



Center for
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STRENGTHENING STRATEGIC SECURITY IN CENTRAL AND EASTERN EUROPE



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Strengthening Strategic Security in Central and Eastern Europe

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Center for European Policy Analysis

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The Center for European Policy Analysis (CEPA) is a nonprofit policy institute dedicated to the study of Central and Eastern Europe with offices in Washington and Warsaw. Our mission is to promote an economically vibrant, strategically secure, and politically free Central and Eastern Europe with close and enduring ties to the United States. Through written analysis and public events, we educate policymakers on the need for sustained engagement, help transatlantic businesses navigate changing strategic landscapes and build networks of future leaders.

Since its creation in 2005, CEPA has grown rapidly to become a leading voice for strengthening security and democracy in the countries of post-communist Europe. It has also provided a forum for scholarly research, writing and debate on key issues affecting the CEE countries, their membership in NATO and the European Union, and their relationship with the United States. CEPA has grown to become the premier source of expert analysis and policymaker attention on U.S.-CEE relations, defense and geostrategy.

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Introduction

U.S. extended deterrence is breaking down in Central and Eastern Europe (CEE). There are two primary causes. First, Russia has introduced limited-war military strategies that are backed by a credible threat of nuclear escalation. Second, U.S. capabilities in Europe are decreasing and the political and strategic unity of the NATO Alliance is at an all-time low. These security dynamics have placed the frontline CEE states in a new and more dangerous position than at any other point in the post-Cold War era. NATO's most exposed member states must consider the prospect of a military crisis in which the Alliance's collective security mechanisms fail or are delayed, and Russia is able to achieve a stealth seizure of territory, inflict an outright military defeat, or threaten nuclear escalation if initially thwarted. In response, many regional allies are re-considering their national military postures. Unlikely to acquire nuclear weapons to enhance their security, they have considered bolstering their conventional capabilities through the acquisition of advanced offensive weapons or the placement of NATO tactical nuclear weapons and Ballistic Missile Defense on their soil.

Allied postures could have an important bearing on future regional stability, in some cases reinforcing the U.S. effort at strategic reassurance and plugging critical gaps in the extended deterrence architecture. In other cases, allies' efforts could decouple them from NATO plans or, in an extreme case involving offensive weapons, even contribute to an escalation in security threats. Little is known about which CEE conventional military options, defensive and offensive, could best deter the Russian nuclear threat and help stabilize the regional security environment. Equally under-analyzed are the options that might be considered an existential or strategic threat to Moscow. Understanding these issues is important for United States and its allies as they seek to maintain strategic security in Europe East within an increasingly unstable environment that could have lasting implications for global security.

On the frontline of an increasingly dangerous strategic environment, the military actions of CEE allies can offer valuable insight into which options have been most successful in strengthening strategic stability, and which ones have not. It is in this search for novel insights that the Center for European Policy Analysis (CEPA) proposed the *Strengthening Strategic Stability in Central and Eastern Europe Initiative* in an effort to increase public-policy understanding of the interplay between "new" Russian warfare techniques and emerging counter-strategies of CEE states; and to highlight the role of ally- and U.S.-level deterrence options for contributing to regional and global strategic stability. To do so, CEPA organized Track II Strategic Dialogues in Warsaw, Poland and Washington, D.C. to bring together top U.S. and CEE security and defense experts to assess these issues. Although the research findings were different from the team's original assumptions, the project nevertheless provided a deeper understanding of the dominant perceptions held by the expert communities of the Baltics and Poland; the policy solutions viewed as most effective by experts on both sides of the Atlantic; and how the threat to the east is characterized by frontline allies.

Scope and Objectives

This report presents the CEPA study team's observations and recommendations on three lines of inquiry: (1) the problem of limited war and Russian tactical nuclear doctrine in CEE and its eastern frontier, particularly the escalation risk that could result from Russia's use of a partially successful or initially rebutted limited war in the CEE region; (2) the role of CEE conventional deterrence in responding to the Russian nuclear threat, in operating in a limited war scenario, in achieving nuclear strategic stability, and how CEE states should develop their defensive doctrines accordingly; and (3) the future role of NATO-level tools, including tactical nuclear weapons and ballistic missile defense, in achieving strategic security in CEE.

The project was carried out through two Track II Dialogue sessions between late 2016 and mid-2017. The project team first undertook a comprehensive review of the academic literature and government reports from the CEE region. The principal investigators then traveled to Warsaw, Poland in January 2016 where they held the project's first (of two) Track II dialogues with regional security experts, academics, and independent researchers from Estonia, Latvia, Poland, the Czech Republic, and the United States. The second Track II dialogue was held in May 2016 in Washington, D.C., which brought together experts from the United States, Poland, and Latvia to exchange ideas, evaluate current approaches, and develop policy recommendations. The findings of these meetings were then evaluated by the principal investigators, and recommendations were explored. This report provides the findings of these dialogues, an assessment of the dialogues, and recommendations for successfully ensuring the future security of the CEE region.

Furthermore, both dialogues were conducted under Chatham House Rules. While this report is by no means an exhaustive exploration of all opinions held by security experts in the CEE region or in the United States, the project team has worked to ensure that all views expressed at the dialogues have been included and fairly communicated. Any errors in the reporting presented are those of the authors.

Background: Strategic Competition in CEE

This project proceeded from the assessment that U.S. extended deterrence is breaking down in Central and Eastern Europe (CEE). The cause is thought to be two-fold: Russia's introduction of limited-war military strategies backed by a credible threat of nuclear escalation; and diminished U.S. capabilities and allied doubts about NATO's ability to counter the Russian threat.

Increasingly, frontline CEE allies are confronted with the question of how to respond to new threats while they are supported only partially or belatedly by Western militaries. They are now considering bolstering their conventional capabilities through the acquisition of advanced offensive weapons or the placement of NATO tactical nuclear weapons and Ballistic Missile Defense on their soil. This is a novel security dynamic for post-Cold War CEE that could have a significant bearing on future regional stability.

More than any region, Central and Eastern Europe symbolizes America's ability to stabilize and transform troubled regions in the modern era. In the post-Cold War period, the United States has steadily scaled back its military presence in Europe. Facilitating this transition was the collapse of the Soviet Union and the eastward expansion of the European Union (EU) and NATO. At seemingly low strategic cost, America shifted its finite forces to other global theaters—notably the Middle East and Western Pacific. This move was based on a two-part organizing assumption: (1) that the CEE space would remain a quiet strategic frontier due to the deactivation of Russia as a serious military power; and (2) that European NATO members backed by the U.S. nuclear deterrent would be able to quell any unexpected but presumably low-intensity threats on the European periphery.

Both assumptions have proven premature. By illegally annexing Crimea and invading mainland Ukraine, Russia has invalidated the foundational components of the post-Cold War European security settlement—namely, that sovereign borders were fixed; and that Russia would not invade its neighbors or take territory by force of arms. The breakdown of that settlement, one punctuated by war in Ukraine, has reactivated Europe's eastern frontier as a zone of military competition. At the same time, the principal mechanism that was meant to underwrite geopolitical stability in this region—NATO—is showing significant strains in both political unity and military capabilities. In raw numbers, capabilities, and war planning, the Western nuclear deterrent has been either static or on a downward trajectory. NATO's tactical nuclear deterrent in Europe will soon be unusable by Germany (due to scheduled aircraft retirements); and political leaders in other Western European allies are openly considering plans to evict NATO's nuclear deterrent from their countries. Despite the underlying rationale for these moves, the net effect has been to decrease the confidence of extended deterrence in the planning assumptions of frontline allies. The belief that America can and will defend its treaty allies, even at the risk of war or threats to the homeland, is increasingly doubted by allies and regional rivals alike.

Just as the U.S. capabilities in Europe are declining, those of Russia are increasing. Long discounted as backward, the Russian military has embarked on a military spending spree without precedent in the post-Cold War era. Between 2004 and 2014, Russia doubled its budgetary allocations on defense. These purchases of advanced military hardware peaked in 2013, when Russian spending reached 4.1 percent of GDP. This exceeded the United States (as a percentage of GDP) for the first time since 2003. The allocation of such defense resources is part of a long-term plan to modernize approximately 70 percent of Russia's armed forces by 2020. Unlike Russia's underwhelming invasion of Georgia in 2008, its well-executed military annexation of Crimea in 2014 showed a faster, more agile, and well-equipped Russian fighting force capable of evading the early warning networks of Western intelligence agencies.

While the Russian military is relatively small when compared to NATO militaries combined, it maintains an overwhelming advantage in the Eastern European balance of power. The Russian Army outnumbers all CEE NATO militaries combined by 3:1 in men and 6:1 in aircraft. Its advantage is especially strong in the Baltic region, where it has a 10:1 edge in land forces and maintains air superiority over NATO's northeastern corner. Moreover, Kremlin planners balance aggregate NATO-Russia conventional disadvantages with a highly publicized and aggressive

posturing of tactical and strategic nuclear forces. This includes the deployment of new, mobile MIRV-ed Intercontinental Ballistic Missiles (ICBMs); the modernization of nuclear ballistic missile submarines; the fielding of advanced theater ballistic missiles (TBMs) capable of evading most Western Air and Missile Defense systems, surprise nuclear drills, and war games to practice the use of nuclear weapons against CEE NATO states. Underscoring Russia's determination, President Vladimir Putin has stated his intention to defend the annexation of Crimea with his nuclear deterrent if western leaders intervened. The eagerness of Russian officials to discuss their nuclear deterrent is an almost casual occurrence – a notable change from the Cold War.

Equally important is the potential risk of nuclear escalation arising from limited warfare operations. As defined in this assessment, limited war is a conventional military attack characterized by the application of restrained force and political objectives for the purpose of achieving influence and control over a geographically-circumscribed area. Due to its inherently limited nature, aggressors in a limited war typically seek to avoid or prevent the injection of superior defensive capabilities into their theater of conflict. If such an event occurred, then a limited regional war could easily rapidly become a global one against a Great Power rival. Russia seeks to avoid this outcome when it comes to a potential conflict with all of NATO and/or the United States specifically. It was one reason why Russia relied on the use of anonymous “little green men” to achieve its operational objectives during the 2014 Crimean annexation. By cloaking the initial invasion in a fog of uncertainty, disinformation, and plausible deniability, Russia was able to mitigate the short-term risks of Great Power intervention before it could establish its territorial land grab as a *fait accompli*. In limited conventional operations such as the 2014 annexation of Crimea, the means and aims might be curtailed—but the dangers to an aggressor from the interventions of nuclear-armed Great Powers can be daunting.

The case of Russia's Crimean invasion is an illuminating one, as it underscores the embedded risks and uncertainties that the Kremlin faces when conducting limited conventional operations. The first risk to Russia was obvious: immediate, coordinated resistance from Ukraine's military. In the event that forces loyal to Kyiv actively contested the arrival of Russia's “little green men” in Crimea, the Kremlin may have been forced to escalate its attack using larger, less anonymous units to achieve its operational objectives. This would have eliminated the plausible deniability, which Russia initially relied upon to befuddle and confuse the early responses of Ukrainian defenders and Western political leaders. At the extreme end of this risk chain was the possibility of direct Western military intervention in support of Ukraine's territorial sovereignty in Crimea. The arrival of adversarial Western military assets into the theater Russia's limited war operations is a serious, ever-present danger to the Kremlin. Had Russia's limited assault on Crimea spiraled into a direct brawl with NATO forces, the resulting conflict could have exceeded the restrained use force and specific political objectives envisioned in the original invasion. Open war with NATO is an outcome that Russian doctrine seeks to expressly avoid in limited operations. Such a risk is very real from Russian perspective. If such a scenario became a possibility in 2014, Moscow may have been forced to consider a halt to the Crimean operation altogether. However, Russia also enjoyed another option for preventing Western forces from entering the battlespace in Crimea: the nuclear card.

Under Russia's existing doctrine, military planners allow for the use of tactical nuclear weapons in otherwise conventional, limited conflicts. This thinking grants Russia several distinct advantages over its potential opponents. The greatest advantage is vis-à-vis non-nuclear states. Lacking nuclear weapons of their own, such opponents can never match Russia's ability move up the escalatory ladder in time of war. And as long as actual nuclear powers (for example the United States) stay on the sidelines in a limited conventional war against a non-nuclear opponent, Russia never has to consider the possibility of a nuclear retaliatory strike. Should Russia ever lose the initiative in a limited conflict, and the threat of Great Power intervention becomes real, then its leaders can resort to a strategy of "escalate to de-escalate."

The underlying concept behind "escalate to de-escalate" is relatively simple. The idea postulates that Russia can prevent or halt the arrival of conventional U.S. and/or NATO forces into a battlespace (e.g. "de-escalating" the conflict) by first "escalating" it through the first use of nuclear weapons. Viewed by outsiders, this idea might seem severe, preposterous, or even irrational. However, when viewed from inside Russia's strategic culture, where the line between conventional and nuclear forces is less distinct than in the West, then "escalate to de-escalate" is an eminently reasonable option for preventing Great Power war. Even inside the limited, conventional context of the 2014 Crimean operation, Putin has stated that he was prepared to utilize Russia's nuclear forces. While such weapons were never employed, this willingness to consider the nuclear card in a limited war setting speaks to the different conceptual approach that Russia applies to its nuclear stockpile in the modern battlespace: everything is on the table. Perhaps more troubling is how Russia's thinking on limited war and nuclear weapons can influence the strategic calculations of CEE decision-makers. Unlike ten or twenty years ago, war planners in these states must once again contend with the possibility that Russia might employ nuclear weapons to alter the outcome of a conflict.

One immediate take-away from this survey of the CEE strategic environment is that strategic competition is back. The proliferating number of threats to CEE allies, and the subsequent breakdown of extended deterrence, are now driving NATO's most exposed members to invest in alternative military options and capabilities. In some cases, these plus-ups are a complement the traditional Euro-Atlantic security foundations – and hedge against their failure in a future crisis. Poland has already begun boosting its defenses with newer and cheaper conventional technologies like "Anti-Access/Area Denial" (A2/AD) to raise the price of Russian military incursions. Some countries are investing in regional alliances such as the Visegrád Group, which has accelerated its plans to form a Battle Group, or the Nordic-Baltic Group, which has drawn in greater security investment from Sweden and Poland. Some countries are investing in regional alliances such as the Visegrád Group, which has accelerated its plans to form a Battle Group, or the Nordic-Baltic Group, which has drawn in greater security investment from Sweden and Poland. Some governments, seeking to avoid conflict, are pursuing some measure of neutrality to try and reduce political and economic exposure to Russian pressure. The most risk averse governments have muted their criticisms of Moscow and urged the lifting of economic sanctions in order to avoid involvement in future conflicts. It is likely that the Ukraine crisis and growing Russian nuclear aggression will only intensify these diverse changes to the CEE region's political responses.

