Minding the Gap: Understanding Suwalki Vulnerabilities in the Post-INF Security Environment

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ABSTRACT

If Russia attempts to execute a daring land grab in the Baltic states of Estonia, Latvia, and Lithuania, it will likely seek to exploit the geographic and military advantages inherent to a strategic flashpoint along the Poland-Lithuania border known as the "Suwalki Gap." Situated between Kaliningrad and Moscow ally Belarus, this narrow stretch of land is particularly vulnerable to a dual-pronged assault that, if successful, could sever the Baltics from the main North Atlantic Treaty Organization (NATO) body and prevent the deployment of Allied reinforcements. Further exacerbating Russian threats to NATO's eastern flank is the Kremlin's introduction of emergent missile technology to the theater, namely a new ground-launched cruise missile (GLCM) designated the SSC-8. This weapons system, whose range extends beyond limitations previously imposed under the Intermediate-Range Nuclear Forces (INF) Treaty, allows Moscow to target cities and installations across the European continent. This article examines the impact of the SSC-8 and broader post-INF security environment upon the political and military dynamics surrounding the Suwalki Gap. It specifically finds that the SSC-8 will allow Russia to direct conventional attacks against European NATO assets in a manner that could severely impede Allied operations to reopen the Gap and recapture occupied Baltic territory.

I. INTRODUCTION

Should Russian President Vladimir V. Putin seek to execute a *fait accompli* by swiftly invading and occupying the Baltic republics of Estonia, Latvia, and Lithuania, he could likely do so with relative ease. Recent RAND Corporation war games predict that Russian forces could eliminate or bypass all resistance to reach Riga and Tallinn within thirty-six to sixty hours.¹ Putin himself has echoed this ominous forecast, claiming, "[i]f I wanted, in two days I could have Russian troops in Riga,

^{1.} David A. Shlapak & Michael W. Johnson, Reinforcing Deterrence on NATO's Eastern Flank, RAND CORP. 4 (2016), available at http://www.rand.org/content/dam/rand/pubs/research_reports/RR1200/RR1253/RAND_RR1253.pdf (last visited Nov. 27, 2020) [hereinafter Shlapak & Johnson].

Vilnius, Tallinn, Warsaw, and Bucharest." Notably, local geography does not favor the United States and its North Atlantic Treaty Organization (NATO) allies. Russian troops based in Kaliningrad Oblast and Belarus need only span the approximately forty-mile Poland-Lithuania border, known as the Suwalki Gap (the Gap), to sever the Baltic republics from the main NATO body. Given the possibility of quantitatively superior Russian brigades sealing the Gap before Allied reinforcements arrive, Suwalki has become a flashpoint where "the many weaknesses in NATO's strategy and force posture converge."

Further exacerbating threats along NATO's eastern flank is Moscow's introduction of novel missile technology to the European theater. In February 2017, the Kremlin deployed a new dual-capable⁵ ground-launched cruise missile (GLCM), designated the SSC-8 or 9M729, with an estimated range of 2500 km.⁶ In doing so, Moscow contravened its obligations under the Intermediate-Range Nuclear Forces Treaty (INF Treaty, or the Treaty),⁷ prompting Washington to terminate the agreement.⁸ This paper seeks to assess the impact of the SSC-8 and the broader post-INF Treaty security environment upon the military and strategic dynamics surrounding the Suwalki Gap. Most fundamentally, it finds that the SSC-8 provides Russia the newfound ability to direct conventional attacks against European NATO military assets in a manner that could impede Allied operations to recapture lost Baltic territory.

The paper will proceed in four parts. First, it will examine the Suwalki "doomsday" scenario, NATO vulnerabilities, and Russian motivations for aggression. Second, it will describe the origins and unique

^{2.} Putin: Russian Troops Could be in Vilnius, Warsaw, and Bucharest in Two Days, ATLANTIC COUNCIL (Sept. 18, 2014), available at https://www.atlanticcouncil.org/blogs/nato-source/putin-russian-troops-could-be-in-vilnius-or-warsaw-in-two-days (last visited Nov. 27, 2020).

^{3.} See Shalapak & Johnson, supra note 1. The "Suwalki Gap" is also commonly referred to as the "Suwalki Corridor" and "Kaliningrad Corridor," although this paper will use only "Suwalki Gap" for consistency.

