose it when the time comes.”[[299]](#footnote-299) This is highly inconsistent with typical Russian actions, as Russia almost enthusiastically declares its nuclear procurements, even if the program is eventually delayed or cut completely. Given Putin’s propensity for showing disdain for the INF Treaty, some of the weapons Putin referred to could be INF range missiles.[[300]](#footnote-300)

As noted, some insights can also be gleaned from other officials in the Putin regime. For example, Sergei Lavrov has consistently made statements that demonstrate Russian views on nuclear weapons in Europe. After Petro Poroshenko, now President of Ukraine, threatened to retake Crimea, Lavrov gave unique insight into how Russia could respond. “If it comes to aggression against Russian territory, which Crimea and Sevastopol are parts of, I would not advise anyone to do that," warning that Russian national security doctrine is "very clear" on how Moscow would react on any attempt to challenge its territorial integrity.[[301]](#footnote-301)

Moreover, amid rumors that Russia was placing Iskander-M, R-500, and Tu-22M3M nuclear capable systems in Crimea, Lavrov again hinted that Russia could respond to regional challenges with nuclear weapons by noting Russia has the right to place nuclear weapons in Crimea.

“The term ‘nuclear-free zone’ which characterizes a certain international legal agreement, has never been applied to Crimea. Such zones exist in Latin America, and Central and South-East Asia. Crimea was not a nuclear-free zone in terms of international law: it was part of Ukraine, which is a non-nuclear state. Now Crimea has become part of a state which, under the Nuclear Non-Proliferation Treaty, possesses such weapons. Under international law the Russian state has the grounds for doing what it likes with its nuclear arsenal – I repeat, a legitimate arsenal – in accordance with its interests and its obligations under international law.”[[302]](#footnote-302)

Although there was some disagreement over the viability of this threat due to inadequate storage sites on the peninsula, it seems Lavrov’s statements are indeed coming to pass. According to *Gazeta.ru*, the 12th Main Directorate of the General Staff of the Defense Ministry (12th GUMO) has begun to construct weapon support infrastructure in Crimea.[[303]](#footnote-303)

Lavrov’s nuclear threat to defend Crimea has profound implications critical to the future of regional, if not global, security. Russia’s doctrine clearly states any attack that threatens the existence of the state could initiate a nuclear response. Yet it is difficult to imagine that the loss of Crimea would threaten the modern Russian nation. Rather, this implies a substantially lower nuclear threshold, which links nuclear weapons use to maintaining territorial integrity, rather than as a last resort. Perhaps more importantly, not only would this stray far from the public Military Doctrine, but would indicate that Russia could essentially annex any region it deemed important and threaten nuclear usage should the offended state attempt to retake its territory. This policy would have profound implications for regions closely connected to Russia, whether historically, culturally, or economically (for example, reference figure 1: Ties to Russia).

For his part, Medvedev has been less overt about the possibility of nuclear use. However, he has hinted that nuclear war could become a reality should western practices continue. During his last months in office, Medvedev stated, “Hasty military operations in foreign states usually bring radicals to power…At some point such actions which undermine state sovereignty may lead to a full-scale regional war, even, although I do not want to frighten anyone, with the use of nuclear weapons. Everyone should bear this in mind."[[304]](#footnote-304) This statement is particularly foreboding given the recent events in Ukraine. More to the point, the statement is consistent with Russian threat perceptions and military doctrine, which unequivocally states military interventions can lead to major regional, likely nuclear, conflicts.

Deputy Prime Minister Dimitri Rogozin has also noted the importance of nuclear weapons for regional conflicts. Discussing NATO conventional weapon superiority over Russia, Rogozin stated that “We have never underestimated the role of nuclear weapons…as a ‘great equalizer.’”[[305]](#footnote-305) Moreover, Rogozin went on to insist “If we come under attack, we will undoubtedly use nuclear weapons in certain situations to defend our territory and state interests.”[[306]](#footnote-306)

Rogozin’s comments fall in line with Lavrov’s linkage between nuclear use and territorial integrity, despite being made a year earlier. Evidently, Rogozin not only believes there is a threat serious enough to Russia that this sort of warning should be issued, but also that Russia’s nuclear weapons stand ready to be used in “certain situations to defend our territory and state interests.” Like Lavrov, Rogozin’s statements signal that nuclear use would be an acceptable response to counter not only threats that challenged the very existence of the state, but also to protect against *any* attack on Russia’s territory. Consequently, this presents a much lower nuclear threshold than specified by the 2014 Military Doctrine, which only sanctions nuclear usage if an adversary’s advances threaten the survival of the Russian state.

However, it should be noted that Rogozin has been known to make statements without much backing. After Ukraine and Romania denied Deputy Prime Minister Dimitri Rogozin’s plane the right to fly over their territories, Rogozin stated that next time he would visit in a Tu-160 strategic bomber.[[307]](#footnote-307) While perhaps more of a quip than a threat, it nonetheless demonstrates a clear inclination to brandish nuclear weapons, even in unwarranted situations.

Putin, Medvedev, Lavrov, and Rogozin all understand that nuclear weapons and the implication of their use carry significant political power. Threats allow Russia to signal its disdain for various polices. However, it is equally clear that the Russian leadership views nuclear weapons as a viable and immediate response should a crisis evolve. As Sergei Ivanov once told the state Duma, “As regard to use of nuclear weapons in case of aggression, of course [it will use them in this case]. What else were they built for?”[[308]](#footnote-308)

**Preemptive/Preventative Nuclear Options**

Another longstanding debate that often surfaces in the Russian press is Russia’s stance on preemptive/preventative nuclear strikes. Based on surprise, both preemptive (attacking based on the belief an adversary is about to strike) and preventative strikes (attacking based on the belief that it is better to fight sooner rather than later) exploit the initial stage of war, dealing a potentially knockout blow to adversarial forces. Indeed, these concepts were highly valued by the Soviet High Command, and were considered a crucial requirement if Warsaw Pact forces were to be successful in a war against NATO.[[309]](#footnote-309)

Today, many in the Russian military still value the preemptive/preventative nuclear option, who nearly overwhelmingly support the concept. In 2008, then First Deputy Minister of Defense and Chief of the General Staff of the Armed Forces Yuri Baluyevsky argued during meeting at the Academy of Military Sciences that Russia should not hesitate to employ its nuclear potential to protect Russia’s national interests. "We are not going to attack anyone…but we want all our partners to realize that Russia will use armed force to defend its own and its allies' sovereignty and territorial integrity. It may resort to a pre-emptive nuclear strike in cases specified by its doctrine."[[310]](#footnote-310) This was, among other things, an apparent reference to the need to develop a new military doctrine which allowed preemptive nuclear strikes.