The emerging CEE security dynamic has brought attention to the underexplored and understudied regional dimension of nuclear strategic stability. Since the end of the Cold War, a growing nuclear imbalance has placed nuclear authoritarian states such as Russia at a strategic advantage, allowing Moscow to use its nuclear position to threaten and coerce its neighbors.

Additionally, after successful application in Crimea, limited war has now become Russia's preferred method of military attack and is well-suited to challenging small, exposed NATO member states in the Baltic region. While limited war is designed and employed to elicit a restrained conventional military response (or none at all), it has become apparent that a successful conventional response in a CEE scenario may have nuclear implications. If conventional capabilities are considered triggers for a limited Russian nuclear attack, then non-nuclear regions like CEE must consider ways to adequately deter potential attacks through current and new conventional military capabilities, especially in the absence of a strong external deterrent.

While most studies of nuclear strategic security focus on the U.S.-Russian nuclear dynamic, it is often forgotten that U.S. allies also play a critical role in deterrence. In an attempt to navigate an uncertain and tumultuous environment, some CEE states have begun trying to determine ways to stabilize the region on their own, and through the only means they have available: conventional deterrence capabilities. What's more, questions are emerging about what U.S. allies are doing to counter major threats of limited conventional attacks and nuclear escalation, and if and how those efforts are affecting (strengthening or weakening) nuclear strategic stability.

On the frontline of an increasingly dangerous strategic environment, the military behaviors and actions of CEE allies can offer valuable insight into which options have been most successful in strengthening strategic stability, and which ones have not. Little is known about which military options, defensive and offensive, are or could be successful deterrents to the Russian nuclear threat or conducive to stabilizing the regional security environment. More dangerous, and equally under-analyzed, are the options that might be considered an existential or strategic threat to Moscow.

Track II Dialogues

The Center for European Policy Analysis (CEPA) proposed the Strengthening Strategic Stability in Central and Eastern Europe Initiative in an effort to increase public-policy understanding of the interplay between new Russian warfare techniques and emerging counter-strategies of CEE states; and to highlight the role of ally- and U.S.-level deterrence options for contributing to regional and global strategic stability. To do so, CEPA organized Track II Strategic Dialogues in Washington, D.C. and Warsaw, Poland to bring together top U.S. and CEE security and defense experts to assess these issues.

At these discussions, the implications of the decline in U.S. extended deterrence, as well as how CEE deterrence strategies can support extended deterrence and counter new threats were discussed, with the hope that novel ideas about helping the U.S. and its allies avoid a major war on disadvantageous terms would be developed.

The Problem: Russian Limited Warfare

On the problem of limited war and Russian tactical nuclear doctrine in CEE and its eastern frontier, there was a degree of consensus between CEE experts and their U.S. compatriots. Russian limited warfare strategy is viewed in the Baltics and Poland as fully developed, backed by credible capabilities, and willingly utilized by a predatory government. Experts from the United States largely agreed with this assessment, but had more moderate views on the likelihood of open Russian military incursions into NATO member territory. Consensus was also found on the threat posed by Russian tactical nuclear doctrine and the erosion of a credible American nuclear deterrence in the CEE region. However, the American experts present noted that their views on the nuclear dimension of the Russian threat are in the minority in the United States, where there is widespread doubt over the severity of the Russian nuclear threat. Both groups noted that a lack of clarity on the issue severely impedes the debate.

The Baltic representatives, as well as those from Poland, conveyed a developed understanding of Russia's limited war strategy and the role of non-strategic nuclear weapons within it. Their assertion is that Russian limited war backed by credible nuclear threats is not a conjecture – the Gerasimov doctrine¹ is real – and that both nuclear and conventional warfare are interwoven. Russia treats information operations, sub-conventional warfare, conventional warfare, and nuclear warfare as interdependent. Furthermore, these forms of warfighting are viewed as being applicable to a range of scenarios, and can be mixed and matched as the situation demands. In this sense, Russian warfare does not progress linearly from subversion to sub-conventional to conventional to nuclear, instead, strategies and capabilities are used as the situation demands. The United States and its CEE allies must also learn to be flexible in their counter-planning.

The (current or future) deployment of specific weapon systems to the western military district of Russia were pinpointed as indicators of Russia's intent. For example, the introduction of the S-300 and S-400 systems into a threatened region should be seen taken as a warning sign. Russia has the advantage of focusing on a single region of security competition, and will attempt to overmatch both CEE states, and the NATO forces backing them, as a form of intimidation. These systems not only complicate the ability of NATO to carry out conventional air missions and degrade the utility of even 4th generation fighters, but they also are essential for protecting Russia's nuclear capability. Tracking the deployment of these systems and finding innovative ways to degrade their usefulness – as well as ways to signal this capability without overplaying our hand – are important tasks that the United States and its CEE allies must be capable of doing.

Both U.S. and CEE experts observed that escalation is not inherently bad in the CEE region – indeed, it can help force a decisive intervention by NATO. The problem with escalation arises from the United States current lack of escalatory flexibility in the CEE region. Essentially, the United States must race to a high level of escalation to counter a much lower military threat from Russia. This fact is exploited by Russia to chip away at the credibility of the United States as a member of the NATO alliance – Russia may want the United States to overreact. An example of this is the positioning of Iskander-M missiles in Kaliningrad or Pskov. The distinction is

1. A somewhat ill-defined term, used here in reference to hybrid or non-linear warfare.

irrelevant-- both can hit frontline targets. The true purpose is to test Western reactions and possibly to provoke the United States and the European Union (EU) in the hope that Russia will be able to exploit political reactions that carry little military substance.

On the subject of Russian non-strategic nuclear weapons (NSNW) employment during a military crisis, there is some disagreement regarding Moscow's intentions. Experts from the Baltics stated that Russia envisions six uses for its NSNW arsenal: (1) a single isolated demonstration strike; (2) an intimidation demonstration strike; (3) singular destruction of concentrated land forces; (4) intimidation/escalation strike(s); (5) intimidation/retaliation strike; and (6) the "end of the world." Some of the United States experts observed that five of these six potential strikes are intended to demonstrate resolve and to gain escalation dominance. To them, the role of NSNW seems to be conflict termination, not to gain the advantage on the battlefield as envisioned in Cold War scenarios. Their initial position was that perhaps deterrence is more stable in CEE than previously thought.

The Polish experts countered by stating this assessment is too optimistic for several reasons: a credibility gap on the part of the United States nuclear commitment; Russia's ability to conduct operations below thresholds that trigger an alliance response, and; an unrealistic reliance upon mutually assured destruction. One U.S. expert agreed with this last idea and pointed out that the United States reliance on the nuclear triad is too high. The United States has underinvested in the maintenance and modernization of its nuclear triad due to the domestic issues trumping security concerns. It was posited that, until this trend is reversed, a stop-gap measure could be to increase readiness and training of the United States dual-use capable aircraft – something not currently being done.

A final area of discussion on this topic detailed the strategic advantage held by Russia. The United States and CEE experts agreed that Russia has the benefit of being a unitary actor up against an alliance of whose main security guarantor is a continent away. The distance factor gives Russia an obvious advantage, yet the nature of any alliance gives Russia the opportunity to continuously erode solidarity and confidence. Both groups agreed that the United States is at a disadvantage in the current security competition, since it must work to support a diverse array of national interests and security needs from a significant distance, while Russia possesses a significant degree of freedom to choose the time and place of their provocations.

CEE Deterrence Options

Discussion on the role of CEE conventional deterrence – in responding to the Russian nuclear threat, in operating in a limited war scenario, and in ultimately achieving nuclear strategic stability – was wide-ranging. The Baltic experts noted one prominent barrier to expanding defensive postures in the CEE region – political complications. In Europe, the general political attitude downplays the role of a strong military for national security. The trend in CEE is to think and act more like Western European states – presumably to both further integration into the EU and to avoid conflict. While CEE still values extended deterrence, this is taken somewhat for granted. Extended deterrence is central to their security, yet the removal of tactical nukes from Germany and the decrease in both available weapons and delivery systems has eroded the

credibility of extended deterrence. Despite these vulnerabilities, CEE politicians are wary of actions that could alienate them from economically powerful EU states to the west.

Aside from this political barrier, the Baltic experts had several policy recommendations that they believe would be effective at countering Russian influence, if the political will in their own countries and the U.S. can be mustered. First, the United States should push for Russia to live up to its stated commitment to the Prague agenda (decreasing nuclear stockpiles). Second, the United States needs to modernize its nuclear triad with a focus on fulfilling the missions needed for extended deterrence. Third, the United States ratio of tactical-to-strategic nuclear weapons needs to be reworked – the goal being to allow for more escalatory levels. Fourth, the EU and the United States need to push Russia to abide by the Treaty on Conventional Armed Forces in Europe so as to bring increased transparency to the conventional balance in the region. Finally, there is an increasingly pro-Russian attitude in some NATO member states which hurts the position of both the CEE region and the United States – this trend needs to be reversed.

Some CEE experts provided a discussion on the possibility of CEE states acquiring their own nuclear weapons, specifically Poland. The basic requirements that Poland would have to meet if they were to successfully develop a nuclear deterrent were presented. For such a drastic step, Poland would need to develop a positive political environment at home, and develop political support in Western Europe. The deterrent itself would have to be numerous enough to survive a preemptive strike. An independent nuclear doctrine appropriate for Poland's strategic position would have to be developed. Finally, once in place, Poland's nuclear deterrence must have enough "shots" for both first and second strikes against Russia. In their opinion, meeting these requirements is unrealistic and therefore a Polish nuclear program is not feasible. There were some objections from the Polish experts, though they recognized that the debate in their country is by no means concluded. Their claim is that Poland could in fact acquire nuclear weapons without going through the strenuous requirements of a domestic nuclear program by joining NATO's nuclear sharing arrangement. However, the U.S. experts countered that this would not be possible in the short term due to entrenched resistance in the EU to expanding the nuclear sharing arrangements, and questions about the procurement and usefulness of dual-use capable aircraft by Poland.

Several Baltic experts, based on the previous assessment, then asked, if the response to Russian limited nuclear war is NOT to acquire your own, then what should frontline states do? To answer this, they floated three ideas. First, if nukes are not an option, then CEE states should put all of their resources towards conventional deterrence. Second, in addition to bolstering their conventional capabilities, the CEE states should develop credible sub-conventional capabilities – equipping, training, and posturing a force highly capable at insurgency and special operations. Instead of just handing out guns to the general population, these units (civilian, reserve, and full time) must be trained, equipped, and commanded directly by the military. Finally, both the first and second suggestions require that frontline societies acquire a far greater amount of "resilience" by hardening their society against Russian political and military pressure. U.S. and CEE experts both agreed that these suggestions bear some merit and should be considered not only at the national level, but also at the international level in organizations like NATO.

Baltic experts expanded on this general line of thought, and considered the role of CEE conventional deterrence in responding to the Russian nuclear threat, in operating in a limited war scenario, and in ultimately achieving nuclear strategic stability. This conversation started by asking “what leads states to pick territorial defense as an option?” Flowing from the previous discussions, and the assumption that territorial defense is the best conventional deterrence strategy for frontline states in CEE, they stated that the combination of threats and geography are what drives this deterrence strategy. For frontline states bordering hostile great powers, there is no recourse to a deterrence by denial strategy relying solely upon their individual capabilities. Frontline states are forced to either accommodate the hostile powers demands, form a defensive alliance with other regional powers, or seek the security support of another great power. Accommodation with Russia by these frontline states means surrendering control (to a greater or lesser degree) over their foreign policy, security arrangements, economic independence, political independence, and system of governance. Frontline states in CEE on the whole have little appetite for appeasing Russia due to a variety of reasons – most prominently negative historical experiences – though this stance is softened somewhat in states that do not share immediate borders with Russia.

The group agreed, and noted that an independent regional security alliance is unrealistic for several reasons, including existing international treaties and membership to the EU. There is also the vast asymmetry in conventional and nuclear capabilities between the Russian military and the sum of current and projected CEE conventional forces. In any case, the question was viewed as largely academic, since the CEE states have already chosen to join NATO. The difficulty in creating an effective territorial defense was agreed to be largely due to domestic politics. Experts from CEE noted that this is not an insurmountable problem, noting that Finland is a good example of a frontline state dealing with this political difficulty. However, even Finland is now looking to outside help to guarantee its security – a phenomenon which indicates Helsinki’s perception of the Russian threat to Finnish sovereignty.

Group discussions identified four strategic requirements of territorial defense. First, military capabilities must match the expected threats. Second, these capabilities must be real and demonstrated. Third, capabilities must be tailored to the specific geographic environment of the state. Finally, all security branches must work together and towards the common strategy. If these four criteria are not met, then resources will be miss-allocated or wasted, and casualties will be high. Fulfilling all of these tasks requires a unified strategy, enduring political and military commitment, and access to necessary technologies. While agreeing in principle, the Baltic and Polish experts noted that there are still significant political barriers, not all of which are domestic, to achieving this level of cooperation.

The U.S. experts noted that Finland provides a good example of genuine territorial defense – albeit one that is facing increasing pressure. It can punish an aggressor and hold specific ground – key traits of territorial defense. This example is in contrast to the Baltic states, which lack a unified strategy. Lithuanian doctrine appears to be focused on escalating or pre-empting a conflict with Russia by shooting first. Doing so forces Russia to escalate as well, the logic being that increased Russian military involvement will force NATO to act. However, this approach risks presenting Lithuania as the aggressor. NATO members desperate to avoid conflict Russia

would likely use this as an excuse to slow or prevent a decisive response by NATO. Latvia is largely focused on maintaining internal security, relying on Russia, and de-escalation of potential conflicts. This approach could be effective in preventing the instigation of domestic unrest by Russia, but is perhaps overly dependent on the military support of NATO. Estonia is the closest to embracing a territorial defense similar to what we have discussed. Their doctrine embraces non-linear responses to Russian threats and they advertise that enemies will bleed if they contest Estonian territory. The risk here is that the preoccupation with inflicting damage on Russia risks escalating the conflict to a level where Russia decisively defeats the Estonian military challenge. It also faces the risk appearing as an aggressor.

In light of the points raised in the discussion, the group agreed that there is a clear need for methods of hybrid deterrence. Economic pressure, information warfare (including “Wikileaks” style disclosures of high-level corruption in the Kremlin), exploitation of social media, guerrilla warfighting capabilities, and strengthened conventional capabilities are all urgently needed in the CEE region. It appears that CEE states believe that Russian hybrid warfare should be countered with hybrid warfare measures of their own. Building up the resilience of the CEE populations is viewed as an essential measure. However, the CEE experts conceded that the United States should strongly discourage CEE states from engaging in any sort of preemptive military action against Russia, encouraging them to instead focus on defensive military measures, democracy promotion, and information warfare. There is also a strong desire to close treaty loopholes and to call-out outright violations by Russia. Baltic experts recommended that the US seriously threaten to withdraw from the Intermediate Nuclear Forces Treaty to force Russia into compliance. Finally, it was agreed that building political sympathy and support in the EU (and in the United States) for the CEE region will be necessary for the success of a conventional arms buildup in the CEE region, and for forcing Russia into compliance with its treaty obligations.