^{4.} Ben Hodges, Janusz Bugajski & Peter B. Doran, Securing the Suwalki Corridor, Strategy, Statecraft, Deterrence, and Defense, CTR. FOR EUR. POL'Y ANALYSIS 3 (2018), available at https://docs.wistatic.com/ugd/644196_ff84e43cc2504402bcf98e712e6a4c1f.pdf (last visited Nov. 27, 2020) [hereinafter Hodges, Bugajski & Doran].

^{5.} Dual-capable refers to a weapon that may deliver a nuclear or conventional warhead.

^{6.} SSC-8 (9M729), CTR. FOR STRATEGIC & INT'L STUD. (Sept. 4, 2019), available at https://missilethreat.csis.org/missile/ssc-8-novator-9m729/ (last visited Nov. 27, 2020).

^{7.} Intermediate-Range Nuclear Forces Treaty, Russ.-U.S., Dec. 8, 1987, 27 I.L.M. 84 (1988).

^{8.} Michael P. Pompeo, *U.S. Withdrawal from the INF Treaty on August 2, 2019*, U.S. DEP'T OF ST. (Aug. 2, 2019), *available at* https://www.state.gov/u-s-withdrawal-from-the-inf-treaty-on-august-2-2019/ (last visited Nov. 27, 2020).

capabilities of the SSC-8. It will then discuss the advantages SSC-8 deployment may confer upon Moscow vis-à-vis Suwalki, including operational usage and political intimidation. Finally, it will prescribe four means via which Washington and its partners may mitigate this multidimensional threat: (1) enhancing forward-deployed forces in the Baltics; (2) augmenting investments in two developmental anti-cruise missile technologies; (3) placing ground-launched INF-range conventional missiles in Europe while engaging the Kremlin in negotiations to reinstate INF obligations; and (4) extending economic and political outreach to Belarus to induce reluctance to assist Russian operations across the Suwalki Gap.

II. THE SUWALKI THREAT

Following its successful campaigns in Georgia and Crimea, a newly assertive Russia may next target the former Soviet republics of Estonia, Latvia, and Lithuania. The most troubling prospect is the potential materialization of what this paper terms the "Doomsday Scenario," a multipronged armored incursion from Kaliningrad and Belarus that severs the Suwalki artery and overwhelms the Baltic capitals before Allied reinforcements are able to arrive. The Gap presents particular vulnerabilities for NATO due to a combination of unfavorable geography and disadvantageous comparative force posture. Although this hypothetical bears a minimal likelihood of imminent fruition, a panoply of inducements could tempt Putin to attempt such a gamble.

A. The Doomsday Scenario

Recent Russian behavior offers some indication of the tactics it would employ in the course of a Baltic invasion. In 2013, Russian Armed Forces Chief of Staff Valery Vasilyevich Gerasimov published an article advocating the use of "nonmilitary means" such as information warfare, cyber operations, manipulation of "internal opposition," and special

^{9.} Russia engaged in a brief armed conflict with Georgia in August 2008 over the status of self-proclaimed republics South Ossetia and Abkhazia. See, e.g., Jim Nichol, Russia-Georgia Conflict in August 2008: Context and Implications for U.S. Interests, CONG. RES. SERV. (Mar. 3, 2009), available at https://fas.org/sgp/crs/row/RL34618.pdf (last visited Nov. 27, 2020). Moscow also annexed the former Ukrainian territory of Crimea in March 2014, and continues to engage in armed operations in the Donbas region. See, e.g., Steven Pifer, Crimea: Six Years After Illegal Annexation, BROOKINGS INST. (Mar. 17, 2020), available at https://www.brookings.edu/blog/order-from-chaos/2020/03/17/crimea-six-years-after-illegal-annexation/ (last visited Nov. 27, 2020).

forces deployments to subvert the political authority of a target state.¹⁰ As U.S. Lieutenant General Ben Hodges wrote in a seminal 2018 report, this so-called "Gerasimov Doctrine" leverages "all tools short of all-out war that may weaken and defeat an opponent."¹¹ Importantly, hard power underpins lower intensity actions.¹² Christopher Chivvis observes that behind Moscow's asymmetric tactics lie the "implicit threat of Russian conventional and, in the extreme, nuclear force."¹³