Other military leaders have also spoken about the need to include preemptive nuclear options into Russia’s military doctrine. In 2009, Nikolai Patruschev gave a shocking interview with *Izvestia*, in which he argued that a new doctrine must provide for “flexibility” for nuclear use depending on the situation and intentions of the enemy.[[311]](#footnote-311) “In situations critical for national security we do not rule out a possibility of using a preemptive (preventive) nuclear strike against the aggressor” Patruschev went on to conclude.[[312]](#footnote-312) As noted earlier, that same year, Lt. General Andrei Shvaychenko commented, “In a conventional war, they [nuclear weapons] ensure that the opponent is forced to cease hostilities, on advantageous conditions for Russia, by means of single or multiple *preventive strikes* against the aggressors' most important facilities. (emphasis added)."[[313]](#footnote-313)

Although the every military doctrine has not included a preemptive/preventative nuclear strike clause, military officials have continued to affirm their importance to Russia’s regional nuclear strategy, as preemption and prevention would likely play a critical role in early stages of a conflict. In 2010, then Chief of the General Staff Nikolai Makarov stated that Russia reserves the right to employ preemptive strikes against perceived threats to its vital interest, even if it hasn’t been attacked. “Taking into account a missile defense system's destabilizing nature, that is, the creation of an illusion that a disarming strike can be launched with impunity, a decision on *preemptive employment* of the attack weapons available could be made when the situation worsens (emphasis added),” Makarov proclaimed at an international conference attended by US and NATO officials.[[314]](#footnote-314) In 2014 General Yuri Yakubov, a senior Defense Ministry Official, echoed Marakov’s position when he called for Russia’s new military doctrine to specify the conditions under which Russia would launch a preemptive nuclear strike against NATO.[[315]](#footnote-315) Indeed, according to an *Interfax* report, “The military were very insistent about including the provision for preemptive nuclear strikes.”[[316]](#footnote-316)

While much of the debate today has come from the military sphere, the political leadership has also given some insight into their position. In 2003, Putin declared that Russia “retains the right to launch a preemptive strike, if this practice continues to be used around the world."[[317]](#footnote-317) That same year, former Defense Minister Igor Ivanov again reiterated Putin’s statement. “There's another thing: Russia reserves the right for itself to utilize in a preventive fashion the military force. And I did drive home to my partners in detail why we're... and under which conditions and why, wherefore, this should be done, including in the CIS states.”[[318]](#footnote-318) However, it appears as if Putin and Ivanov were referring to conventional preemptive actions only. Days later Ivanov specified that "Russia still regards nuclear weapons as a means of political deterrence. We do not envisage a scenario or a situation where we would use such weapons first.”[[319]](#footnote-319)

Yet, it is clear from Russia’s doctrine and its military exercises that it does indeed foresee possibilities of using nuclear weapons first, often in very specific ways. When pressed about why Ivanov had said Russia didn’t have preemptive nuclear strike options, Ivanov candidly replied,

“What we say is one thing. That sounds cynical, but everything that we plan does not necessarily have to be made public. We believe that from the foreign policy viewpoint it is better to say that. But what we actually do is an entirely different matter. If we are talking about nuclear weapons, they are the chief components of our security. And there can be no doubt that attention toward them cannot be relaxed.”[[320]](#footnote-320)

As Schneider noted about Ivanov’s about-face, “Ivanov undercut the international political message of his original statement and strongly implied that Russia had preemptive nuclear strike options and, moreover, that they make ‘dovish’ statements about nuclear weapons in international fora for political reasons since they play well with the international community.”[[321]](#footnote-321)

There are two chief reasons why the Russian leadership, specifically the military, would want to include preemptive nuclear strikes. Firstly, preemptive nuclear strikes could be highly advantageous to a military tactician. Military planners must devise military plans for the worst-case scenario in every condition. In a situation that necessitated preemption, such as a rapid buildup of NATO military forces along Russia’s border (similar to the buildup before the invasions Iraq and Afghanistan), nuclear weapons would of course be a valuable instrument.

Against a powerful adversary, it is only natural that the military would want to utilize all available means in order to guarantee success. The presumption that preemptive nuclear strikes could secure success is all the more dangerous when Russia’s “siege mentality” is taken into consideration. Russia is highly perceptive of its external threats and often amplifies its anxieties. Thus, should a crisis occur, the military might deem it necessary to react quickly and employ a preemptive nuclear strike option.

On the other hand these statements could be purely politically motivated. To be sure, one could reason that statements on preemption were simply made to test public (both foreign and domestic) reactions to the concept. According to Roger McDermott, this was partly the reason Patrucshev and others made their comments in 2009. However, because the debate was about official policy, Colonel-General (ret.) Viktor Yesin noted that remarks were severely limited and the debate within Russia was carefully managed.[[322]](#footnote-322) It is unlikely that domestic factors heavily weighed on the leadership’s decision not to include preemptive/preventative nuclear strikes in the 2010 and 2014 doctrines. More probable is that Russia was attempting to flex its military muscles and gauge foreign audiences, rather than those domestically. Indeed, Patruschev’s timing was impeccable, as his statements coincided with Hillary Clinton’s arrival in Moscow for a meeting on formulating the New START Treaty, suggesting the Moscow believes nuclear threats enhanced its position.[[323]](#footnote-323)

Preemptive/preventative action is a convincing argument when one considers the weakness of the Russian conventional army, particularly during the 2008-2012 timeframe. Indeed, Makarov himself lamented that “We now have a situation when there is virtually nobody left to draft. It is a serious problem and I make no bones about it.”[[324]](#footnote-324) Demographic shortage of recruits, aging military equipment, and a military culture still wedded to Soviet philosophies has made it difficult to rely on the GPF to defend the Russian Federation. Stressing its one area of military competence would be in line with typical Russian bluster, which often showcases the best of Russia. As Tom Nichols reasoned, “Nuclear weapons are their last badge of superpower status, so now and then the Russian generals feel the need to remind everyone that they have them… until the Russian military transcends its Soviet roots, we’re going to have to hear things like this now and then. Griping about NATO and nuclear war is part of the Russian General Staff’s job…”[[325]](#footnote-325)

However, it’s important to note that these two notions are not necessarily mutually exclusive. It is likely that the Russian military perceives the need to noticeably flex its military muscle as well as contemplate preemptive/preventative nuclear options. Because nuclear weapons remain the guarantor of Russian security, they will need to be emphasized to strengthen the leadership’s domestic and international position. It is equally clear that the Russian General Staff thinks about the combat roles and capabilities of its nuclear arsenal in concrete terms. It is likely that for a variety of contingences Russian generals assume the need for preemptive/preventative nuclear strike options.