NATO: East of the Vistula?

Discussion on the role of NATO capabilities in CEE and potential difficulties to their use revealed a strong focus on the political problems perceived to be tied to their deployment, and the widely held belief that U.S. capabilities overmatch those of Russia. There was also a widespread recognition that the past and current NATO focus on expeditionary missions has led to a decline in its territorial defense capabilities. Overall, U.S. experts were keen to point out that the military balance does not favor a timely NATO response to open Russian aggression, and that the alliances reliance on the nuclear deterrent is misplaced. CEE experts agreed on these points, but seemed confident that a gradual change in posture would prove to be successful.

U.S. experts observed that, collectively, the focus on expeditionary forces by all NATO members was a strategic mistake. The contention is that reliance on deploying large forces into contested areas will not work against an adversary like Russia. The United States and other NATO members will need time to get into the battlespace, and we need escalation of the conflict to get the political commitment necessary. In the near-term, frontline states need to prioritize denying airspace. Doing so will buy time for ground forces countering Russian incursions, and force Russia to escalate their involvement. This escalation will clarify the military situation and help

activate Article 5. Unfortunately, time and space are two commodities that CEE states do not and will not have in the event of a conflict with Russia. Therefore, the United States and NATO should move toward forward deployments. The current response time does not favor the NATO alliance.

Baltic experts built on this point, noting that while forward basing is one of the potential answers to the problem of defending CEE states, it has several drawbacks. First, forward deployments are and will be, seen as provocative in Moscow. Second, most of the EU and some CEE states will also view the forward basing of United States forces as needlessly provocative to Russia. Third, which capabilities are forward deployed will have to be carefully considered – U.S. long-range capabilities are especially concerning to Russia and their presence in the region could risk provoking the very response we wish to avoid. Nonetheless, it was agreed that the fact remains that U.S. reinforcement capabilities are vulnerable. Some degree of forward basing was viewed as becoming increasingly necessary.

U.S. experts delved into the specific goals of forward basing. They argued that reassuring allies is a different goal than defeating Russia. If Russia's goals are simply to create chaos along their periphery, then we can focus on building resiliency. However, if Russia aims to create dependency and restore to a large extent its sphere of influence in CEE, then we need more significant capabilities in the region. In either case, moving bases should not make Russia more aggressive than it was before, however, it will put internal pressure on NATO. The approach should be to start small and build up U.S. capabilities in CEE gradually. This will allow us to gauge not only the reaction of Russia, but also of NATO partners. As the EU changes post-Brexit, its security concerns will shift more and more to reflect the consensus of its largest members. Finally, the U.S. experts noted that Washington must ensure that efforts to build-up territorial defense do not alienate the larger nations of the EU.

U.S. and CEE experts agreed that if large EU members have no appetite for increased defense spending and military exercises then the burden will increasingly fall on the frontline states. Long-term, if large EU members become less inclined to participate in NATO, there will be a natural reaction by the United States to become less-inclined to intervene. The temptation by some in the United States will be to turn a blind eye toward Russian revisionism that does not blatantly challenge the security of the United States. This was seen as adding another dimension to the importance of forcing an appropriate Russian escalation by the militaries of CEE states in the event of a crisis.

On the topic of developing regional defensive capabilities, the U.S. experts put forward several examples that would be useful in the pursuit of territorial defense. Broadly, the duplication of conventional capabilities by CEE states is viewed as good since it will prevent gaps in capabilities. Increased munitions production in CEE states is also desirable since it decrease their reliance on imports. For NATO forces in the CEE region, sensor fused weapons will dramatically increase the effectiveness of even small deployments. EMP capabilities will also be very useful, since they would totally blind the Russians in the event of a crisis. This provides a significant escalatory option that does not require nuclear weapons. Ballistic missile defense is

essential, not just for its limited damage mitigation ability, but also for the accurate and timely intelligence these systems provide to both the military and the political leadership in the region.

Finally, the group discussed some of the future security trends in the EU that will affect deterrence efforts. It was agreed that the United States and the EU should expect continued slow economic growth, a two-track European project, unclear consequences from Brexit, tension over the migration issue, and continuous Russian pressure. The broad implications for the EU would be slow decision-making, a decline in national predictability, unresolved questions on the integration of migrants, stalled economic integration of new EU members, and unlikely further EU enlargement. All of this will result in divisions that Moscow can exploit. In sum, the EU will be more focused on internal issues than on defense spending. As a result, CEE states will need to become increasingly self-reliant and focused on buying time for consensus to emerge. If territorial defense is the way forward, then CEE states must coordinate their defensive strategies to ensure that no single state becomes a weak-point for Russian aggression. However, the problem of the Russian nuclear threat will not be solvable by the CEE states – they must continue to rely on American extended deterrence.

The Enigma: Russian Non-Strategic Nuclear Weapons

Over the course of the Track II Dialogues it became increasingly clear that the nuclear dimension of the strategic competition in the CEE region was somewhat of an enigma. While the existence of Russia's non-strategic nuclear weapons, and their importance to Russian military and political leaders, is not in question, the true role these weapons play in Russian military and diplomatic planning is ambiguous. Are these numerous and varied nuclear weapons retained by Russia due to institutional inertia, political infighting, and as insurance against conventional inferiority as much academic literature suggests? Are these weapons fully incorporated into military planning and diplomatic strategies? An apparent disconnect between published Russian military (and academic) literature and official government policy documents – along with a lack of publicly available data – has thus far prevented decisive analysis from being made. While the following research and analysis is by no means exhaustive, the project team has attempted to provide some clarity to the debate by describing the key variables which Russia must control in order for limited nuclear conflict to be successful; examining official Russian military doctrine as well as unofficial debates; cataloging known Russian NSNW capabilities and integration into the armed forces; and analyzing the role of NSNW in Russia's foreign policy.

Frontline allies in the CEE region are convinced that Russia has a lowered threshold for nuclear weapons use and that Russia is basing non-strategic nuclear weapons (and delivery systems) near their borders. Experience in recent years seems to support at the very least Russia's willingness to threaten states in the CEE region with nuclear attack. To support threats of nuclear blackmail, brinkmanship and limited nuclear war Russia has developed both a military doctrine that permits the use of nuclear weapons in conventional conflicts of a regional scope, and the technical capability required to conduct limited nuclear strikes. By demonstrating resolve through communicating nuclear intentions, displaying nuclear capabilities, and developing requisite

nuclear military capabilities, Russia has managed to convince many European states that even a localized military conflict with Russia risks inviting a nuclear response.

Key to Russia's doctrine of "escalate to de-escalate" are the class of nuclear weapons known in Russia as "non-strategic nuclear weapons" (from here on, NSNW) or "tactical" in the United States and Europe. Neither NATO experts nor even experts in Russia agree on what precisely constitutes a NSNW—but they are generally understood as nuclear weapons designed to be used on the battlefield in proximity to friendly forces. This requires the weapon yield to be, in general, lower than that of weapons designed to destroy strategic targets. The range of the delivery vehicle has also been proposed as a delineation between NSNW and strategic weapons, the logic being that short-range weapons (300–800 km) would be primarily used to support troops in the field. However, some have pointed out that the difference in destructive effect between a NSNW and a strategic nuclear weapon detonated in, for example, Warsaw, is almost irrelevant. Hundreds of thousands would die. Therefore, defining a NSNW could perhaps be determined by the nature of the target, not the yield or range of the weapon in question.²

Russian, as well as U.S. stockpiles of NSNWs, are not limited by the types of arms control treaties that constrain strategic nuclear weapons. The only successful attempts to reduce NSNWs were the bilateral and voluntary Presidential Nuclear Initiatives of 1991, which did not include verification measures. On a voluntary basis, both countries drastically reduced their NSNW stockpiles, with the United States continuing reductions into the 2000s. In contrast, Russia seems to have stalled in cutting its NSNW stockpile since the early 1990s. While open-source estimates vary, a conservative estimate is that Russia has about 2,000 operational NSNWs and 4,000 inactive NSNWs.³ In comparison, the United States has roughly 150 operational NSNWs in Western Europe and a further 350 reserve NSNWs.⁴ It is important to note that the difference between Russian and United States NSNW is not simply in numbers. The United States has one type of NSNW, the B-61 gravity bomb, available in three variants. The Russian stockpile includes land/air/sea-launched cruise missiles, ballistic missiles, air-to-air missiles, gravity bombs, nuclear depth charges and nuclear artillery.

The disparity in nuclear postures is mirrored in the balance of conventional forces between CEE's NATO member states and Russia. On the tail end of a mostly successful modernization program, the Russian armed forces are both qualitatively and quantitatively superior to any single or combined CEE military.⁵ Presumably, the security guarantees of NATO membership prevent a direct, conventional assault by Russian forces on a CEE NATO member. Yet Russian limited warfare techniques employed in the Crimea and eastern Ukraine have raised serious concerns about local "uprisings" orchestrated and supported by covert Russian military forces as a method of subverting the collective defense. These warfare techniques operate under layers of

2 Amy Woolf defines NSNWs as "...all weapons *not* covered by strategic arms controls treaties [SALT, START, Moscow Treaty 2002, and New START]..." Using this definition in the Russian context is useful because the Russian NSNW arsenal has a diversity of yields and delivery ranges, and an ambiguous target set. Amy Woolf, *Nonstrategic Nuclear Weapons*, Washington, D.C.: Congressional Research Service, 2017.

3 Sutyagin, Igor. *Atomic Accounting: A New Estimate of Russia's Non-Strategic Nuclear Forces*. London: RUSI, 2012. and Hans M. Kristensen & Robert S. Norris (2017) Russian nuclear forces, 2017, *Bulletin of the Atomic Scientists*, 73:2, 115-126.

4 Hans M. Kristensen & Robert S. Norris (2017) United States nuclear forces, 2017, *Bulletin of the Atomic Scientists*, 73:1, 48-57.

5 Sokolsky, Richard. *The New NATO-Russia Military Balance: Implications for European Security*. Washington, D.C.: Carnegie Endowment for International Peace, 2017. <http://carnegieendowment.org/2017/03/13/new-nato-russia-military-balance-implications-for-european-security-pub-68222>

conventional and nuclear deterrence (irregular-conventional-tactical nuclear-strategic nuclear), which seek to control the escalation of local conflicts to prevent the outbreak of regional or global war. In a scenario where covert Russian military forces were at risk of being routed current Russian doctrine would allow for the use of nuclear weapons to de-escalate the conflict and prevent a wider war from breaking out.

Using nuclear weapons to de-escalate a conflict seems counterintuitive. The discontinuity between conventional and nuclear weapons has created a lasting taboo against their use. Yet, by tailoring the nuclear damage done to the opponent, as circumstances require, Russian military planners believe they can create a military and political situation where it would be more advantageous for the opponent to cease military operations than to continue them. The use of a nuclear weapon is also a powerful demonstration of resolve and willingness to elevate the risk. Russia would be counting on the United States and its allies to back down from continuing the conflict, rather than risk an expanded nuclear war for the sake of what from the U.S. perspective are distant territories.

What Russia essentially envisages is a deterrence strategy heavily reliant upon the threat of limited nuclear use, a strategy that while hitherto theoretical nonetheless has distinct military and political requirements.⁶ Achieving deterrence through a strategy reliant upon limited nuclear use requires the credible communication of resolve and ability. Failure to convince adversaries of one's willingness to cross the nuclear threshold when vital interests are threatened, or to possess the requisite military technology, risks the failure of deterrence. These two requirements are related; developments in military technology may drive a willingness to accept political risk and vice-versa. Russia has made efforts to communicate its resolve in several ways, including: the public dissemination of its military doctrine, large-scale military exercises involving nuclear strikes against NATO members, nuclear arms control treaty violations, and ambiguous or direct nuclear threats. The ability to conduct limited nuclear strikes requires the capability to manage the unique escalatory pressures inherent to nuclear weapons. To this end, Russia has maintained a diverse arsenal of strategic and non-strategic nuclear warheads, developed accurate delivery systems, distributed its nuclear capability to all branches of the armed forces, and positioned these forces within range of U.S. and NATO targets.

Some have argued that Russia's reliance upon NSNWs for deterrence is a transitory phenomenon, one it will phase out as Russia rebuilds its conventional deterrence after the collapse and subsequent degradation of capabilities following the fall of the Soviet Union. The available evidence would seem to indicate otherwise; the mostly successful modernization efforts of the past decade have not corresponded with an increasing threshold for nuclear use. Instead, Russia has maintained a lowered threshold for the first use of nuclear weapons, has developed new nuclear strike capabilities, and has trained its armed forces to conduct nuclear strikes in conjunction with conventional operations. The following sections will seek to demonstrate that Russia's NSNWs are an integrated and useable component of Russia's military strategy. This capability is achieved through the credible communication of Russia's resolve to

⁶ A similar course was pursued under the "Flexible Response" doctrine by the Kennedy administration, and declassified documents reveal that the U.S. military and intelligence services simulated nuclear use below the level of strategic exchanges. See, for instance, Organization of the Joint Chiefs of Staff. *SCYLLA III-73: Final Report*. Washington, D.C.: Studies, Analysis, and Gaming Agency, 1974.

cross the nuclear threshold, and the ability to limit the technical escalatory pressures inherent in nuclear weapons.

Demonstrating Resolve

The widespread belief that nuclear weapons exist in a class all their own, that to use a nuclear weapon is to go beyond the pale, is a powerful deterrent to their very use. The speed, magnitude and certainty of destruction inherent to the physical properties of nuclear weapons—along with a 70-year tradition of non-use—have combined to create this “nuclear taboo.”⁷ Threatening to break this taboo is thus a powerful way for a state to signal the value of its interests and the depth of its commitment to those interests involved in a dispute or conflict. To possess credible nuclear capability and to communicate a willingness to use that capability—to incur the moral cost of breaking the nuclear taboo and to risk a spiral of nuclear escalation—is the ultimate expression of an asymmetry of interests between states.

Yet the risks involved in the use of nuclear weapons are so high that rival states doubt the commitment and credibility of a potential initiator of nuclear conflict. This doubt increases as the dispute at hand is far removed from the nuclear state’s perceived vital interests. Distance, that is, affects the credibility of the deterrent. After all, what sane leader would slaughter thousands for the sake of some distant territory or political slight? Thus, communicated threats and displays of power are key tools to convince the rival of one’s own commitment to the particular objectives at hand. This is nuclear brinkmanship, where the communication and credibility of intent are just as important as actual military capabilities. The mental battlefield precedes the physical battlefield, particularly in the case of nuclear interactions.

Since the ascendance of Vladimir Putin, Russia has paid attention to shaping the mental battlefield of its rivalry with the West. It has communicated its apparent willingness to engage in a nuclear conflict, set ambiguous boundaries to its nuclear doctrine, threatened adversaries through nuclear intimidations, and managed the escalation dynamics of local conflicts. It has achieved some degree of control over the psychological factors of nuclear conflict through various means, including the public dissemination of its military doctrine, large-scale military exercises involving nuclear strikes against NATO members, nuclear arms control treaty violations and ambiguous or direct nuclear threats.