Past Russian military operations reflect the manifestation of the Gerasimov Doctrine's tenets in practice. In Georgia, the Kremlin coordinated cyber-warfare attacks, disinformation campaigns, and proxy raids in South Ossetia to establish a pretext for military intervention. Similarly, propaganda aimed at inciting Crimea's local Russian-speaking population contributed to the efficacy of Moscow's annexation in 2014. Hard power also played a role in these scenarios. Amidst the Crimea crisis, Russia transferred nuclear-capable Iskander missiles to Kaliningrad and conducted a snap military exercise in the Western Military District (WMD) that included "150,000 troops, three armies, and hundreds of tanks and aircraft." As Matthew Kroenig notes, "threats of

^{10.} Mark Galeotti, *The 'Gerasimov Doctrine' and Russian Non-Linear War*, IN Moscow's Shadows (Oct. 2015), *available at* https://inmoscowsshadows.word-press.com/2014/07/06/the-gerasimov-doctrine-and-russian-non-linear-war/ (last visited Nov. 27, 2020). As Gerasimov writes, the use of nonmilitary means can create a "permanently operating front through the entire territory of the enemy state." Then, special forces, potentially "under the guise of peacekeeping and crisis regulation," may then appear in the contested territory to ensure "final success in the conflict." *Id.*

^{11.} Hodges, Bugajski & Doran, supra note 4, at 25.

^{12.} See Nicole Ng & Eugene Rumer, The West Fears Russia's Hybrid Warfare. They're Missing the Bigger Picture., CARNEGIE ENDOWMENT FOR INT'L PEACE (July 3, 2019), available at https://carnegieendowment.org/2019/07/03/west-fears-russia-s-hybrid-warfare.-they-re-missing-bigger-picture-pub-79412 (last visited Nov. 27, 2020).

^{13.} Christopher S. Chivvis, *Understanding Russian "Hybrid Warfare" and What Can Be Done About It*, RAND CORP. 4 (May 11, 2017), *available at* https://www.rand.org/content/dam/rand/pubs/testimonies/CT400/CT468/RAND_CT468.pdf (last visited Nov. 27, 2020).

^{14.} See Eugene Rumer, The Primakov (Not Gerasimov) Doctrine in Action, CARNEGIE ENDOWMENT FOR INT'L PEACE (June 5, 2019), available at https://carnegieendowment.org/2019/06/05/primakov-not-gerasimov-doctrine-in-action-pub-79254 (last visited Nov. 27, 2020).

^{15.} Id.

^{16.} See Nicole Ng & Rumer, supra note 12.

^{17.} Johan Norberg, *The Use of Russia's Military in the Crimean Crisis*, CARNEGIE ENDOWMENT FOR INT'L PEACE (Mar. 13, 2014), *available at* https://carnegieendowment.org/2014/03/13/use-of-russia-s-military-in-crimean-crisis-pub-54949 (last visited Nov. 27, 2020).

deploying nuclear weapons formed part of the backdrop of the Ukraine invasion."18

In a Baltic scenario, the Gerasimov Doctrine stipulates that Moscow would first authorize "below the threshold" operations to establish a pretext for the incursion. Possible examples include covert Spetsnaz insertions into Lithuania aimed at provoking a violent confrontation near the Kaliningrad border, fermentation of unrest amongst Russian speaking populations in former East Prussian lands, or deployment of an ostensibly nonviolent mission in response to a genuine or fabricated humanitarian crisis. ²⁰

To color its narrative, the Kremlin would likely employ bots and propaganda outlets, like *Russia Today* and *Sputnik News*, to "muddy the waters and cast doubt upon objective truths" within Baltic societies. Moscow may also order cyber attacks against information systems and political processes to disrupt governmental responses to subsequent conventional assault and direct groups of domestic biker gangs and neo-Nazi sects to intimidate local populations or incite ethnic Russians into violence against their governments. Last, Baltic security services may observe the appearance of "little green men," the Russian professional soldiers lacking uniforms or identifying insignia that played pivotal roles in establishing roadblocks and seizing strategic locations during the Crimea crisis. ²³

^{18.} Interview with Matthew Kroenig, Assoc. Professor, Georgetown Univ., in Washington, D.C. (Feb. 21, 2020) [hereinafter Kroenig interview].

^{19.} See Chivvis, supra note 13, at 3.