**IMPLICATIONS AND CONCLUSIONS**

**The Conventional-Nuclear Trade-Off**

It is difficult to ascertain the level of confidence the Russian leadership current has in the GFP’s ability to replace nuclear weapons as the ultimate guarantor of Russian security. However, it is quite clear that the military’s non-nuclear role is growing. This has been readily apparent by scrutinizing Russian doctrine, military exercises, and procurements. While nuclear weapons do have extreme destructiveness, it is clear that nuclear weapons cannot fulfill every task. Because of this, Russia has had to accept the need for powerful conventional weaponry. But to what extent should Russia rely on its conventional arsenal? Will it ever overtake Russian nuclear deterrent as the ultimate guarantor of security?

Official Russian discussions can give some insight. Some analysts question the leaderships’ belief in the absolutization of nuclear weapons as the threat of large-scale nuclear wars seems minute. Putin himself said in 2000 that, “... major challenges to Russia, taking into account the global situation, today will originate from local conflicts. Russia will be pulled apart not with nuclear weapons or nuclear threat. We will witness today the attempts of pulling Russia apart [from] local conflicts.”[[326]](#footnote-326) While dated, this sentiment is reflected in Russia’s military doctrines, which continue to emphasize the risk of lower-scale conflicts. In this sense, heavy reliance on nuclear armaments can be counter-productive for Russia’s security, as scare resources are diverted from Russia’s most pressing needs. As a *Kommersant-Vlas*t report discussed, “Russia will not be able to focus on nuclear weapons. The major threat to the national security today are Chechen militants and Islamic fundamentalists, rather than NATO with its new members.”[[327]](#footnote-327)

Indeed, Russia’s military operations in Chechnya, Transnistria, Georgia, and Ukraine were all small-scale conflicts; nuclear weapons were never seriously considered during them. For this reason General Makhmut Garayev stressed that, although nuclear weapons are becoming increasingly important for Russian security, Moscow cannot rely exclusively on nuclear weapons for protection as they are useless against failed-states, terrorists, or to “neutralize economic, information, and other forms of aggression.”[[328]](#footnote-328) According to Garayev, this can only mean Russia must maintain a potent conventional force.[[329]](#footnote-329)

President Putin has also emphasized the need for conventional forces. At a meeting on the development of high-precision weapons, Putin stated, “…high-precision weapons are becoming an increasingly important factor in non-nuclear deterrence, and perhaps even one of the most decisive factors… The degree of precision and power of today’s high-precision weapons makes them essentially an alternative to nuclear weapons. In some of their parameters they are quite simply equal to nuclear weapons in their effectiveness.”[[330]](#footnote-330) In 2014, Putin again reaffirmed the need to develop conventional weaponry as Russia’s second priority (behind nuclear expenditures, early warning and aerospace defense), but emphasized it must be done without overburdening the economy.[[331]](#footnote-331) Similar statements have become typical of Putin’s position on the subject.

Russia requires these weapons in order to conduct specific operations in low-level conflicts. It is equally apparent that Russia needs strong conventional weaponry to achieve quasi-parity with NATO, or at least the illusion of such. As reflected in 2014 Military Doctrine, should a crisis erupt Russia must have non-nuclear selections to retaliate at the initial period of escalation. Baluyevsky argued that this was a requisite for Russia, particularly vis-a-vis NATO. "As for nuclear weapons, not everything can be solved by SNF strikes. Here is a simple example: the Soviet Union also had a powerful nuclear shield, but it was unable to save our country from collapse," the general said. Baluyevsky went on to say,

"I am convinced that, in addition to nuclear deterrence, we need a system of non-nuclear deterrence….We must turn the no-contact war into a contact one already at the initial stage, as a contact war is what the enemy armed with long-range precision-guided weapons wants to avoid…Speaking of the nuclear deterrence factor, especially when applied to containing threats posed by an opponent using conventional arms, one must bear in mind that in present-day conditions the nuclear deterrence can be effective only given highly-equipped and combat-ready general-purpose forces. It is only in this case that the threat to use nuclear weapons in response to an attack involving conventional armed forces will look convincing.“[[332]](#footnote-332)

Articles appearing in *Voyennaya Mysl* have echoed this point*.* According to (Ret.) Col. Gen. V. V. Korobushin, “nuclear weapons will remain the foundation of Russia’s strategic deterrence and security for a long time to come…At the same time, the evolution of precision guided strategic non-nuclear weapons can reduce the deterring role of strategic nuclear weapons…Russia, in the interest of maintaining a credible strategic deterrence capability, will apparently have to develop precision guided missiles with conventional warheads.”[[333]](#footnote-333) (Ret.) Col. A.L. Khryapin and Col. V.A. Afanasyev also contended that deterrence begins with the threat of conventional weaponry then moves up to the threat of using nuclear weapons.[[334]](#footnote-334) Thus, some key conventional armaments are necessary to conduct effective deterrence. However, while the two colonels believe that conventional weapons could one day become an alternative to heavy reliance on nuclear capabilities, but both insist that the Russian Federation is nowhere near that point. This has been reflected in Russia’s strategic exercises, as the GPF are still relieved by nuclear strikes to end of most major exercises.

It is also quite clear that there are major concerns about the ability of the current military reforms. For example, the Russian military budget has been drained by corruption. It has been reported that around one-fifth of Russia’s military budget is stolen each year.[[335]](#footnote-335) Others, such as Kirill Kabanov, head of the non-governmental anti-corruption committee, believe that number could be around 40%.[[336]](#footnote-336) Dmitri Ryabov, a representative from Russia’s Federal Security Service’s economic security directorate, stated that in 2014 corruption had cost the state defense budget over 5 billion Rubles ($75 million).[[337]](#footnote-337) Widespread corrupt could drastically reduce the Russian military’s ability build up its conventional forces. Funding remains tight and is only set to become more thinly spread as Russia progresses with its modernization process.

Likewise, fluctuating energy prices and a sinking Ruble could impact Russia’s ability to fully equip both its conventional and strategic forces simultaneously. As Alexander Golts pointed out, Putin’s “do-it-all” approach is overextending Russia’s manufacturing capabilities.[[338]](#footnote-338) “A lot of people here agree that the rearmament program in general cannot be fulfilled,” Golts said. “They want to produce all spectrums of military systems: from small guns to Topol missiles. It means no one program will have enough funding.”[[339]](#footnote-339) If Russia is forced to reduce spending on its military, intense competition could erupt within the Russian General Staff over funding allocations, particularly between nuclear and conventional forces. For now, it seems as though the Russian government will reduce procurement in every sector but defense. In 2015 Russian Finance Minister Anton Siluanov announced all expenditures will be cut by 10%, except for defense spending.[[340]](#footnote-340) How long Russia can continue to shield its military expenditures from budget cuts is unknown.