Evolution of Russia’s Military Doctrine

The evolution of Russia’s military doctrine since the fall of the Soviet Union shows an increasing willingness to use nuclear weapons to secure Russia and its interests in the event of a military conflict. While these documents are closely related to the development of Russian military capabilities, their public release also serves as an important tool for communicating how Russian leadership conceptualizes its security situation and how it will be protected. These documents also communicate the notional circumstances under which Russia may cross the nuclear threshold. By setting ambiguous boundaries for using nuclear weapons, yet committing

⁷ Nina Tannenwald, *The Nuclear Taboo* (New York: Cambridge University Press, 2007).

to said use, Russia creates a “threat that leaves something to chance” which aids its deterrence strategy.

The first Russian Military Doctrine since the Soviet collapse was adopted in 1993. While this doctrine defined the mission of nuclear weapons as “the removal of the danger of a nuclear war by means of deterring other states from unleashing an aggression against the Russian Federation and its allies,” the doctrine implicitly dropped the Soviet “no first use” pledge by omitting it from the text. The document, approved by Boris Yeltsin, also noted the threat posed by the NATO bloc’s expansion into the former Soviet space, and the threat of possible American intervention in Russia’s area of influence. However, NSNWs were viewed as part of a strategy of massive retaliation, not as tools used to offset deficiencies in conventional forces or to de-escalate a regional conflict.

Before becoming Russia’s president, Putin played an important role in creating the 2000 Military Doctrine. The first Security Council of Russia meeting chaired by Putin commissioned a new military doctrine. Concerned with the failure of Russian strategic forces to deter NATO from intervening in Kosovo, as well as technological and manpower deficiencies, Russia compensated by assigning new missions to NSNWs. Nuclear weapons could now be used in regional wars, where a state or coalition of states pursues political goals through military means against Russia or its allies, as well as global war. The doctrine also allows the right to use nuclear weapons first, and in response to a conventional attack.

A 2003 white paper, *Aktualnye Zadachi Razvitiya Vooruzhennykh Sil RF*,⁸ refined the role of nuclear weapons in de-escalation by articulating that they would be used to inflict “tailored damage.” The capability to inflict tailored damage, which is subjectively unacceptable to the enemy and which exceeds the gains expected to be made through military force—is essential for de-escalation, since it is a limited response to a limited attack. Consequently, this implied the need for accurate, long-range delivery systems capable of carrying NSNWs.

Little information is available on the specific types of nuclear strikes Russia might conduct to de-escalate or terminate a conventional conflict. The only extant document that describes the strikes to be used in the escalate to de-escalate concept is short on specifics, but does provide a general impression as to how Russian military planners conceive the use of nuclear weapons to de-escalate. The following table is derived from V.I. Levshin, A.V. Nedelin, and M.E. Sosnovsky’s 1999 essay “On Employing Nuclear Weapons to De-Escalate Military Operations.” Despite its age, this document has continued to inform discussions on the role of non-strategic and strategic nuclear weapons in escalation scenarios, and thus can be viewed as the best available insight into how Russian military planners may plan nuclear strikes and under what circumstances.⁹

⁸ *Aktualnye Zadachi Razvitiya Vooruzhennykh Sil RF*. Moscow: Voeninform, 2003.

⁹ Quinlivan, James T. and Olikier, Olga. *Nuclear Deterrence in Europe: Russian Approaches to a New Environment and Implications for the United States*. Washington, D.C.: RAND, 2011.

Figure 1 Russian Nuclear Escalation

Type of Strike	Target Set
Demonstration	Single strike in desert or water areas or minor sparsely manned or unmanned military facilities.
Intimidation-Demonstration	Single strikes to transportation hubs or engineering installations to decrease possible area of military operations and reduce effectiveness of opposing forces without causing high losses.
Intimidation	Several strikes against the main opposing force in a single operational area to change the balance of forces and/or to neutralize an enemy breakthrough.
Intimidation-Retaliatio	Several strikes against several opposing force groups to remove the threat of a rout, to change the balance of forces in an area, and to eliminate a large enemy breakthrough.
Retaliation-Intimidation	Many strikes against opposition forces across an area to rout them and achieve a radical revision in the military situation in one's favor.
Retaliation	Many strikes against opposition forces (and possibly economic targets) within the entire theater of war, coordinated with all available forces and assets in the theater, and the possible use of strategic nuclear forces.

Source: V.I. Levshin, A.V. Nedelin, and M.E. Sosnovsky. "On Employing Nuclear Weapons to De-Escalate Military Operations."

The 2010 and 2014 Military Doctrines both attempted to lower the level of conflict where nuclear weapons may be used to "local wars," With local wars being defined as those where one or several states attempt to achieve limited goals through military force. An example of this would be the Russo-Georgian War of 2008. Known as the "Patrushev Doctrine" after its major proponent Nikolai Patrushev, it called for preventive nuclear strikes in situations critical to Russian national security, even in small-scale wars. However, pushback from the military and expert community barred the Patrushev Doctrine from being formally included in the 2010 Military Doctrine. Instead, the text stated that "the Russian Federation reserves the right to utilize nuclear weapons in response to the utilization of nuclear and other types of weapons of mass destruction against it or its allies, and also in the event of aggression against Russia with the use of conventional weapons when the very existence of the state is threatened."¹⁰ The 2014 Military Doctrine kept this section, but added that the "decision to use nuclear weapons is taken by the President of the Russian Federation."¹¹ Ultimately, neither the 2010 or 2014 doctrines significantly changed the de-escalation role of nuclear weapons, but they did provide greater detail about the conditions under which they may be used.

Military Exercises

Military exercises are an important tool for proving strategic and operational concepts, training troops, improving readiness, and integrating forces. They also can serve as an effective method for signaling intentions and commitment during times of peace—or during a crisis. Since 1999,

¹⁰ Russia. *The Military Doctrine of the Russian Federation*. Moscow, Russia: Security Council of Russia, 5 February 2010.

¹¹ Russia. *The Military Doctrine of the Russian Federation*. Moscow, Russia: Security Council of Russia, 26 December 2014.

Russia has carried out military exercises involving nuclear strikes to de-escalate a conflict. Sometimes these exercises are timed to occur simultaneously with the military exercises of potential competitors, or snap exercises are called during a developing crisis. A review of notable Russian military exercises shows not only that Russia demonstrates a willingness to use nuclear weapons in a conflict, but that it is also willing to use them as a coercive tool.

Figure 2 Major Russian Military Exercises, 1999-2015

[illegible]

Fall 2011	Irregular	-	X	X	X	-	-	-	-	-	-	-	-	Took place during the Arab Spring revolutions.
Tsentr 2011	Regional	-	X	X	-	-	-	-	-	-	-	-	-	
Kavkaz 2012	Local/Regional	-	X	X	X	-	?	?	-	X	-	X	-	
Zapad 2013	Regional	-	X	X	X	-	-	-	X	X	-	X	-	US considers military intervention in Syria after gas attacks.
Feb. 2014	Local	-	X	X	X	-	-	-	-					Inspection and drills in Western military district occurred before seizure of Crimea.
Vostok 2014	Regional		X	X	X	X		X	X	-	-	-	-	Concurrent with Russian Operations in Ukraine.
Tsentr 2015	Regional	-	X	X	X	-	-	X	-	-	-	-	-	Expanded Russian Military Presence in Syria.

Sources: Sokov, Nikolai. "Russia's Nuclear Doctrine." NTI.org <http://www.nti.org/analysis/articles/russias-nuclear-doctrine/> and Van Herpen, Marcel H. *Russia's Embrace of Tactical Nuclear Weapons*. Paris: The Cicero Foundation, 2011. PDF e-book. http://www.cicerofoundation.org/lectures/Marcel_H_Van_Herpen_RUSSIA_EMBRACE_OF_TACTICAL_NUCLEAR_WEAPONS.pdf and Norberg, Johan. *Training to Fight: Russia's Major Military Exercises, 2011-2014*. Stockholm: Swedish Defence Research Agency, 2015. PDF e-book. <https://www.foi.se/reportsummary?reportNo=FOI-R--4128--SE> and NTI. *Russian Nuclear Chronology*. Monterey: James Martin Center for Nonproliferation Studies. PDF e-book. http://www.nti.org/media/pdfs/russia_nuclear.pdf?_id=1316466791

Looking at this series of large-scale exercises, we make the following observations:

First, since 1999, exercises have regularly integrated nuclear weapons with conventional forces.

Second, when nuclear weapons are used in these exercises, it is at the regional level of war, consistent with the minimum level of conflict for nuclear use according to Russian doctrine.

Third, the simulated use of nuclear weapons often takes place at a late stage in the simulated conflict.

Fourth, simulated targets of a limited Russian nuclear strike are of five main types: military installations in NATO countries, unknown targets in the continental United States, unknown targets in European countries, carrier groups sailing in international waters, and U.S. military installations abroad.

Fifth, all three branches of the Russian military and the strategic missile force have fielded nuclear or dual-use systems as part of large-scale exercises.

Sixth, the long-term trend of exercises with simulated limited nuclear strikes indicates that the concept is firmly integrated with Russian military planning.

Seventh, many large-scale exercises saw the opening of a second front in a region not directly related with the initial conflict at a late stage in the exercise—indicating a willingness to de-escalate by putting pressure on nations outside the area of conflict.

Eighth, Russia has consistently and knowingly timed the initiation of large-scale exercises to intimidate local states, influence negotiations, signal a willingness to use force, or to prepare for an intervention. Less aggressively, Russia has conducted large-scale exercises during period of political instability or domestic crises to both maintain public order and deter interference by outside powers.

Conducting large-scale military exercises that involve the simulated use of nuclear weapons against military and, possibly, civilian targets to de-escalate a conflict is an important signal from Russia that it is willing to cross the nuclear threshold. Even when exercises do not include a (publicly) known nuclear strike, their inclusion of numerous dual-use platforms lend an ambiguous nuclear dimension to many such exercises. Synchronizing these large, ambiguous nuclear exercises with periods of diplomatic tension or covert military actions cements the fear that Russia may be willing to use nuclear weapons to achieve its goals. This dynamic furthers short-term goals of the particular crisis occurring at the time of the exercises, but also increases in the minds of the Western allies the perceived risk of challenging Russia.

Nuclear Threats

In recent years, Russia has used its nuclear arsenal for coercion as well as deterrence. It has done this by communicating threats to the European leaders of both NATO and non-NATO states, should they cross certain military thresholds. During the 2014 Crimean crisis, Putin made several implicit and explicit nuclear threats against NATO, and in 2015 explicitly stated that Russia was

ready to put its nuclear weapons on alert during its annexation of Crimea.¹² In 2015, Russia's ambassador to Denmark threatened to target that country with nuclear missiles if it joined the NATO missile defense program. Also in 2015, Russian envoys warned Moscow would use nuclear weapons if NATO moved forces into the Baltics. Implicit nuclear threats were made against Romania and Poland in 2016, in response to their participation in the NATO missile defense program. Also, that year, Russia threatened Norway with nuclear weapons for hosting 330 U.S. Marines. In 2017, Putin implicitly threatened a nuclear attack on Sweden if it joined NATO.¹³ These threats have occasionally been made through simulated nuclear strikes, such as those against Sweden in 2013¹⁴ and Poland in 2009.¹⁵ As Russian foreign policy has become increasingly assertive, its proclivity to make nuclear threats has correspondingly risen. Indeed, the success of Russian military interventions has tracked with increased confidence in the effectiveness of nuclear blackmail for achieving favorable conflict termination and the deterrence of a decisive response by the NATO alliance. The nuclear threat has also played a role in preventing the United States from deploying forces within the border of CEE states that are members of NATO. Furthermore, nuclear threats have been effective – so far – at deterring states from pursuing NATO membership as insurance against Russian aggression. As Russia continues to exploit divisions in the EU, further nuclear threats can be expected.

Managing Nuclear Escalation

The technical characteristics of nuclear weapons create strong military pressures to escalate to larger yields at both the strategic and tactical levels of war fighting. In a regional contest, attempts to manage conflict escalation by limiting weapon yields and the quantity used will rapidly deteriorate due to these technical characteristics and how they interact with the battlefield. These pressures are created by the two most important distinctions between conventional and nuclear weapons: effect and efficiency. The inherent escalatory dynamics arising from these two technical characteristics are amplified when non-strategic nuclear weapons are used on the battlefield—especially when there is an asymmetry of forces.

While conventional weapons owe their destructiveness to the effects of blast pressure—which may be augmented by projectiles, fragmentation and accurate delivery—nuclear weapons rely upon both blast pressure and direct radiation for their lethal effect. A conventional bomb and a nuclear bomb of equivalent yield may produce similar blast pressure, but the direct radiation emitted by the nuclear weapon creates superior anti-personnel and terrain denial effects. There is thus a discontinuity in the effect of the nuclear weapon, which gives greater lethality and persistence to nuclear weapons.

To counter the effects of NSNW use, the logical response is to disperse forces over a wider area or to shield them in heavily fortified emplacements. This acts to minimize the costs incurred by

12 Durkalec, Jacek. *Nuclear-Backed "Little Green Men."* *Nuclear Messaging in the Ukraine Crisis*. Warsaw: PISM, 2015.

http://www.pism.pl/files/?id_plik=20165

13 Sharkov, Damien. "Putin Vows Military Response to 'Eliminate NATO Threat' If Sweden Joins U.S.-Led Alliance." *Newsweek*, 2 June 2017.

<http://www.newsweek.com/vladimir-putin-vows-eliminate-nato-threat-sweden-joins-619486>

14 Oliphant, Roland. "Russia 'Simulated a Nuclear Strike' Against Sweden, NATO Admits." *The Telegraph*, 2 April 2016.

<http://www.telegraph.co.uk/news/worldnews/europe/russia/12139943/Russia-simulated-a-nuclear-strike-against-Sweden-Nato-admits.html>

15 Day, Matthew. "Russia 'Simulates' Nuclear Attack on Poland." *The Telegraph*, 1 November 2009.

<http://www.telegraph.co.uk/news/worldnews/europe/poland/6480227/Russia-simulates-nuclear-attack-on-Poland.html>

an NSNW strike, and to maximize the persistence and territorial control of deployed forces. The counter to this strategy is to increase the yield of the NSNW—increasing the area and thus number of forces destroyed by the blast pressure and radioactive effects, as well as destroying or incapacitating fortified elements. Additionally, an NSNW strike may be used to deny terrain to the enemy and forcing it into smaller areas, thus increasing the concentration of targets destroyed by subsequent conventional or nuclear attacks.