^{20.} Hodges, Bugajski & Doran, *supra* note 4, at 26-31. Other examples include a coup against Belarusian President Alyaksandr Lukashenko and counterterrorism operations against groups allegedly operating in the Baltic territory. *Id.*

^{21.} See Chivvis, supra note 13, at 3.

^{22.} See Agnia Grigas, NATO's Vulnerable Link in Europe: Poland's Suwalki Gap, ATLANTIC COUNCIL (Feb. 9, 2016), available at https://www.atlanticcouncil.org/blogs/nato-source/nato-s-vulnerable-link-in-europe-poland-s-suwalki-gap/ (last visited Nov. 27, 2020); see also Michael Carpenter, Russia Is Co-opting Angry Young Men, The ATLANTIC (Aug. 29, 2018), available at https://www.theatlantic.com/ideas/archive/2018/08/russia-is-co-opting-angry-young-men/568741 Error! Hyperlink reference not valid.(last visited Nov. 27, 2020).

^{23.} See Steven Pifer, Watch Out for Little Green Men, BROOKINGS INST. (July 7, 2014), available at https://www.brookings.edu/opinions/watch-out-for-little-green-men/ Error! Hyperlink reference not valid.(last visited Nov. 27, 2020). This is far from the only plausible scenario of Russian aggression towards the Baltic states. As Hodges writes, in sparking a crisis "Russia's options are limited only by the creativity of its war planners." See also Hodges, Bugajski & Doran, supra note 4, at 26.





After "little green men" and local militias commandeer government facilities or "invite" Russian intervention on their behalf, Moscow may proceed with a conventional military incursion aimed at rapidly overwhelming Baltic defenses. Hodges terms this strategy as "stab, grab and hold." To exploit NATO inattentiveness, Russia could stage a snap

^{24.} See Max Bearak, This Tiny Stretch of Countryside is the Only Thing That Separates Baltic States from Russian Envelopment, WASH. POST (June 20, 2016), available at https://www.washingtonpost.com/news/worldviews/wp/2016/06/20/this-tiny-stretch-of-countryside-is-all-that-separates-baltic-states-from-russian-envelopment/ (last visited Nov. 27, 2020).

^{25.} Hodges, Bugajski & Doran, *supra* note 4, at 20. The Crimea annexation may offer some indication of a potential timeframe for Baltic aggression. Large-scale protests began in November 2013; by February 28, 2014, Russian "little green men" had seized Crimea's parliament building and two airports, after which a Ukrainian minister claimed that Russia had invaded the country. A "referendum" was held on March 16, and two days later, Crimean and Russian officials signed the Treaty of Accession of the Republic of Crimea to Russia. *See also* Gabriela Baczynska, Pavel Polityuk & Raissa Kasolowsky, *Timeline: Political Crisis in Ukraine and Russia's Occupation of Crimea*, REUTERS (Mar. 8, 2014), *available at* https://www.reuters.com/article/us-ukraine-crisis-timeline/timeline-political-crisis-in-ukraine-and-russias-occupation-of-crimea-idUSBREA270PO20140308 (last visited Nov. 27, 2020); *see also* Pifer, *supra* note 9.

exercise—in ZAPAD 2017, an estimated 60,000 to 70,000 troops simulated conflict with a NATO member—and promptly transition into actual combat. The Kremlin employed this strategy to conceal preparations for operations against Georgia and Ukraine, and presently practices "surprise" maneuvers designed to, in the words of Defense Minister Sergei Shoigu, bring units to "the highest degree of combat readiness." Moscow would then presumably deploy forces across the Gap in a pincer movement from Kaliningrad and Belarus while WMD-based troops surge into the northern Baltic territory. Upon initiating hostilities, a combination of overwhelming force, superior firepower, and geographical advantages could enable Russia to prevail in as few as thirty hours. Such an onslaught may present Baltic leaders with an unpalatable dilemma: resist and risk complete destruction, as occurred during the 2000 Russian siege of Grozny, or surrender to the invading forces. Given this choice, many may elect not "to turn their biggest cities into battlefields."