Russia’s economic woes do not bolster confidence in the GPF. According to the 2014 US Defense Intelligence Agency threat assessment, “The general purpose forces will continue to acquire new equipment in the near-term, but deliveries will be small and largely consist of modernized Soviet-era weapons.”[[341]](#footnote-341) Thus, it is difficult to assume that should a major conflict ensue with NATO that the Russian conventional military will be able to successfully defend Russian interests, particularly without large quantities of modern weapons. Thus, despite Russian leader’s acknowledgement of the need to develop a range of conventional force, extreme costs and low confidence in the military’s ability to repulse a NATO intervention will likely mean retention of nuclear weapons as the foundation of Russian security in the foreseeable future.

In the near to medium term, as military expert Andrei Kokoshin believes, nuclear deterrence will be supplemented by a system of non-nuclear deterrence using advanced conventional weapons (what he called pre-nuclear deterrence).[[342]](#footnote-342) This appears to be the official line in Moscow, as the gap between Moscow and NATO in conventional weaponry is wide, if not unbridgeable.[[343]](#footnote-343) While conventional weapons are certainly needed, it looks as if non-nuclear weapons will play a supporting role, rather than an equal or greater role compared to nuclear weapons.

**Russia’s Regional Nuclear Strategy**

It is clear from this report that Russia has modified parts of its nuclear strategy for regional level contingencies, in this case Europe. This report identifies four main features of Russia’s regional nuclear strategy. First, Russia comprehends both the political and military value of its nuclear arsenal and a limited nuclear strike more specifically. At its core, Russia’s embrace of flexible and discriminate nuclear capabilities enables it to employ a credible threat of nuclear escalation to achieve its strategic objectives. Should deterrence fail, limited nuclear options allow Russian to nullify an adversary’s conventional superiority and de-escalate the conflict. Although de-escalation is rarely blatantly articulated, it is apparent that the concept is well grounded in Russian wartime policy. As noted, de-escalation has been an implicit theme in official doctrines, exercises, and procurements.

It has become increasingly clear that a key piece of Russia’s strategy is its ability to employ nuclear weapons as an instrument of political pressure. Military exercises often coincide with major events, sometimes during visits by US or European diplomats or heightened periods of tensions.[[344]](#footnote-344) In addition, Russian officials regularly employ nuclear threats against policies deemed objectionable in order to intimidate others.[[345]](#footnote-345) For example, in opposition to the expansion of NATO missile defense, Vladimir Putin told a press conference, “Our General Staff and experts believe that this system [the proposed deployment of a missile defense site in Poland] threatens our national security, and if it does appear, we will be forced to respond in an appropriate manner. We will then probably be forced to retarget some of our missile systems at these systems, which threaten us.”[[346]](#footnote-346) The Russian leadership must believe such statements achieve political goals, as they continue to be made. In 2015, Ambassador to Denmark warned Copenhagen that there would be consequences to Danish cooperation to NATO missile defense efforts. “If that happens, Danish warships will be targets for Russian nuclear missiles,” said Russian Ambassador Mikhail Vanin.[[347]](#footnote-347)

Secondly, it is clear that the Russian leadership has developed policies and approaches to modify its nuclear strategy to be applicable at the regional level. Moscow believes it can separate regional wars from becoming global ones by restraining the types of nuclear weapons used, their targets, and under what circumstances each weapon is used, while threatening the possibility of greater devastation, all the way up to global nuclear war. By utilizing a limited strike which “the infliction of unacceptable damage” coupled with the threat of increased destruction (from the strategic nuclear forces), Russia can effectively control escalation and force an opponent to cease hostilities.

As Nikolai Sokov wrote, the infliction of unacceptable damage, whether it be from a demonstrative nuclear strike or limited counterforce attack, promises “…to deny benefits from aggression, [but] also conveys a message that damage would be commensurate to the level of conflict rather than devastating. Calibrated damage gives the opponent a choice to back down without escalation to the strategic level.”[[348]](#footnote-348) Thus, at the foundation is Moscow’s clear demonstration of restraint. Most importantly, discriminate nuclear usage reinforces the perception that Moscow’s stakes in a conflict are extremely high, while allowing an adversary enough room to seek a way out without feeling compelled to quickly advance up the escalation ladder toward global nuclear war. The restrained, punctuated use of nuclear munitions achieves a narrow set of goals and acts as a lever to force surrender before global nuclear weapons are use.[[349]](#footnote-349)

Indeed, the capacity and willingness to engage strategic nuclear forces allows Russia to credibly threaten and manage conflict escalation, as regional nuclear contingency options fall into Russia’s larger nuclear strategy. Indeed, the de-escalation authors themselves note that “[NSNW and limited nuclear use] are only a ‘supporting deterrence factor.’”[[350]](#footnote-350) As Sokov wrote, “…the credibility of the threat of a limited use of nuclear weapons requires no less compelling strategic deterrence – otherwise the other party in response to the threat of restricted use could at least convincingly threaten escalation,” quashing any limited nuclear threat.[[351]](#footnote-351) Jacob Kipp agreed, explaining that de-escalation and regional nuclear deterrence “[embraces] a direct link between the escalated employment of non-strategic nuclear forces and the will to use strategic nuclear forces up to the point of ‘mutual destruction.’”[[352]](#footnote-352) Due to Moscow’s belief that MAD still dominates the military balance between the United States (Russia’s primary nuclear adversary in a NATO-Russia conflict) and Russia, Moscow believes limited nuclear usage coupled with a threat to significantly escalate the conflict to a global nuclear level should force a cessation of hostilities. In this sense, global nuclear deterrence is connected, and thus supports, regional nuclear deterrence strategies. This represents the foundation of Russia’s regional nuclear strategy.

It should also be assumed that even the uppermost level of leadership, Vladimir Putin, most likely has the conceptual belief that limited nuclear usage in a regional conflict is a viable option. Indeed, it was then Security Council Secretary Putin who helped guide the 1999 Security Council Meeting on Nuclear Weapons, which formulated early concepts for the use of nuclear weapons.[[353]](#footnote-353) Press reports from the time suggest the meeting explicitly focused on increasing the role of NSNW and low-yield warheads to “change the image of nuclear weapons as a weapon of mass destruction.”[[354]](#footnote-354)

Yet problems remain. The data of this report suggests that the theory accompanying Russian nuclear use strategy overly simplifies enemy behavior and is extremely risky. Russian analysts fail to identify clear mechanisms to reinforce the notion that Moscow is being restrained in its actions and that it is willing to come to an agreement with the other side. In this sense, the fog of war could disrupt of lines of communication on multiple levels. Likewise, Russian strategy often assumes an imbalance in the stakes of a conflict. Should both sides share a belief that they ***must win***, limited nuclear use could quickly escalate to higher levels of conflict.