The property of efficiency also creates strong incentives to escalate to higher yields with nuclear weapons and, conversely, to smaller yields for conventional weapons, specifically, the efficiencies of weight and yield. Pound for pound, a nuclear weapon delivers greater destructive effect than a conventional explosive. This discrepancy in weight means that nuclear weapons can be used for military operations in ways that conventional weapons cannot practically match. A conventional bomb attempting to equal the yield of a NSNW introduces difficult problems of weight and size, which create further complexities for the logistical, targeting and delivery requirements of such a weapon. This issue of weight bleeds into the dependence of weapon efficiency on yield. To destroy X number of targets in an area, the conventional explosive is more efficient if dispersed into smaller, lower-yield weapons due to the weight problem. Accurate targeting and delivery can further offset the weight issue. This pressure to create small, low-yield, accurate conventional weapons is reversed for nuclear weapons. With a nuclear device, it takes only a small increase in the weight of the weapon to substantially increase the weapons yield, and thus also the area of destruction. There is then a strong incentive to use larger-yield nuclear weapons in combat over lower-yield ones.

Clearly, the properties of effect and efficiency inherent to nuclear weapons create strong incentives to escalate to higher yields—whether using them at the strategic or tactical level of warfare. Yet, if using higher yields results in a greater area of destruction and a greater cost to the opponent, it would seem to follow that one could attempt to communicate the limits of a nuclear exchange by reducing the yields of nuclear weapons. However, the self-limitation of yields also encounters strong escalatory pressures. First, limiting yields introduce higher requirements for target acquisition and delivery accuracy due to the smaller area of destruction afforded by a low-yield nuclear weapon. The precise location of targets is difficult to establish in ground warfare, and deficiencies in battlefield reconnaissance may be overcome by using higher-yield weapons, increasing the likelihood suspected targets in an area are destroyed. This dynamic carries over into deficiencies in accuracy. If one cannot accurately guide a nuclear weapon to its target over long distances, or penetrate contested territory deeply enough to accurately deliver a weapon, then the response is to use higher yields delivered from greater ranges to compensate. Finally, in conflicts involving the exchange of NSNWs, it becomes difficult to accurately determine the yield used by an opponent. Confusion over the enemy's adherence to yield limits—tacit or explicit—plus the temptation to gain an advantage by increasing ones' own weapon yields both work to create escalatory pressures on the yields of nuclear weapons.

To summarize, NSNWs have inherent escalatory dynamics due to their technical characteristics. The properties of effect and efficiency both create strong military incentives to increase the yields of NSNWs, and thus the scale of destruction. These escalatory dynamics are amplified by the problems of reconnaissance, weapon accuracy and yield size assessment during a conflict.

There are also strong incentives to overcome battlefield asymmetries by increasing the yield and number of NSNWs used. This is especially true when either side, or both sides limit themselves to in-area, counterforce targeting practices. Thus, a strategy which seeks to de-escalate or terminate a conflict using NSNWs must develop military capabilities that mitigate the escalatory properties of NSNWs by tailoring the damage inflicted to levels appropriate for the level of conflict, and the ability to inflict the necessary degree of punishment to de-escalate a conflict before escalation outpaces the ability of either side to control.

The ability to “tailor damage” implies several requirements: an ability to discriminate between low- and high-value targets; a supply of warheads with low yields to limit collateral damage; accurate delivery systems; an attack vector that does not unintentionally trigger a concurrent or overwhelming nuclear response; and strict political control over the targeting and use of nuclear weapons. The concept of de-escalation is closely linked to timing: the enemy must be deterred before a wider conflict breaks out. This leads to several logistical requirements: the basing and maintenance of nuclear weapons in proximity to the theater of conflict, the availability of nuclear-capable delivery systems and transports for theater operations, secure and prompt communication between commanders and the political leadership, and a delivery capability able to survive a reprisal. Russia is already fielding the requisite capabilities for tailoring damage and has positioned its NSNW forces for the rapid execution of de-escalatory strikes. The following sections will outline Russia’s NSNW capabilities as publicly understood, and attempt to show that the arsenal is at a higher level of readiness than widely believed.

The Russian NSNW Stockpile

In the late 1980s and early 1990s, the Soviet Union had an estimated 15,000 to 25,000 nonstrategic nuclear weapons.¹⁶ On 27 September 1991, President George H.W. Bush unveiled the first Presidential Nuclear Initiative which made the unilateral decision to, among other measures, recall and destroy all deployed short-range, ground-launched nuclear weapons along with their stockpiles and to cease the deployment of tactical nuclear weapons on surface ships, attack submarines and land-based naval aircraft.¹⁷ On 5 October 1991, President Mikhail Gorbachev reciprocated the initiative by pledging to eliminate all nuclear artillery munitions, tactical nuclear warheads for missiles, and nuclear mines; to remove all tactical nuclear weapons from surface warships and submarines, with a portion of those to be destroyed; and to separate nuclear warheads from air-defense missiles with a portion of those to be destroyed.¹⁸

Following the collapse of the Soviet Union, Russian President Boris Yeltsin reaffirmed Russian commitments to the PNI on 29 January 1991 and expanded the original measures to include the elimination of one-third of Russia’s sea-based tactical nuclear weapons, half of its ground-to-air nuclear missile warheads, and half of its airborne tactical nuclear weapons.¹⁹ The actual implementation of these and previous measures is difficult to verify. Russian officials claimed in

16 Woolf, Amy F. *Nonstrategic Nuclear Weapons*. Washington: Congressional Research Service, 2016. Print. (p 21)

17 Koch, Susan J. *The Presidential Nuclear Initiatives of 1991-1992*. Washington: National Defense University Press, 2012. Print. (p 10-11)

18 Ibid. (p 14-15)

19 Kimball, Daryl and Reif, Kingston. *The Presidential Nuclear Initiatives (PNIs) on Tactical Nuclear Weapons at a Glance*. Washington: Arms Control Association, 2012. Print. (p 1-2)

the 1990s that they were eliminating tactical nuclear warheads at a rate of about 2,000 per year.²⁰ U.S. State Department officials have publicly expressed doubt about these statements, citing the lack of Russian financial and technical resources—never mind political will—necessary to achieve the stated rate.²¹

Further undermining the credibility of the claimed rate of tactical nuclear weapon elimination, Russian officials have consistently and publicly moved the deadline for the elimination process. The most recent official estimate from the Russian government came in 2010, when it claimed to have reduced its nonstrategic nuclear weapons inventory by 75 percent.²² Exactly what “reduction” means is unclear; it is impossible to verify that warheads have been disassembled and not merely separated from their delivery systems. In 2003, Gen. Yuri Baluyevsky, then first deputy chief of staff of the Russian General Staff, stated that Russia would not destroy all NSNWs, and would instead hold on to its stockpiles.²³ In 2008, Gen. Nikolai Makarov reiterated this policy, claiming that Russia would retain nonstrategic nuclear forces for as long as there are nuclear armaments in Europe.²⁴ Considering these uncertainties, the following estimates of the size and state of the Russian nonstrategic nuclear stockpile approximate best guesses.

Aggregate estimates of the nonstrategic stockpile vary mainly in the ratio of active stockpile weapons to inactive stockpile weapons. On the low end of the scale are about 1,000 nonstrategic warheads in the active stockpile and 900 in the inactive stockpile, for a total of roughly 1,900 remaining nonstrategic warheads.²⁵ A higher estimate puts the numbers at around 3,800 nonstrategic weapons in the active stockpile and 2,500 in the inactive stockpile, for a total of approximately 6,300 remaining nonstrategic warheads.²⁶ The variance in the active NSNW stockpile to inactive nonstrategic weapons stockpile is mostly due to differing perceptions of the Russian nuclear posture, uncertainty about the status of reserves, and the lack of transparency measures.

Breaking down Russia’s active nuclear stockpile into operational categories reveals much about the possible Russian nuclear posture, Russia’s current thinking on nonstrategic weapons, and its threat perceptions. The best available information regarding the number of operational NSNWs and their distribution among the armed forces and military districts comes from Igor Sutyagin’s 2012 estimates, and the subsequent update found in the FOI’s 2016 report on Russian military capabilities.²⁷ The following table is mostly drawn from this extremely useful FOI 2016 report.

20 Dunn, Lewis. “Non-Strategic Nuclear Weapons Control: What is the Problem?” *Controlling Non-Strategic Nuclear Weapons: Obstacles and Opportunities*. Eds. Larsen, Jeffrey A. and Klingenger, Kurt J. United States Air Force: Institute for International Security Studies. 2001. Print. (p 17)

21 Woolf, Amy F. *Nonstrategic Nuclear Weapons*. Washington: Congressional Research Service. 2016. Print. (p 21)

22 Ibid (p 21)

23 Isachenkov, Vladimir. “U.S. Nuke Development Concerns Russia” *Interfax*. 26 November, 2003.

24 “Russian Military Chief Defends Nonstrategic Nukes,” *Global Security Newswire*. 17 December 2008.

25 Sutyagin, Igor. *Atomic Accounting: A New Estimate of Russia’s Non-Strategic Nuclear Forces*. London: RUSI, 2012.

26 Perry, William J. and Schlesinger, James R. *America’s Strategic Posture*, The Final Report of the Congressional Commission on the Strategic Posture of the United States. Washington, D.C. April 2009. (p 111)

27 Persson, Gudrun. *Russian Military Capability in a Ten-Year Perspective*, 2016. Stockholm: FOI, 2016.

Figure 3 Estimated Russian Operational NSNW 2016: Delivery Vehicles and Assigned Warheads by District

Armed Forces Branch	Eastern Military District Warheads	Central Military District Warheads	Southern Military District Warheads	Western Military District + Northern Fleet Warheads	Total Warheads
Air Defense and Space Forces					
• A-135	-	-	-	80	80
• S-300/400	0-10	0-16	0-6	0-46	0-78
• S-400	0-7	0-2	0-4	0-14	0-27
Total	0-17	0-18	0-10	80-140	80-185
Aerospace Force					
• Tu-22M3 [AS-4]	-	34	-	68	102
• Su-24M [AS-11 & AS-14/18]	-	18	36	18	72
• Su-34 [missiles and bombs]	18	-	36	36	90
Total	18	52	72	122	264
Navy					
• LACM [SS-N-21, Kalibr 3M14T/K]	16	-	88-132	52	156-200
• AShM [SS-N-2c/9/12/19/22]	19	-	21	34	74
• ASW and air defense	42	-	32	81	155
• Shore-based aviation NDB	32	-	-	24	56
• Coastal defense missiles [SSC-1b/3/5]	6	-	-	6	12
• Air-to-Surface Weapons	-	-	18	18	36
Total	115	0	159-203	215	489-533
Ground Forces					
• SS-21 ballistic missile	-	-	-	12-18	24-36
• SS-26 missile	-	12-18	56-84	72-108	224-336
• Nuclear Artillery [2A36, 2S5, 2S7, Tyulplan]	72-128	24-36	-	0-6	0-26
Total	72-128	36-54	56-84	84-132	248-398
Grand Total	205-278	88-124	287-369	501-609	1,081-1,380

Source: Persson, Gudrun. *Russian Military Capability in a Ten-Year Perspective, 2016*. Stockholm: FOI, 2016.

Examining the above table reveals several important characteristics of Russia's NSNW arsenal:

First, Russia possesses many offensive non-strategic nuclear weapons, spread across all branches of the armed forces.

Second, most NSNWs are distributed to military units in the Western and Southern military districts. This would seem to indicate that Russia is focused on maintaining its capability to wage a nuclear war in Europe.

Third, the comparative lack of NSNW units in the Central and Eastern military districts indicate Russia's relative sense of security in those regions.

Fourth, the integration of NSNW systems with otherwise conventional forces blurs the line between conventional and nuclear Russian military units.

Fifth, the variety of delivery systems and achievable ranges creates overlapping target areas where enemy assets can be held at risk.

NSNW Basing

Russia employs four principal forms of nuclear weapons storage sites. The Russian NSNW arsenal is split among these four, sometimes alongside strategic nuclear weapons. Russia claims that all of its NSNWs are in “central storage facilities,” though the truth of this claim is difficult to verify.²⁸ It is also hard to verify that Russian NSNWs are not sometimes carried by active military units.²⁹ Only by monitoring activities at storage facilities associated with operational forces can deployed NSNWs be identified. Locating these active sites—especially the operational depots—reveals the general outline of Russia’s nuclear posture, since NSNWs must be kept near their delivery systems and under control of the 12th Main Directorate of the Ministry of Defense (GUMO).³⁰

In fact, all nuclear weapons—strategic and nonstrategic—fall under the authority of the 12th GUMO, which answers directly to Russia’s defense minister and its headquartered in Moscow, with operational units across Russia. Units of the 12th GUMO maintain nuclear weapon storage facilities across the Russian Federation and are responsible for storing, servicing, maintaining and delivering nuclear weapons to combat units. The 12th GUMO does not relinquish control over a nuclear weapon until it is mated to a delivery system, at which point authority is turned over to the military agency in charge of that system.³¹

These nuclear weapon storage facilities may be divided into four categories. The first type consists of deep underground reserve storage facilities. The most prominent of these is located at the newly upgraded Mayak nuclear complex in the southern Ural Mountains near Cheliabinsk.³² This complex contains the reactors used to produce plutonium and other radioisotopes. It also houses a storage facility designed to hold about 25,000 containers known as “pits” with nuclear weapon material components. Munitions stored at these sites are most likely undergoing decommissioning and recycling procedures.

The second type of storage facilities comprise nuclear weapon manufacturing sites. Here, nuclear weapons are either assembled and sent to centralized storage or operational depots, or are dismantled for future military or civilian use. Russia operates two such

28 Uliyanov, Mikhail I. “Statement,” *Acting Head of the Delegation of the Russian Federation at the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (Cluster 1: Nuclear Disarmament)*. New York, May 1, 2015.

29 There is some evidence that Russian Navy attack submarines have patrolled with NSNWs, though the extent and contemporaneity of this practice is unknown. See: <http://www.gazeta.ru/2001/04/05/bylolinakurs.shtml>, and N. Poroskov, “Тактический ядерный туз” *время новостей*, 7 September 2007.

30 Pavlova, Elena. “Генерал Владимир Верховцев: ‘На базы, где содержится ядерное оружие, проникнуть невозможно’” *виперсон*, 4 September 2007, <http://viperson.ru/wind.php?ID=364570&soch=1>.

31 Рожденные атомной эрой. История создания и развития 12 Главного Управления Министерства Обороны Российской Федерации. т. 1. Москва: Наука, 2007.