Upon attaining control, Russia would likely seek swift annexation to attain some measure of political legitimacy for its conquest.³³ If NATO

^{26.} Dave Johnson, ZAPAD 2017 and Euro-Atlantic Security, NATO REV. (Dec. 14, 2017), available at https://www.nato.int/docu/review/articles/2017/12/14/zapad-2017-and-euro-atlantic-security/index.html (last visited Nov. 27, 2020). In 2014, for example, an estimated 155,000 Russian troops participated in the VOSTOK exercise. See also Dave Johnson, VOSTOK 2018: Ten Years of Russian Strategic Exercises and Warfare Preparation, NATO REV. (Dec. 20, 2018), available at https://www.nato.int/docu/review/articles/2018/12/20/vostok-2018-ten-years-of-russian-strategic-exercises-and-warfare-preparation/index.html (last visited Nov. 27, 2020).

^{27.} Steve Gutterman, Putin Puts Troops in Western Russia on Alert in Drill, REUTERS (Feb. 26, 2014), available at https://www.reuters.com/article/us-ukraine-crisis-russia-military/putin-puts-troops-in-western-russia-on-alert-in-drill-idUSBREA1P0RW20140226 (last visited Nov. 27, 2020). See also Hodges, Bugaiski & Doran, supra note 4, at 23.

^{28.} Steven J. Flanagan, Jan Osburg, Anika Binnendijk, Marta Kepe & Andrew Radin, Deterring Russian Aggression in the Baltic States Through Resilience and Resistance, RAND CORP. 6 (Apr. 15, 2019), available at https://www.rand.org/content/dam/rand/pubs/research_reports/RR2700/RR2779/RAND_RR2779.pdf (last visited Nov. 27, 2020) [hereinafter Flanagan, Osburg, Binnendijk, Kepe & Radin].

^{29.} Id. at 6.

^{30.} During the Second Chechen War, Russian forces laid siege to the Chechen capital of Grozny between December 1999 and February 2000. As Daniel Williams wrote at the time, "[i]mages of Grozny broadcast on Russian television showed World War II-like destruction, as tanks and armored vehicles rolled down streets lined with blasted and burned-out buildings. Houses were battered into misshapen hulks and roads were deserted." See Daniel Williams, Russians Capture Grozny, WASH. POST (Feb. 7, 2000) at A01.

^{31.} See Flanagan, Osburg, Binnendijk, Kepe & Radin, supra note 28, at 6.

^{32.} Id.

^{33.} See Shlapak & Johnson, supra note 1, at 7. Shlapak and Johnson envision operations designed to seize and occupy the entirety of Estonia, Latvia, and Lithuania. Id. Still, this scenario does not necessarily need to pertain to a full seizure of all three Baltic states; as

eschews the seemingly unthinkable route of accepting the Russian fait accompli, it would then face the daunting task of mobilizing a counter-offensive to recapture lost territory.³⁴ Michael O'Hanlon estimates the Alliance would require around 300,000 troops, the majority of whom it would need to draw from the U.S. military.³⁵ The process of deploying this multidivisional force, which would require a "fairly prolonged buildup," followed by loading equipment onto ships, transit across the Atlantic Ocean, and debarkation at European ports, would likely take two to three months.³⁶ Even this prediction, O'Hanlon notes, does not account for lack of U.S. readiness and inevitable Russian disruptions, such as operations against NATO electrical grids, satellites, and fiber optic cables.³⁷

NATO forces in transit to the Baltics would also be particularly vulnerable to Russian attacks. The Kremlin could direct ballistic and cruise missile strikes against "discrete, localized targets on land and sea," such as airfields, ports, rail marshaling yards, and large truck depots. Russian forces could also use missiles, aircraft-delivered precision-strike ordinances, and attack submarines to target NATO ships in the Atlantic Ocean or the North and Baltic Seas. Given that the data from recent naval conflicts suggests that even warships "with their defenses alert and working" fail to intercept 10% to 30% of incoming advanced threats, Russian saturation attacks could sink or incapacitate several crucial NATO crafts, including the integral large medium-speed roll-on/roll-off transport vessels (LMSRs) and SL-7 Fast Sealift Ships. Should this occur, the United States might lose "the majority of its top-line combat equipment in a single battle."

Hodges writes, Russia's initial objective will be "the seizure of NATO territory in or around the Suwałki region," after which it may take further action contingent upon NATO's response. See Hodges, Bugajski & Doran, supra note 4, at 31.

^{34.} MICHAEL E. O'HANLON, THE SENKAKU PARADOX: RISKING GREAT POWER WAR OVER SMALL STAKES 24 (2019) [hereinafter SENKAKU PARADOX].