To be sure, although some Russian strategists have attempted to theorize how best to circumvent sharp turns in escalation, they have so far been unable to clearly articulate how best to contain escalation. For example, while retired Colonels Vyacheslav Kruglov, Michael Sosnowski, and Vladimir Sivolob agreed that while limited nuclear use “may” lead to greater escalation, this was “not guaranteed” and that escalation would only occur if the aggressor and its allies were willing to be utterly destroyed for the sake of terminating its opponent; In other words, driven by an irrational bloodlust for the destruction of Russia.[[355]](#footnote-355) All too often, these discussions end in the belief that NATO will not escalate simply because the dangers associated seem far too great, that any rational opponent would not dare continue. Yet as Keith Payne often notes, this sort of thinking is dangerous as leaders make decisions based on a variety of factors which often circumvent defined notions of rationality, foiling even the best laid plans.[[356]](#footnote-356) Thus, Russia’s nuclear posture is fundamentally dangerous, as its success rests on the belief that an adversary would be unwilling to challenge Russian nuclear use.

Yet, this in and of itself does not necessary discount the possibility that the Russian leadership believes it can appropriately handle the repercussions of its limited use of nuclear weapons, particular as it already questions alliance solidity. To be sure, the ability to adequately manage a limited nuclear conflict has been a source of academic contention since the Cold War. As Ian Clark argued when discussing limited nuclear war in 1982, “we have to face the issue of whether limiting war is, in principle, desirable and if so, whether it is a goal that is capable of achievement.”[[357]](#footnote-357)

As such, much of the academic debate in Russia shows a decisive acceptance that limited war is possible. Despite potential questions in the Russian leadership over whether or not Moscow can control escalation, it appears probable that de-escalation and limited nuclear strikes will continue to be seen as a practical military utility. Should Russia feel it has no other option, de-escalation remains, according to Alexei Arabov, Russia’s best option.[[358]](#footnote-358)

Thirdly, Russia is developing a new generation of nuclear weapons that are designed to defeat specific military targets, consistent with the strategy of “calibrated damage” in limited nuclear strikes, and provides Moscow a wide range of discriminate and assorted nuclear options. Indeed, envisioned targets include BMD, military infrastructure, NATO naval capabilities, and sites at INF ranges. Moreover, these weapons are focused on survivability, precision, and counterforce. Gone are the days of imprecise city destruction; the Russian leadership places a greater emphasis on accuracy and low collateral damage. Thus, a warfighting nuclear deterrent is valued at the regional level. Judging from the evidence of this report, new regional nuclear weapons will continue to be extremely accurate, mobile systems.

In addition, Russia could look to greatly increase the amount of low-yield nuclear weapons in its arsenal. According to this report, it appears today that Russia has developed, but not fully deployed low-yield nuclear weapons. Should relations with NATO continue to decline and Russia perceive the strategic imbalance (nuclear, conventional, and BMD) to increase, Russia could look to equip its forces with low or super-low yield nuclear warheads. This is well within Russian strategy; low-yield nuclear weapons would increase the usability of Russia’s arsenal and further blur the line between conventional and nuclear weapons. Rather than focus on nuclear brinkmanship crises, in which states exert coercive pressure by manipulating the risk of an unlimited nuclear exchange, low-yield nuclear weapons would be beneficial for Russia as the risks associated with their use would be much limited and less severe.[[359]](#footnote-359) This development would create a dangerous and destabilizing situation for Russia and Europe, as any conventional-nuclear distortion might increase the prospects of nuclear weapons being introduced on the battlefield.

Fourthly, it appears Russia is increasing its confidence in its non-nuclear weapons. But like BMD for NATO, Russia’s conventional forces are not a substitute, only a compliment. Despite optimism from some analysts, it appears Russia is both unwilling and unable to fully replace nuclear weapons with their conventional counterparts. Rather, nuclear weapons are gaining military missions often associated with long-range strike options. This is visible from Russian war games, which often conclude with a nuclear strike against a variety of specific military targets.

**Implications for NATO**

But what consequences will Russia’s regional nuclear strategy have for NATO? Russia’s nuclear strategy allows it to frustrate NATO on multiple levels. First and foremost, Russia’s strategy is intended to intimidate neighbors and deter outside interference in Russian activities through the credible threat of nuclear escalation. Russia’s low nuclear threshold instantly raises the stakes in any conflict, and forces adversaries to confront the real possibility that should they become involved, so too would nuclear weapons. This has been displayed throughout the Crimea crisis, as nuclear exercises, official statements, and bomber patrols have served as signals to Western states. As noted previously, Russian officials also regularly issue nuclear threats against polices they deem objectionable.[[360]](#footnote-360) Thus, it is clear Russia seeks employ nuclear threats in order to achieve its strategic aims, particularly in its sphere of vital interest.

What poses the greatest challenge for NATO is not the possibility of being deterred from conducting an all-out assault to knock down the gates surrounding the Kremlin to depose Putin and the Russian state; this would likely never be a desirable goal for NATO. Rather, Russia’s strategic posture allows for a form of offensive deterrence, or a strategy of conducting operations belligerent in nature coupled with overt nuclear threats for the purpose of deterring retaliation by the aggrieved party and/or its allies. In order to consolidate its gains, Russia could simply threaten nuclear retaliation to anyone who dare interfere, forcing others to choose between appeasement or nuclear war. According to a recent Russian documentary on the events in Crimea, Putin himself demonstrated a readiness to do this, as he stated he was prepared to put Russia’s nuclear forces on alert in order to deter outside interference, although he ultimately did not do so.[[361]](#footnote-361) This would essentially allow Moscow an ultimate trump card within its near-abroad. Despite describing its policy as purely defensive, it is clear that Russia considers nuclear coercion as a great power instrument to be leveraged during periods of hostilities. Obviously, this poses challenges for NATO’s ability to protect and defend its eastern-most members.