32 Podvig, Pavel and Serrat, Javier. *Lock them Up: Zero-deployed Non-Strategic Nuclear Weapons in Europe*. UNIDR, 2017.

manufacturing and storage sites at Zlatoust-36 in the Cheliabinsk region and at the Start plant near the Penza-19 facility.³³

The third type are centralized storage or “S-sites” containing large stocks of non-strategic and strategic nuclear weapons. At these facilities, such weapons are kept in a constant state of readiness to be used to replace or reinforce nuclear arms at operational depots.³⁴ It is not publicly known how frequently such weapons are transferred from national-level facilities to operational depots. It could be a routine matter, in response to a crisis, or as a signal. One of the few publicly known examples of such a transfer occurred in 2013, when both strategic and tactical nuclear weapons were transported to operational depots as part of a major exercise.³⁵ Russia has 12 such central storage sites, nine of which are associated with active military bases and overseen by the 12th GUMO, two at nuclear weapon manufacturing plants, and one site for components at the Mayak facility.³⁶

Finally, there are storage facilities of the operational depot type, located at or near military bases that have NSNW-capable delivery systems. These facilities oversee the storage and maintenance of operational NSNWs at active military bases; Russia has 34 such active operational depots.³⁷ Operational depots are often associated with a specific military branch (Navy, Aerospace Force, Strategic Missile Force) though there can be some overlap at bases operated by more than one service.³⁸ Those operational depots associated with either the Russian Navy and Aerospace Force are most relevant in the NSNW context, given the preponderance of warheads and delivery systems assigned to these two branches—as well as their proximity to the borders of NATO member states.

33 Arbatov, Alexei. “A Russian Perspective on the Challenge of U.S., NATO, and Russian Non-Strategic Nuclear Weapons,” in *Reducing Nuclear Risks in Europe*, edited by Steve Andreasen and Isabelle Williams. Washington: Nuclear Threat Initiative, 2011.

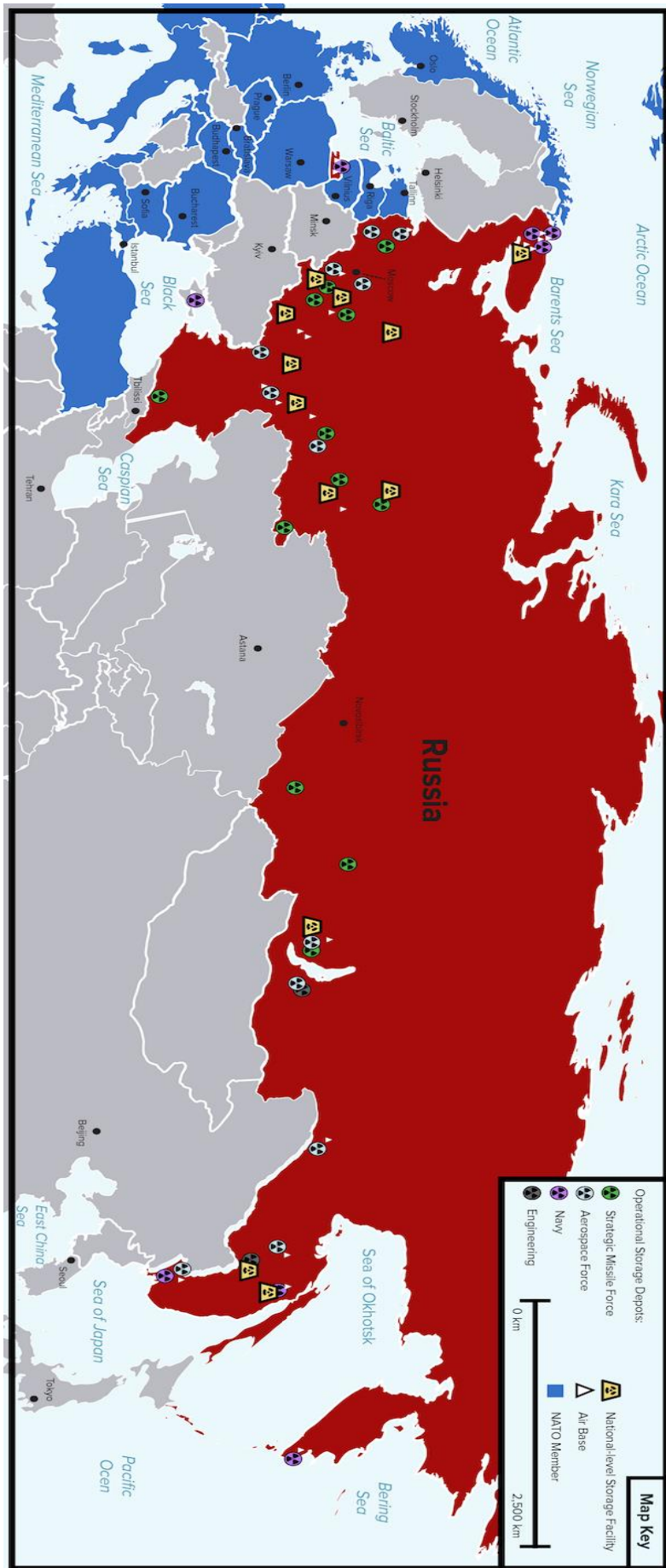
34 During transit, warheads may be temporarily stored in a variety of small-scale facilities such as naval docking areas, delivery system mating areas, transportation vehicles, maintenance facilities and other infrastructure not classified as weapons storage.

35 Gertz, Bill. “Russians Conduct Huge Nuke Drill,” *The Washington Free Beacon*, 5 March 2013, <http://freebeacon.com/national-security/russians-conduct-huge-nuke-drill/>.

36 Podvig, Pavel and Serrat, Javier. *Lock them Up: Zero-deployed Non-Strategic Nuclear Weapons in Europe*. UNIDR, 2017.

37 Podvig, Pavel and Serrat, Javier. *Lock them Up: Zero-deployed Non-Strategic Nuclear Weapons in Europe*. UNIDR, 2017.

38 “Гаранты ядерного щита,” *Красная звезда*, 3 September 2012, <http://www.redstar.ru/index.php/component/k2/item/4428-garantyi-yadernogo-schita>.



Precision Guided Munitions and Low-Yield Warheads

Technological advancements in precision-guided munitions (PGM) and attendant ISTAR (Intelligence, Surveillance, Target Acquisition and Reconnaissance) capabilities have greatly changed the calculus of Russian military planners, who are acutely aware of Russia's previous disadvantages in this area. A PGM capability gives military planners greater flexibility at the strategic and tactical levels, and allows for a higher level of conflict to be waged without resorting to tactical nuclear weapons. Part of the Russian military modernization program has focused on addressing its inferiority in this area. By doing so, Russia hopes to acquire the ability to engage and defeat conventional opponents quickly, at lower costs to itself, and to achieve strategic effects that previously required the use of NSNWs. However, it would be wrong to assume that this modernization effort has as its goal the elimination or reduction of NSNWs. Conversely, the capabilities of the Russian PGM program are designed with limited nuclear warfare in mind and thus seek to enhance Russia's capabilities in this area.

While progress in the development of Russia's PGM capability has been haphazard, the Russian military is beginning to reap the benefits of its investments.³⁹ The Syrian conflict has provided Russia with a permissive environment to test newly developed PGMs. For the first time, the Russian military has successfully used satellite-guided PGMs in combat. Using PGMs in both tactical and strategic roles is an important improvement for Russian conventional war-fighting capabilities. However, in the context of tactical nuclear weapons, the use of long-range cruise missiles is a most concerning development.

Over the course of the war, the Russian military has launched new cruise missiles from aircraft, surface ships and submarines—successfully targeting and destroying ground targets in Syria. All three of Russia's nuclear-capable, long-range bombers (Tu-22M, Tu-95MS and Tu-160) conducted strikes⁴⁰ with two newly operational stand-off range cruise missiles (Kh-555 and the Kh-101). The Kh-555 is an upgraded version of the Kh-55 with advanced guidance systems, while the Kh-101 incorporates both advanced guidance systems and stealth features. Both weapons are dual-use, in that they can be armed with nuclear warheads of various yields in addition to conventional options. Russian surface ships in both the Mediterranean and the Caspian seas have also demonstrated the capability of their own newly operational PGM systems by launching volleys of the 3M14T variant of the 3m-54 Kalibr cruise missile.⁴¹ The 3M14T and 3M14K variants are the land-attack cruise missiles carried by Russian Navy surface and submarine ships.⁴² Both missiles can carry conventional and nuclear warheads. Russian submarines have

39 Alexander Mladenov, "Industry Report: Rapidly Going Nowhere?" *Combat Aviationist*, October 2015, pp. 88-93.

40 David Cenciotti, "Russian MOD Video Shows TU-160, TU-95 and TU-22 Bombers (With SU-27 Escort) Bomb ISIS in Syria," *The Aviationist*, 17 November 2015, <https://theaviationist.com/2015/11/17/russian-mod-video-shows-tu-160-tu-95-and-tu-22-bombers-with-su-27-escort-bomb-isis-in-syria/>

41 Sam LaGrone, "Ship-launched Russian Cruise Missile strike Part of New Aleppo Offensive," *USNI News*, 15 November 2016, <https://news.usni.org/2016/11/15/ship-launched-russian-cruise-missiles-part-new-aleppo-offensive> and Tim Ripley, "Russian Black Sea Fleet fires more cruise missiles at Syrian target," *Jane's 360*, 23 August 2016, <http://www.janes.com/article/63155/russian-black-sea-fleet-fires-more-cruise-missiles-at-syrian-targets>

42 "SS-N-30A (Kalibr)," *Missile Threat: CSIS*, 8 November 2016, <https://missilethreat.csis.org/missile/ss-n-30a/#enref-430-5>

also successfully attacked ground targets in Syria with their variant of the Kalibr cruise missile: the 3M14K.⁴³

These weapons systems are examples of PGMs that are both operational and dual-use, but they are by no means the only such systems deployed or in development. Following the 2010 announcement by Defense Minister Anatoliy Serdyukov that Russia intended to increase its nuclear forces, Russia has announced more than 20 new or modernized strategic delivery systems.⁴⁴ Within this program are several non-strategic nuclear weapons. Aside from the previously mentioned air- and sea-launched cruise missiles, the Russian military has also reportedly fielded the SSC-8 land-launched intermediate range cruise missile, in violation of the Intermediate-Range Nuclear Forces Treaty (INF).⁴⁵ This weapon can carry both conventional and nuclear warheads, and is believed to be deployed by two battalions. The Russian military has also developed and deployed the Iskander-M road-mobile, short-range ballistic missile system, which may carry either conventional or nuclear payloads. The Russian arsenal of precision-guided munitions is clearly growing, and the dual-use nature of these systems conveys an ambiguous nuclear threat wherever they are deployed.

In addition to modernizing and diversifying their inventory of dual-use PGMs, Russia has been researching and developing nuclear warheads with low yields and tailored radiation outputs. Since at least 1993, Russian scientists and military planners have advocated for accurate, low-yield nuclear weapons, and there are many reasons to believe that these calls have not gone unanswered.⁴⁶ The reality of Russia's willingness to use NSNWs in limited warfare has been consistently demonstrated by large-scale Russian military exercises. The emphasis on low yields and tailored radiation output stems from three goals: (1) to reduce the risk of escalation by limiting the persistent radiological effects of a nuclear detonation, thus lowering the psychological impact of their use; (2) to limit the damage done to Russian (or ally) territory should nuclear weapons be used to repel an invading force; and (3), to increase the ability of military planners to tailor punishment to the enemy force or population, thus controlling escalation. Accurate delivery systems coupled with low-yield, tailored radiation nuclear warheads make a limited nuclear war or demonstration strike feasible options for Russian military planners.

Russia's development and use of PGMs has undoubtedly advanced to the point where the Russian military feels comfortable enough to field them in current and future conflicts. Supply issues remain, but in the context of a small-scale territorial contest this problem is less pressing than a global competition with near-peer adversaries. These weapons have also demonstrated their capability to create strategic effects with conventional payloads

43 Natallya Vasilyeva, "Russia fires cruise missiles, targets IS positions in Syria," *The Washington Post*, 31 May 2017, https://www.washingtonpost.com/world/europe/russian-warships-in-mediterranean-hit-is-positions-in-syria/2017/05/31/1c6f6356-45cd-11e7-8de1-ccc59a9bf4b1_story.html?utm_term=.08f1c26c235d

44 Mark B. Schneider, "Russian Nuclear Weapons Policy," *Real Clear Defense*, 28 April 2017,

http://www.realcleardefense.com/articles/2017/04/28/russian_nuclear_weapons_policy_111261.html#_edn31

45 Anthony Persico, "SSC-8," *Missile Defense Advocacy*, 2/1/2017, <http://missiledefenseadvocacy.org/missile-threat-and-proliferation/missile-proliferation/russia/ssc-8/>

46 Central Intelligence Agency, *Evidence of Russian Development of New Subkiloton Nuclear Warheads*, 30 August 2000, https://www.cia.gov/library/readingroom/docs/DOC_0001260463.pdf

from long range—a useful capability for threatening and bargaining with future adversaries. This conventional PGM capability is a troubling development for U.S. and NATO military planners, but its nuclear dimension is perhaps even more concerning. By combining accuracy and range with low-yield weapons, Russia can “dial in” the punishment inflicted by a limited nuclear strike, affording Russia a wider variety of potential targets and escalatory options. The dispersal of these dual-use weapons to a wide variety of launch platforms also enhances Russian flexibility by creating uncertainty about the intentions and capabilities of Russian military deployments, and allows Russia to threaten more opponents. Russian developments in PGMs are therefore not just an effort to enhance its conventional warfare capabilities, but also an effort to supplement and make useable NSNWs.

The Threat of Russia’s NSNW Arsenal

Russia’s conventional military inferiority in the 1990s, and to a lesser extent today, is widely considered to be one of the primary drivers for Russia’s adoption of a military doctrine that relies on the use of nuclear weapons in a conventional conflict to deter the United States and NATO. This is essentially a reversal of Cold War positions; Russia in the ‘90s was in a position of quantitative and qualitative conventional inferiority. This fact was compounded by the advancement of precision-guided munitions, information warfare, and advanced command, control, communications, intelligence, surveillance and reconnaissance technologies developed by the United States.

Washington’s willingness and capability to intervene in Russia’s areas of interest—as first exemplified by the 1991 air campaign over Yugoslavia—convinced Russia’s leaders that they could not rely on strategic deterrence alone to protect Russia and its claimed interests. As a result, Russia’s military planners came to believe that the only way to compensate for the quantitative and qualitative inferiority of the Russian armed forces was to capitalize on a large and diverse stock of existing nuclear weapons by lowering the threshold for their use to conventional conflicts. While strategic weapons would still play an important role in nuclear deterrence, their destructive potential precluded them from being used on Russian soil against an invading force. Only NSNWs, with their generally lower yields, could be used in such a manner. Once conventional parity was restored, it was widely assumed that Russia would return to a more cautious nuclear deterrence strategy.

The available information indicates that this has not been the case. Instead of lowering its nuclear threshold as conventional military capabilities have been reclaimed, Russia has instead increased its NSNW strike capability and pursued an aggressive, revanchist policy backed by nuclear threats. It has made credible demonstrations of its resolve to cross the nuclear threshold through implementing a reckless nuclear military doctrine, massive military drills incorporating nuclear strikes, and explicit as well as implicit nuclear threats against NATO members. These demonstrations of resolve are backed by the ability to carry out nuclear threats with a diverse arsenal of nuclear weapons suited to

limited nuclear war, the basing of NSNWs near NATO member states, and nuclear delivery systems capable of holding NATO military assets at risk.

The states of Central and Eastern Europe, as well as the Baltics, are confronted with the reality of a Russian state willing and able to use, or at least threaten, nuclear weapons in pursuit of its foreign policy goals. While Russia appears to be satisfied using nuclear weapons as a cudgel in negotiations – as well as defensive insurance – the fact remains that for Russia to issue credible nuclear threats it must have both a demonstrated nuclear capability and the demonstrated resolve to follow through. Frequent and large-scale exercises incorporating nuclear weapons; the forward basing of NSNW and their delivery systems; the development of new and highly accurate delivery systems; and an ambiguous official doctrine which masks aggressive actions, all serve to support Russia's broader revanchist goals in the CEE region while deterring a decisive U.S. response. As these forward allies develop their own deterrence posture, the factor of Russia's non-strategic nuclear weapons must be systematically addressed. However, the necessary discussions on how to counter the Russian nuclear threat to CEE are hampered by a lack of consensus on the severity of the threat – a situation that Russia works to maintain through a lack of transparency with its NSNW arsenal and operational planning. Developing the political will in the United States and CEE to confront the Russian NSNW problem will require the building of that consensus.

Assessment: Charting A Course to Strategic Security in Central and Eastern Europe

The stability and security of Central and Eastern Europe (CEE) is predicated on the ability to deter Russia. Although the European continent faces multiple challenges—a migration crisis, Islamist terrorism and the weakening of the EU integration process, to name a few—the primary threat to regional stability on the eastern flank, and thus for Europe writ large, is Russia. NATO, particularly the United States, plays a pivotal role in deterring Russia and therefore in preserving the region's geopolitical status quo. But the response from the CEE states, the most immediately affected and thus most interested parties, will also shape the future of regional stability.

Some countries in the region, especially Poland and the Baltic states, have expressed the will to push back against Russian aggression, and are taking steps to develop various degrees of defensive capabilities that would allow them to inflict costs on a potential aggressor. While incipient, the development of these capabilities will shape the region's escalatory dynamics. Because the rivalry with Russia occurs in the shadow of nuclear war, it is important to consider how steps taken by CEE states to enhance the defense of their territories will shape the escalatory dynamics of a potential future conflict.

This project focused on three topics, examined in seminars held in Warsaw and Washington over the course of the year (2016). These topics were:

First, the problem facing the Western alliance, and most immediately the CEE frontline, is a revisionist Russia pursuing limited war techniques with an aggressive nuclear posture.

Second, CEE countries have a variety of deterrence options—ranging from developing their own nuclear capabilities to building up their conventional forces for guerilla-type warfare—and there are costs and benefits to all of them.

Third, regional security will never be an achieved fact that requires little or no work, but rather the outcome of a strategic competition between Russia and the Western alliance that is unlikely to disappear in the years to come.

Russia

The principal threat to regional security on Europe's eastern frontline is Russia. Moscow has demonstrated in recent years both the willingness and the capability to effectively use small, conventional forces to destabilize its immediate neighborhood and wage an information war aimed at undermining the ability of Western institutions to reinforce democratic governance and preserve political transparency. The wars in Georgia (2008) and Ukraine (2014 to the present) are powerful reminders of Moscow's willingness to use limited military force to achieve its political objectives. Both of these conflicts were accompanied by aggressive nuclear signaling – whether in the form of conveniently timed drills or through outright nuclear threats – designed to deter possible military responses by the NATO alliance and the United States. These conflicts are also harbingers of what Russia may choose to do further west, toward the most exposed NATO members. In brief, the menace is a mixture of conventional limited war techniques combined with an aggressive nuclear posture.

The limited war technique adopted by Russia is based on quick action and limited territorial conquest. Although Russia may be able to penetrate deep into its western neighbors—particularly the Baltic states—direct conquest of the entire territory of these states is unlikely to achieve the primary political objective Moscow seeks: the fragmentation of the Western alliance. Achieving this would make it easier for Russia to expand its influence in Europe and exert greater control over the states along its border. The pursuit of that goal, ambitious in scope, risks igniting a large-scale confrontation with NATO that would be lengthy in time and devastating in its effects. It is very plausible that the current Kremlin regime does not want this, and will avoid engaging in actions that increase the likelihood of such a conflict.

There is undoubtedly a tension between what Moscow hopes to achieve (the fragmentation of, and greater influence over, the European order) and what it wants to avoid (a direct, large, long-term clash with a united Western alliance supported by decisive U.S. forces). The quest for the former can result in triggering the latter. Therefore, Russia's likely path will be one of limited war, carefully planned and conducted to chisel away at the Western alliance below the threshold that would clearly

activate a decisive response from it. Russia is pursuing unlimited ends (the destruction of the European order) through limited means (limited war).

Russian limited war will seek to achieve limited territorial gains very quickly, presenting the targeted state as well as its allies with a quick *fait accompli*.⁴⁷ This will put the aggrieved state and the Western alliance behind it in a difficult position: instead of defending alliance territory from a continued push by Russia, the aggrieved state and the Western alliance will have to switch to a more offensive posture and evict entrenched Russian forces. At this point it is irrelevant whether they would be “little green men” or a clearly marked armed force. Furthermore, the extent of territory conquered by Russian forces is less important than the speed with which this is achieved. The faster territory is seized, the greater the likelihood the opposing alliance will have difficulty mustering the resolve and forces necessary to repel the Russian aggressor.

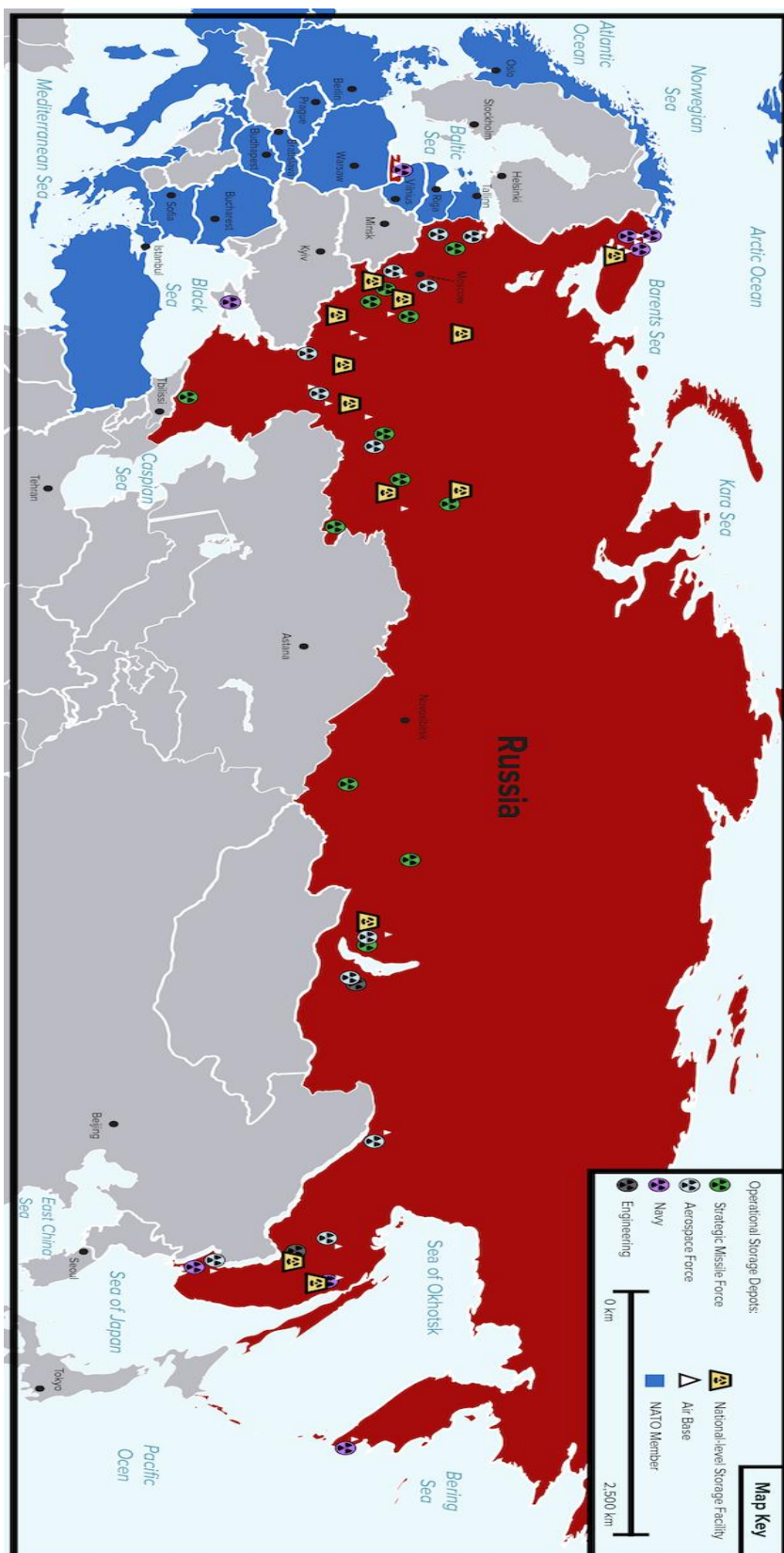
Russia combines this conventional, limited war technique with an aggressive nuclear posture. This approach, often referred to as “escalate to de-escalate,” uses the threat (or actual use) of nuclear weapons by Russia to force the Western alliance to lessen its desire to participate in a conflict and de-escalate its military efforts. Russian military doctrine and training emphasizes the possibility of using nuclear weapons at all levels of conflict, not as a tool to reserve until a high threshold of violence had been crossed, or to be used only against another nuclear power. To the contrary, there is a role for nuclear weapons at every ladder of escalation for Russia. Therefore, it is not out of the question that Russia may use a nuclear weapon for tactical or even purely demonstrative purposes without an equivalent threat coming from the Western alliance. In Russian thinking, it appears that nuclear weapons are usable in all operational conditions, including as tools to prevent the reversal of a Russian *fait accompli* by the Western alliance in a limited war scenario. The maintenance of Russia’s vastly superior and more diverse non-strategic nuclear weapons (NSNW) arsenal is a tangible symptom of this thinking.

Furthermore, it is plausible that the main vector of Russian foreign policy is toward Europe. In Asia, China is a growing power that Russia may not have the capabilities to oppose and has reached the limits of its influence. The Xinjiang deserts and mountains—combined with China’s burgeoning might—are a powerful disincentive to Russian imperial aspirations in the East. Instead, Europe is where Russia has the greatest aspirations, opportunities, and perceived threats. In the mindset of the regime in Moscow—a mix of kleptocracy and authoritarianism—the most alarming threat to its survival is the success and expansion of a democratic, legal, and transparent Western order sustained by American military strength. The continued existence and possible expansion of this Western order limits the ability of Russia to reclaim what it sees as its historical and strategically vital sphere of influence in Central and Eastern Europe. On top of these revisionist desires, the Western order – by way of example – threatens the domestic stability of Russia, and the long-term survival of the ruling regime, who fear the

⁴⁷ Often the term used is “hybrid warfare.” This phrase however does not convey the very kinetic (both conventional and nuclear) nature of the Russian threat, pushing the perceived competition to the realm of a “clash of narratives” or “information warfare.” While undoubtedly spreading false information and confusing political discussions in the West is part of the Russian *modus operandi*, the ultimate threat that needs to be deterred is a military attack, for which the “hybrid” aspect is merely a preparation.

popularization of democratic ideals and governance amongst its polity. Thus, a successful EU and a strong NATO alliance are assessed as the main threats to the Russian state. The current period of economic and political disruption within the EU, along with a public debate on both sides of the Atlantic concerning NATO's role and the commitment of the United States to European security presents Russia with a valuable opportunity for disruption and revision. This Euro-centric Russian strategic vector also seems to be reflected in its nuclear posture. For instance, it is reasonable to speculate that Russia arranges the placement of non-strategic nuclear weapons with the European theater in mind rather than the Far East.

Figure 4 Russian NSNW Basing



A credible nuclear threat against Europe is part of the limited war technique that Russia may employ against the CEE region. Not only does it convey the risk of annihilation to Europe's eastern frontline, but it also increases the costs of participating in the conflict for the rest of the alliance. The nuclear shadow makes Western intervention in a Russian limited war in CEE less credible, because it creates a greater than usual asymmetry between stakes and costs.

Finally, part of the strategic challenge that Russia presents to CEE stability now and in future decades is the asymmetry of alliances. Russia has no genuine allies to protect, a strategic weakness under most circumstances but with some benefits to Moscow in its quest to undermine Europe's balance of power. To put it simply, Russia can threaten U.S. allies in Europe without threatening the United States directly. The flip side is that the United States must maintain a credible extended deterrence in CEE by threatening the Russian homeland because of Moscow's strategic solitude. This creates an asymmetry that carries some advantages for Russia. Any Russian threat—or limited war—against a CEE state that belongs to NATO can be carefully tailored to limit any direct threat to the United States or even other European members of NATO. But any NATO response or threat of response lacks this benefit because it must inflict costs directly upon Russia. The asymmetry of alliances, therefore, is also an asymmetry of credibility—and Russian limited war techniques are geared to exploit it. The narrower and more targeted the Russian threat, the more difficult it is for the Western alliance to deter it.

This asymmetry makes the current rivalry different from the Cold War. Back then, the Soviet Union had outposts of its empire far from its homeland, presenting potential targets for Western retaliation that were costly to Moscow but not as threatening as a potential attack against targets in its homeland. The geopolitical retreat of Russia now means that retaliating against Russia is much greater escalatory step and one that risks substantial damage to Europe and even the United States. It may be difficult to convince the public in the United States and Western Europe to sacrifice blood and treasure to expel Russian forces from the territory of a geographically distant state in Eastern Europe. In this sense, Moscow enjoys a further advantage – it is not constrained in its military actions by public opinion in the same way as the democratic members of the NATO alliance, who must make a compelling case for expeditionary war and foreign intervention to their public. While the Cold War was obviously a high-stakes confrontation with the risk of nuclear annihilation always present, the current rivalry is perhaps less stable because of this asymmetry of stakes and credibility.

The targeting problem for the United States and the Western alliance may be mitigated somewhat by a more adventurous Russian foreign policy. Recent Russian power projections outside its immediate neighborhood (e.g., in Syria), even if relatively small and destabilizing to regional stability, have a positive externality: they create a targeting opportunity for NATO and the United States. The opportunity for horizontal escalation in response to Russian actions in Europe –but without threatening the Russian homeland – offers a valuable method to signal a credible military commitment by the Western

alliance and the United States. This establishes a situation in which a NATO member may be defended in part through threats to Russian assets or bases in the Mediterranean—an “ally for a base” exchange. However, the limited number of these potential targets, their differing levels of importance to Russia, and their respective relationships to other regional contests, suggests that the striking of these “out-of-area” targets must be selected and sequenced based on the effectiveness of “in-area” responses, the severity of the Russian challenge to the European status quo, and the potential to activate unwanted competitions in a different region.