To be sure, this was what both Rogozin and Lavrov alluded to with regard to their nuclear threats over Crimea. Indeed, General Sir Adrian Bradshaw, Deputy Commander of NATO Forces in Europe, concluded that “the threat of escalation might be used to prevent re-establishment of territorial integrity.”[[362]](#footnote-362) Pavel Felgenhauer agreed, suggesting Moscow is becoming comfortable with using the threat of nuclear war to “scare the West into concessions.”[[363]](#footnote-363) This continued approach could lead to an “emboldened Russia brandishing nuclear weapons each time it wants something,” given a free pass to conduct its aggressive operations.[[364]](#footnote-364)

Should Russia continue to see this as a viable strategy, the NATO alliance could witness Russian intrusions into the eastern portion of the alliance through limited local proxies, backed up by nuclear threats. At the very least, any time the Kremlin feels threatened, it might display its nuclear sabre in order to raise the stakes in a conflict to a level other nations would simply be unwilling to match. Indeed, during a meeting at the Valdai Club in October 2014, Putin himself has gave a history lesson the power of nuclear intimidation, stating,

“True, the Soviet Union was referred to as ‘the Upper Volta with missiles’. Maybe so, and there were loads of missiles. Besides, we had such brilliant politicians like Nikita Khrushchev, who hammered the desk with his shoe at the UN. And the whole world, primarily the United States, and NATO thought: this Nikita is best left alone, he might just go and fire a missile, they have lots of them, we should better show some respect for them.”[[365]](#footnote-365)

Nuclear brinksmanship, or “balancing on the verge of war,” could trigger an inadvertent chain of events that lead to a nuclear confrontation.[[366]](#footnote-366) This prospect has been taken quite seriously by Russians. Former Foreign Minister Igor Ivanov declared, “The threat of a nuclear conflict is higher today than it was during the Cold War. In the absence of a political dialogue, with mutual mistrust reaching historical highs, the probability of unintended accidents, including those involving nuclear weapons, is getting more and more real.”[[367]](#footnote-367) The last Soviet President Mikhail Gorbachev has also made similar comments.[[368]](#footnote-368) Indeed, these considerations are the most immediate and worrying product of Russia’s nuclear policies.

Moreover, Russia’s flexible and discriminate nuclear deterrent affords Moscow the ability to frustrate NATO war-planning should an actual conflict erupt. As noted throughout this report, Russia maintains and is continuing to develop a nuclear arsenal that is designed to provide Russian leaders with a limited, diverse, and discriminate strike options. By employing specific systems against critical target sets, such as aircraft carriers, critical command and control nodes, and long-range air bases, Russia could effectively carry out a highly successfully offset strategy which negates NATO’s conventional superiority by destroying the alliance’s most prized assets. Not only would this cause enormous losses for NATO military personal and infrastructure, it would also constrain, if not totally deny, NATO’s ability to conduct offensive operations to dislodge an occupying Russian force.

In addition, Moscow’s threat to use nuclear weapons (or to continue its nuclear usage) could result in coercive pressure to dissuade certain NATO actions during the course of a conflict; essentially a form of intra-war deterrence. As noted by Elbridge Colby,

“For instance, if Moscow threatened to ‘go nuclear’ if the Alliance struck Russian sovereign territory, NATO might be deterred by fears of nuclear escalation (or further nuclear use) from attacking crucial Russian targets that it would need to destroy to disable to successfully prosecute its dislodgement campaign.”[[369]](#footnote-369)

This could consist of supply hubs, air bases, or sophisticated air and missile defenses located just inside Russia’s borders, which would be critical targets during an operation to remove Russian forces from a NATO ally. Yet again, the credible threat of limited nuclear use forces NATO to either restrict its operations or face punitive nuclear damage.

For Russia, these realities encompass the mainstay of Russia’s European “theory of victory.” Should NATO and Russia come into a direct confrontation, Russian strategy is crafted to offset NATO operations by negating its conventional superiority (most notably its non-contact way of war), while at the same time confronting NATO with further escalation, resulting in the capitulation or at least de-escalation of hostilities on terms favorable to Russia. By refusing to keep a conflict conventional, Moscow raises the stakes, forcing NATO to choose between submission or nuclear war. Thus, NATO must prepare for not just a miscalculated Russian nuclear strike, but a ***calculated*** one as well.

However, the core of Russia’s regional nuclear strategy is not based on an illusion of ‘duking it out’ with a powerful NATO military. The Kremlin recognizes that NATO’s greatest strength is also its most exploitable weakness: the unanimity of its 28 members. Following Sun Tzu’s teaching of disrupting an enemy’s alliances, Russia’s limited nuclear strike strategy could divide NATO by threatening greater destruction and loss should the bloc fail to yield during a conflict. Russian leadership presupposes that French, British, American, and German citizens will be unwilling to risk nuclear retaliation over far away regions such as Warsaw, Narva, or Daugavpils. As Robert Joseph noted, “Russia’s doctrine assumes an *asymmetry of interests* and a *lack of willingness* on the part of the enemy to risk nuclear war (emphasis added).”[[370]](#footnote-370) Therefore, a separate, but no less integral, component of Russia’s nuclear strategy is to challenge NATO’s resolve as a collective alliance.

It is clear that Russia perceives a lack of willingness on behalf of NATO to respond to Moscow’s coercive actions. To be sure, budget allocations are an exceptional optic into a nation’s threat perceptions and motivations. Unlike Russia, which has been increasing its defense spending, at least six major NATO allies will cut defense expenditures in 2015. These allies include the UK, Germany, Canada, Italy, Hungary, and Bulgaria while France is set to neither increase nor decrease its spending.[[371]](#footnote-371) This speaks volumes as to how major NATO allies view the need for increased capabilities and resolve. Simply put, NATO’s actions demonstrate an alliance that lacks internal cohesion and does not share a common set of threat perceptions, as NATO appears to have little appetite to invest in “military capabilities that can impose costs on any opponent.”[[372]](#footnote-372) Consequently, NATO is setting itself up to be woefully unprepared should Russia and NATO come into direct conflict. Unlike Russia, NATO has given little thought about deterrence, limited nuclear war, and conflict between great powers. In the view of the Kremlin, and above all Putin, this showcases a weak and susceptible NATO, vulnerable to coercive actions. Should trends continue, Russian perception of NATO weakness could encourage more aggressive actions.