Central and Eastern Europe

CEE is acutely aware of the Russian challenge. To deter Russia, CEE frontline states need to do three things: increase the immediate costs of any Russian attack, diminish the speed at which Russian forces can achieve a territorial *fait accompli*, and activate the wider alliance (NATO). How CEE states choose to pursue these objectives will affect the region’s stability.

One approach, briefly floated in Poland, is to seek nuclear weapons. But there is almost zero likelihood of this happening in the coming years. There are four primary reasons for this assessment.

First, to develop and maintain nuclear capabilities requires resources and technical know-how that are currently unavailable for Poland (the largest CEE state with the greatest will to balance Russia). The technological requirements needed to develop, store, maintain, and finally, deliver nuclear weapons are simply prohibitive at this stage. Poland has not reached the level of development akin to that of, say, France or Great Britain (the other nuclear powers in Europe), and lacks the global interests and scope of those powers.

Second, the domestic support needed for the long-term commitment required to develop a domestic nuclear weapons program is also missing. In part, this is probably due to the absence of the major EU states, Germany, France or the United Kingdom having significant imperial (or post-imperial) ambitions; politically, Europe harbors a deep opposition to nuclear weapons to which Poland has been acculturated over the past two decades; there is also a historic – and contemporary – aversion because CEE was one of the primary projected nuclear battlefields in a potentially hot confrontation during the Cold War.

Third, any military build-up by Poland (and more broadly, of any CEE frontline state) must be carefully tailored to avoid a potential Russian preventive attack. A development of indigenous nuclear capabilities would provoke Moscow, putting a premium on a Russian surprise attack. In this case, the fear of a catastrophic failure of stability prevents regional nuclear proliferation.

Fourth, a nuclear CEE country would never reach escalation dominance in a confrontation with Russia. That would expose it to the full might of its rival. At the same time, the threat of nuclear use by a CEE country (indeed, the mere

attempt to develop nuclear capabilities) would likely result its diplomatic isolation by the rest of Europe. Alone, even a nuclear-capable CEE frontline state would be unable to maintain geopolitical independence.

The nuclear option in CEE is unlikely and unfeasible. The only potential development is some version of nuclear sharing between Poland and the United States. Beyond the political difficulties, which would have to be solved through negotiations with other European countries, there are significant technical challenges, such as the lack of adequate storage facilities in Poland. Geography also poses a serious problem, as possible CEE nuclear capable aircraft will be parked within easy reach of Russian missiles. In both cases, regional stability would be impaired because it would create a “valley of vulnerability” problem, giving Russia an incentive to strike early and massively to remove the potential nuclear threat in CEE. Placing a few nuclear-capable Polish F16s in more distant and protected European bases may mitigate this threat, but at the cost of increasing doubts that they could be used in case of conflict. The host country, fearful of a retaliatory strike that may be deemed too costly for the stakes involved, could prevent such planes from taking off. Leadership in the United States could also choose to refuse authorizing the release of non-strategic nuclear weapons to the sharing country. In brief, the nuclear option, in all its variants, is of limited use to shore up regional stability.

Figure 5 CEE and Baltic Positions Nuclear Basing and Ballistic Missile Defense

Country	Nuclear Sharing	Nuclear Tasks	BMD in Europe	BMD Basing	NATO NSNW Basing	Role of NATO NSNW
Poland	No	Yes	Favors	Yes	Favors	Deterrence & Alliance Assurance
Czech Republic	No	Yes	Favors	No	Favors	Alliance Assurance
Slovakia	No	No	Favors	No	Favors	Alliance Assurance
Romania	No	Yes	Favors	Yes	Favors	Unknown
Hungary	No	Yes	Favors	No	Favors	Deterrence & Alliance Assurance
Bulgaria	No	No	Favors	No	Favors	Unknown
Estonia	No	No	Favors	No	Favors	Deterrence & Alliance Assurance
Latvia	No	No	Favors	No	Favors	Deterrence & Alliance Assurance
Lithuania	No	No	Favors	No	Favors	Deterrence & Alliance Assurance

The more effective option – and the most likely to be pursued for now – is some mix of conventional capabilities that would shore up the ability of CEE frontline states to defend their territories from a limited conventional attack. How these capabilities are developed and employed will affect the stability of the region. There are two main challenges to the development of credible territorial defense capabilities.

First, there is a lack of unity and cohesion. Not all CEE countries are focused on territorial defense. The most advanced is Poland, followed closely by the Baltics. These countries follow no single approach, in part because of political differences but also due to geographic ones: an effective territorial defense has to be tailored to particular geographic features (size of territory, forest, rivers, mountains, etc.). Neither do they follow a single timetable for acquiring sufficient capabilities, due to differing defense budgets, political commitment, and national capabilities. This creates some challenges, notably in the ability to coordinate defenses and pool defense acquisitions—an approach that seems to counter NATO’s push to instill greater integration among its member states. Overall the splintering of defensive approaches, in terms of procurement and doctrines, is appropriate to the task, but greater efforts must be made to advance procurement programs and operational planning with a similar strategy in mind, lest one region become comparatively more vulnerable than its neighbors.

Second, the capabilities and doctrine of all CEE states must be tailored to conducting territorial defense. The main task of territorial defense is to decrease the speed with which Russian forces can penetrate the territories of CEE frontline states. By increasing the costs of a Russian advance and slowing it down, this approach will prevent aggressor forces from quickly achieving their operational objectives. Getting CEE states to commit to a strategy which requires fighting a conventional war on their own territory will be difficult – the temptation will naturally be to prevent such an action in the first place by acquiring capabilities enabling them to hold at risk strategic targets in Russia. This should be discouraged; the truth is that no CEE state or combination of states can match the military capabilities of Russia or gain escalation dominance in a regional contest over their territory. Striking targets within Russia, at an early stage in a conflict or pre-emptively, risks not only inviting a devastating response but also alienating other members of NATO. This runs counter to the purpose of territorial defense: the activation of Article 5.

The purpose of territorial defense by CEE countries is not to seek an alternative to NATO guarantees but rather to activate the alliance. Expeditionary support from allies continues to be the *conditio sine qua non* of CEE’s survival, and any defensive posture developed by CEE countries must be tailored to aid the alliance in fulfilling its security guarantees.

A territorial defense approach has therefore three tasks:

First, *time*: it must deny the aggressor a quick *fait accompli*, thereby buying time for the alliance to organize and send the necessary forces.

Second, *opening a window*: it must enable the projection of allied power to CEE territories, which are increasingly covered under Russia's A2AD umbrella, making it arduous to operate freely.

Third, *clarity*: it must clarify that whatever aggressive action taken by Russia under cover of "little green men" or informational confusion is a manifest breach of sovereignty and a violent attack that demands a military response.

These tasks carry great risks because they make the attainment of Russian objectives more difficult, forcing Russia to either continue to incur high costs, desist, or escalate. Escalation is dangerous to small, targeted states because it could lead to an unacceptable level of destruction. If Russia can singlehandedly end the confrontation by dialing up the level of violence to an unacceptable level for the CEE frontline country, then territorial defense may become counterproductive.

Any type of territorial defense—whether the threat of protracted partisan warfare or limited strikes on Russian territory to inflict operational costs on the aggressor—is effective only if the enemy is not expected to respond with a catastrophic strike. The enemy cannot possess the capacity to end the war, for instance, through a nuclear demonstration or attack—and the only way to prevent this is by tying territorial defense (and thus deterrence by denial) into the nuclear posture of the Western alliance. Territorial defense has a chance of succeeding only under a nuclear stalemate. At the same time, a Russian escalatory response (short of a nuclear attack) to an effective territorial defense moves the conflict up from a confusing limited war, making allied participation in the protection of CEE more credible. Conventional escalation is a friend of CEE because it activates the alliance.

Any action to enhance territorial defense must therefore be pursued with the primary task in mind: activation of the alliance. This means that overly aggressive actions that could be interpreted as unwarranted or overly destabilizing (e.g., targeting civilian areas or Russian nuclear sites) should be carefully avoided because the wider alliance might use this to justify not intervening. While technological advances give CEE countries the opportunity to become more lethal than ever before possible, procurement and operational planning ought to keep in mind the political ramifications of an overly assertive (and lethal) defense. Standoff weaponry allows for striking the enemy in ways that undermine the larger strategic rationale of CEE defense.

Furthermore, any war, including territorial defense, must be planned or fought with the postwar settlement in mind. Through their defense plans, CEE countries are buying themselves a place at the postwar settlement negotiations. How they fight is important therefore not only for purposes of deterrence but also to improve their postwar conditions. This means that, as mentioned above, they must avoid an escalation of the conflict that would leave the country completely devastated, if not uninhabitable. Such an outcome is undesirable for obvious reasons, but also because it undermines popular support for any territorial defense that risks elevating the conflict to that level. Patriotism is alive in CEE, but there is little appetite for martyrdom akin to the 1944 Warsaw

Uprising. Moreover, the future vision of the postwar conditions—more precisely, of how the targeted country is treated in the settlement—must inform the territorial defense posture by avoiding any action that may be seen as overly aggressive, confrontational or provocative and that may be deemed to have contributed to initiating the war.

An inherent tension exists between the images the defending countries present and their ability to inflict costs on the aggressor. The CEE countries need to be assertive but aggrieved parties to this rivalry with Russia. As explained earlier, this is partly why CEE countries (or, more precisely, Poland) are highly unlikely to seek an indigenous nuclear capability. But it is not equally clear that these countries will avoid the temptation of acquiring very lethal—and medium-range strike—conventional capabilities that may result in dangerous escalatory dynamics. Such dynamics not only may be materially damaging for the CEE countries in question but also may create an image that will undermine these states' postwar negotiating leverage.

Finally, there is a risk that territorial defense postures may create inadvertent conditions for instability. Any type of guerilla warfare gives tactical decision-making control to lower echelons that are more attuned to the reality on the ground and perhaps even lacking communications with the central government and military command. Such decentralization is necessary and inevitable, but it also puts escalation in the hands of local commanders, who are focused on their narrow sliver of operations rather than the larger strategic arena.

The Future

The discussion of how CEE's growing military capabilities may alter regional dynamics remains hypothetical, yet necessary. It is hypothetical because no CEE country has yet developed serious and effective defensive capabilities. Commitment of greater resources is indispensable and so far, some of these countries have modestly increased their defense budgets. The main candidate for a substantive capacity to engage in territorial defenses is Poland, the largest state in the region. The Baltic states follow, but their small military forces are weak, and only through the mass involvement of their populations could they acquire the capacity to impose serious costs on a potential aggressor. Nonetheless, given the effects that the growth of military capabilities of CEE countries may have on regional stability, it is also important to have this discussion.

Also, it is important to remember that CEE regional stability (and geopolitical stability in general) is not a lasting outcome of a specific set of actions. Rather, it must be thought of as an ongoing competition. The actions undertaken by a few CEE countries to enhance their own defenses will generate responses from Russia followed by counter-responses by the Alliance. At any given point of this interaction, regional stability can collapse.

Finally, on a broad level, CEE territorial defense postures must be tied to the nuclear deterrent. The optimal outcome would be to marry the strong conventional capabilities of CEE countries, capable of imposing immediate costs on Russian aggressor forces, with nuclear sharing arrangements (for Poland). The technical, strategic and political details of

such arrangements remain to be developed, but NATO's most exposed members will remain exceedingly vulnerable to a limited Russian war and nuclear threats without being brought fully under the nuclear umbrella of the Western alliance. The current nuclear posture in Europe limits the ability for the Western alliance to credibly deter Russian limited nuclear strikes or demonstration strikes. A nuclear sharing arrangement without serious local conventional defenses is also not ideal because it does little to address the Russian threat of a limited war.

Appendix: Mapping Russia's Air-Launched NSNW Posture

By its very nature, the precise details of Russia's NSNW force posture are opaque to the outsider. However, by combining various open-source reports written by acknowledged experts, a general geographic distribution of weapons and delivery systems can be made. The downloadable Google Earth file, available [here](#), maps the known locations of National-Level Nuclear Storage Facilities and Operational Nuclear Weapon Depots. Russian Air Bases with where nuclear-capable aircraft are based (2015-2016) are also included. Strategic Rocket Forces and Naval Forces are not mapped due to their constantly shifting locations. Furthermore, the Ilyushin Il-38 and naval helicopters have not been included due their primary role as anti-submarine warfare platforms with the capability to drop nuclear depth charges and mines. Long-range bombers, normally thought of as assets for strategic nuclear warfare, are included due to their capabilities to deploy cruise missiles which may be used for demonstration strikes or fitted with low-yield warheads. Finally, the operational ranges of these nuclear-capable aircraft are plotted in relation to their home base. Combining these elements reveals a general picture of both Russia's NSNW force posture, and dominant threat perceptions.

Information on the position and nature of Russia's National-Level Nuclear Storage Facilities was pulled from the Bulletin of Atomic Scientists' *Nuclear Notebook*, 2016. The United Nations Institute for Disarmament Research report, *Lock Them Up: Zero-Deployed Non-Strategic Nuclear Weapons in Europe* provided the locations and service affiliations of the Operational Nuclear Weapons Depots. The basing of nuclear-capable aircraft in 2015-2016, and their technical details, were found in *Russia's Warplanes, Vol.I &II* by Piotr Butowski and the International Institute for Strategic Studies' *The Military Balance*, 2016 report. Ranges for all aircraft are notional operational radiuses – without refueling – and with a typical weapons loadout specified where possible.

Detailed information concerning each National-Level Nuclear Storage Facility, Operational NSNW Depot, Air Base. Aircraft ranges may be found by double-clicking on the radius assigned to each aircraft type. For ease of use, the short-range operational radiuses for all aircraft are hidden. To show these, navigate to the "Aircraft Ranges" folder, select the sub-folder for the air base of interest, and "check" the box of the desired aircraft. The same general procedure may be followed to enable or disable layers at will.

Link: https://cepa.ecms.pl/files/?id_plik=4597

Key:



Air Base: **Blue** represents Aerospace Forces. **Purple** denotes Naval Aviation. Click to see alternative base names and the nuclear-capable aircraft stationed there from 2015-2016.



National-Level Nuclear Storage Facility: Click to see alternative names for the facilities.



Operational Nuclear Weapon Depot: **Blue** icons are facilities assigned to the Aerospace Force. **Purple** icons are facilities assigned to the Navy. **Green** icons are facilities assigned to the Strategic Rocket Force. **Grey** Icons are engineering and maintenance facilities.

Aircraft Range: **Red** shows the operational radius of the Su-24M in a long-range configuration. **Purple** shows the operational radius of the Su-27 at high-altitude. **Blue** shows the operational radius of the Su-34 bomber variant at high-altitude. **Green** shows the operational radius of the Tu-22M at high-altitude. **Orange** shows the operational radius of the Tu-95MS. **Pink** shows the operational radius of the Tu-160 at Mach 1.5.



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