Should Moscow employ a nuclear weapon (either a threat or actual use) against a NATO member, and parts the alliance fail to honor their Article V mutual defense commitments, NATO would effectively become an impotent security guarantor and would de facto dissolve. Indeed, the Russian leadership has seemingly come to see limited nuclear war as not just feasible, but a viable policy option to defeat NATO, due to the postulation that most NATO members are unwilling to defend their eastern-most allies in the face of nuclear reprisals. As Tom Nichols notes,

“Putin’s bluster and the Russian military’s continued probes and feints into NATO territory are all predicated on the Soviet-era belief that NATO is essentially a charade, a phony alliance made of spun glass: pretty to look at, but so delicate it will shatter at even the smallest blow. Should Putin attack, it will not be to defend the ‘rights of Russian-speakers’ or some other fantasy, but rather from the delusion that one sharp military strike will smash NATO as a political entity once and for all.”[[373]](#footnote-373)

For NATO, specifically for the United States, failing to respond in kind to a Russian limited nuclear strike would demonstrate that NATO’s mutual defense commitments and the US extended nuclear deterrent are meaningless; a threat with no real teeth. Indeed, the recent NATO Wales summit classified the US nuclear guarantee as “the supreme guarantee of security for the allies.”[[374]](#footnote-374) If unable to maintain alliance integrity and respond in kind during the direst of circumstances, NATO would be exposed as an essentially useless security apparatus as it would be unable to adequately assure European security. This would culminate as a humiliating defeat for NATO and would essentially terminate not just the NATO alliance, but the current US alliance system based on the premise that the United States would respond to any attack on one of its allies, potentially employing nuclear weapons.

Secondly, there could likely be a renewal of nuclear weapons proliferation, which could develop due to the obvious lack of credibility attached to a US nuclear guarantee. European states such as Germany, Poland, and Turkey, as well as allies Japan and South Korea could see no choice but to establish their own nuclear deterrent. Indeed, the 2010 Nuclear Posture Review acknowledges that a credible US nuclear umbrella is essential in serving our non-proliferation goals by “reassuring non-nuclear US allies and partners that their security interests can be protected without their own nuclear deterrent capabilities.”[[375]](#footnote-375)

Should this assurance be proven ineffective, it is quite possible the world will witness a major cascade of powers clamoring to develop their own nuclear weapons programs in order to provide for their own security. As Dr. William Graham, Chairman of the Congressional Electromagnetic Pulse (EMP) Commission posited,

“Failure to provide a credible deterrent will result in a wave of nuclear proliferation with serious national security implications…The United States nuclear guarantee is a major deterrent to proliferation. If we do not honor that guarantee, or devalue it, many more nations will obtain nuclear weapons.”[[376]](#footnote-376)

This would undoubtedly decrease worldwide stability, with new, immediately threatened nuclear powers springing up in highly unstable regions.

Finally, this would introduce a radically new global security environment. In Europe, the region would become much more divided and competitive, with new power centers and alliances competing for influence. Lack of a unified security apparatus would likely encourage instability and outright hostility, as states would look to solidify their security position, perhaps at the expense of others. Indeed, this could lead powerful states to gobble up non-nuclear neighbors, essentially returning Europe to a pre-World War I standard. Thus, Russia’s regional nuclear strategy is in line with the Putin regime’s worldview discussed in Chapter 1: creating a new European and global security order based on multipolarity and great power politics, undeniably at the expense of NATO, and more importantly, the United States.

Therefore, while Russia’s regional nuclear strategy appears overly simplistic on the surface, it is actually quite cunning and seemingly perfectly crafted to challenge the very foundations of a risk-adverse NATO by utilizing both the military and psychological characteristics of a nuclear strike (or threat) to circumvent NATO’s strengths. Unlike NATO, Russia has consistently demonstrated it has the capability, strategy, and will to employ its nuclear force. This does two things. First, it keeps NATO and the US worried and afraid, effectively deterring outside intervention into Russian operations. Secondly, should deterrence fail, Russia is armed with a flexible, capable, and ready response.

According to Robert Joseph, “among other conditions, deterrence success relies on both capabilities and resolve – a perceived willingness to back up commitments with force if necessary.”[[377]](#footnote-377) Today, NATO and the US have the ability to respond in a decisive manner, both with conventional and nuclear arms.[[378]](#footnote-378) The US maintains a suitable mix of weapon systems with varying yields and delivery platforms. However, this capability could degrade significantly over the next 10-20 years. The majority of US systems are reaching the end of their service life, and will need to be replaced. In 2027, the Navy’s fourteen Ohio-class SSBNs and their strategic missile, the Trident II D-5, will begin to retire.[[379]](#footnote-379) Three years later, the Minuteman III ICBM will also be slated for retirement.[[380]](#footnote-380) With regard to crucial instruments for European deterrence, the longstanding TNW B61 models currently stationed in NATO states are reaching the end of their lifespan, and need refurbishment. The aging stand-off, penetrating AGM-86B ALCM, a crucial piece for not only the US’s regional deterrence but also global deterrence, will also soon be retired.[[381]](#footnote-381)

Yet, despite the obvious need for modernization, the US faces considerable challenges. First and foremost, budgetary constraints threaten to undermine a flexible and responsive US arsenal. Indeed, this has already contributed to delays in force procurement. For example, the Long-Ranged Standoff (LRSO) missile, the replacement for the AGM-86B ALCM, has been delayed three years.[[382]](#footnote-382) Due to budgetary realities, the B61 modernization, designated B61-12, has also been pushed back.[[383]](#footnote-383) These are much needed capabilities that not only affect Washington’s ability to employ a credible threat, but also play a pivotal role in reassuring our allies that we have the capability and will to respond to an adversary’s usage of nuclear weapons. Should budget constraints continue to persistent, US modernization efforts could be significantly set back.

To make the problem grimmer, arms control enthusiasts, nonproliferation proponents, and those looking to curb government spending have seized upon the budgetary argument to insist on reductions, even done unilaterally, in US nuclear arms. Indeed, the Congressional Budget Office recommended delaying a new Long-Range Strike Bomber (LRS-B) by ten years.[[384]](#footnote-384) With regard to the LRSO, some analysts have called for the US to cancel the program entirely.[[385]](#footnote-385) Others, such as those in the Minimum Deterrence and Global Zero camp, have argued for even greater reductions.[[386]](#footnote-386)

This could greatly degrade the US and NATO’s most important regional deterrent tools. Currently, the ALCM, armed with a W80-1 variable yield nuclear warhead (around 5-150 KT), greatly enhances US credibility as it is both a highly maneuverable and discriminate weapon.[[387]](#footnote-387) However, advances in Russian air and missile defenses, cyber, and electronic warfare could disrupt the venerable munition.[[388]](#footnote-388) Moreover, these same technologies could wreak havoc on our ageing dual-capable aircraft (DCA) and B-2 stealth bombers. Indeed, Russia has made it a main concern to prioritize non-nuclear assets to defeat such systems, limiting our ability to conduct operations.[[389]](#footnote-389) Without modernizing our most important regional deterrence assets, confidence in our ability to retaliate to a limited nuclear strike will significantly decline. From a reassurance standpoint, the age and capability of US assets will continue to lose credibility, particularly as Russian systems suited for a regional theater mature.

The flaw with reduction arguments isn’t the perceived need to condense our nuclear force per se. Rather, nuclear arms reductionists’ agenda essentially strips away any flexibly the US has in responding to an adversary’s limited nuclear usage. Cutting our most capable and adaptive assets in Europe (if not the world) could lead to disastrous effects, particularly if Russia feels it is no longer bound by a sense of fear stemming from the threat of NATO retribution. Should US options be removed and only the minimum amounts of strategic forces remain active, the only options available to Washington during an acute surge in hostilities would be either surrender or retaliation through massive, indiscriminate nuclear arms. Even if the ICBMs and SLBMs are highly accurate, it is unclear how an adversary would respond to the introduction of strategic missiles to a regional conflict. Indeed, it appears just as reasonable that Russia, or any other potential adversary, would see this as a noticeable escalation in the level of hostilities.

Should the US fail to upgrade critical regional deterrence assets such as the LRSO, LRS-B, and B61-12, the US would be left with only an incredible threat of a major retaliatory nuclear response to regional and limited conflicts. US nuclear warheads mated to Minuteman ICBMs or Trident SLBMs are typically armed with highly destructive warheads (100 KT in the case of the SLBM, much higher for the Minuteman). As Keir Lieber and Daryl Press contend, should an adversary launch a limited attack on a military base or outlying NATO ally, the US would be self-deterred from launching extremely destructive weapons as they would be vastly disproportionate and could trigger further nuclear aggression.[[390]](#footnote-390) Similarly, Keith Payne observed, “Effective deterrence threats must be credible to the opponents. Unfortunately, leaders of terrorist states and tyrants who recognize the appropriate priority we place on avoiding civilian casualties may not believe US deterrent threats that would produce the high yields and moderate accuracies of the remaining Cold War arsenal.”[[391]](#footnote-391) Should the US only be left with such options, it is likely our adversaries and allies would view any threat of US nuclear usage as implausible.

Ironically, this was the lesson Russia learned during the Kosovo crisis. As Felgengauer describes, Russians learned the threat of general nuclear war with megaton-range weapons is not a credible response to “deter NATO expansion, the attacks on Iraq, [and] the war in the Balkans…Moscow’s protests can be ignored.”[[392]](#footnote-392) This grim recognition led President Boris Yeltsin to miserably ask his staff, “Why aren’t they [NATO] afraid of us?”[[393]](#footnote-393) Simply put, the Kremlin realized highly destructive strategic nuclear weapons do not deter conflicts other than that those that place the very existence of the state at risk.

Furthermore, as Andrei Shoumikhin advances, the Russian Federation remains the only nation in the world to present an existential threat to the United States.[[394]](#footnote-394) Therefore, should the US increase the level of escalation in this scenario, Moscow maintains the ability to match, if not outright dominate, Washington’s response. Thus, a disproportionate nature of US options and Moscow’s ability to retaliate in kind restricts US nuclear options and thus overall policy. This makes for a deterrence posture that lacks credibility.[[395]](#footnote-395)

It would seem Moscow understands this notion well, as a major theme of de-escalation and Russian nuclear strategy is the capability and will to increase the level of destruction should an adversary refuse to capitulate. The threat of national destruction enhances the credibility of Russia’s demonstrative option; either cease military operations or be prepared to escalate to a potentially apocalyptic scale. Due to Moscow’s lead in both development and operational readiness of NSNW and strategic forces, any advance along the nuclear escalation ladder inherently favors Russia. Should the US continue to degrade its forces, the imbalance will become more acute.

Unfortunately, the US and NATO’s decaying capabilities are doing just that. This has likely contributed to the notion that the Kremlin believes actual nuclear usage is a realistic response to conflict with NATO. As Pavel Podvig explains, nuclear usage and the de-escalation concept appear to be quite popular in Russia.[[396]](#footnote-396) Should Putin determine a major confrontation probable, he could conclude that a limited nuclear strike would be the most rewarding option. If Russia’s regional nuclear exercises are any indication, each time the regime has been forced to into such a scenario, it has chosen to go nuclear nearly every time. Moreover, even the threat of a nuclear launch, backed by his regimes threatening rhetoric, exercises, and procurements, could provide the necessary cover to continue operations undisturbed.

**Conclusions**

Russia’s apparent acceptance of territorial subjugation of states in its perceived sphere of interest has led NATO to question Russia’s long-term agenda and the means which Moscow will use to accomplish them. On one hand, Russia feels constantly under threat. It has come to regard NATO as impulsive and quick to utilize force near, or potentially in, Russia. At the same time Russia is an opportunistic power disillusioned with the status quo. Russia has flatly rejected the notion of a Western dominated security environment, as Vladimir Putin has stated on several occasions. Instead, Russia believes it must “push-back” in order to secure Russian interests in its zone of influence. This has produced a violate situation which could erupt into full blown hostilities. As former Soviet President Mikhail Gorbachev reminded the world, a conflict such as the one in Ukraine could inadvertently result in an unintended major war, unavoidably leading to a nuclear exchange.[[397]](#footnote-397)

This reality has been taken quite seriously in Russia. Russia has sought to develop an unquestionable arsenal, designed to be used as a viable option during any circumstance. Thus, at the core of Russia’s nuclear strategy is the need for credibility. Through massive nuclear exercises, missile and launcher procurements, doctrine, and official statements, Russia continues to demonstrate that it both capable and ready to use nuclear weapons to achieve its national goals. This will likely be the basis of Russian security planning for the foreseeable future.

These considerations will continue to have long term impactions for NATO security planning. As Sergei Karaganov concludes, the West and Russia are heading into a period of not just “keen rivalry, but also confrontation.”[[398]](#footnote-398) Karaganov explains that Russian loss in this competition would mean a real and long-lasting defeat that will dash any hope of a great Russian revival.[[399]](#footnote-399) Indeed, former NATO Secretary-General Anders Fogh Rasmussen concluded as much, warning “There is a high probability that he [Putin] will intervene in the Baltics to test NATO’s Article V.”[[400]](#footnote-400)

Thus, the stakes are high. Understanding how Russia would employ limited nuclear use to frustrate NATO is becoming increasingly essential. It would be advisable for NATO to recognize this fact and work to develop policies to negate this advantage through political, diplomatic, and military means. If not, NATO will be miserably unprepared for a Russian response should the leadership deem it necessary to utilize a nuclear weapon.

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