^{35.} Id. at 25-26.

^{36.} *Id.* at 27. O'Hanlon bases this estimate on the two months necessary to deploy over 200,000 troops in Operation Desert Storm. *Id.*

^{37.} Id. at 29.

^{38.} Id. at 30.

^{39.} SENKAKU PARADOX, supra note 34, at 31.

^{40.} *Id.* at 31-32 (citing WAYNE P. HUGHES JR., FLEET TACTICS AND COASTAL COMBAT 275-76 (2d ed. 2000)). Russia could use, for example, torpedoes, anti-ship missiles and laserguided bombs against NATO vessels. *Id.*

^{41.} Id. at 33.

B. Suwalki Vulnerabilities

As currently situated, NATO forces are poorly positioned to defend the Gap against a Russian onslaught. First, regional geography exacerbates the challenges of defending Baltic territory. Hodges characterizes the Suwalki landscape as "relatively easy terrain for a Russian military incursion." In particular, Lithuanian territory north of the Polish border, save a more densely wooded section adjacent to Belarus, is open and "amenable to maneuver mechanized forces." Furthermore, Russian and Belarusian military training grounds, located near the Gap, provide locations from which massed forces disguised as exercise participants could strike. Therefore, if Moscow seeks to "sever and hold territory," a campaign from Kaliningrad and Belarus's Hrodna *oblast* on the Lithuanian side of the Gap appears logical.

Along the border, and to the south, the terrain is more easily defensible against armored assault, yet simultaneously more restrictive of NATO efforts to transport reinforcements northward. The heavily forested Polish side is hillier than Lithuania, and accordingly more "conducive to light infantry or operations by Special Forces" than to mass armored or mechanized movements. Along the border, the terrain is a "nightmare for maneuver," with rolling fields "disrupted by chain lakes, rivers, streams, thick stands of forest, and muddy soil." Gaładuś Lake, for example, spans approximately six kilometers of the border. Moreover, only one railway and two narrow roads, Suwałki-Kaunas and Augustów-Alytus-Vilnius, lead northward from Poland across the Gap; Russia could sever this "tight and predictable funnel" with artillery or ground troops. A gauge break at the Poland-Lithuania railhead could also

^{42.} Hodges, Bugajski & Doran, supra note 4, at 23.

^{43.} Id. at 18. Finnish commentator Robin H...ggblom characterizes this land as "tank country." See Robin H...ggblom, Kaliningrad and the Suwalki Gap – A Look From the Other Side, CORPORAL FRISK (Aug. 11, 2016), available at https://corporalfrisk.com/2016/08/11/kaliningrad-and-the-suwalki-gap-a-look-from-the-other-side/ (last visited Nov. 27, 2020) [hereinafter H...ggblom].

^{44.} See Hodges, Bugajski & Doran, supra note 4, at 23.

^{45.} See id. at 18.

^{46.} Hodges, Bugajski & Doran, supra note 4, at 18.

^{47.} Id.

^{48.} Location Information of Jezioro Galadus, GOOGLE MAPS (2020), available at http://maps.google.com (follow "Search Google Maps" hyperlink; then search destination field for "Jezioro Galadus") (last visited Nov. 27, 2020). As Finnish commentator Robin H...ggblom thus argues, a mechanized force attempting to bridge the Suwalki Gap "would be vulnerable to ambushes and being funneled into bottlenecks." H...ggblom, supra note 43.

^{49.} See Hodges, Bugajski & Doran, supra note 4, at 16-18.

create a "severe bottleneck" that could delay tracked vehicles' transportation for days. 50

Notably, the rail dynamic appears to be improving. In October 2016, the Baltic states and Poland agreed to implement Rail Baltica, a line extending from Poland northward to Tallinn via Riga and Kaunas.⁵¹ As Olevs Nikers notes, this initiative, considered the "most important project for the Baltic States in the 21st century," would allow NATO to "move large volumes of military cargo from Germany and Poland to the Baltic States without interruption–saving time and limiting the numbers of personnel and transport equipment involved in the logistics." The railway would thus offer NATO forces a more efficient form of military transportation than "any of the transit routes currently available by sea, air, or road." However, budgetary disagreements between European Union (EU) leadership and the Baltic governments currently threaten the project's viability.⁵⁴

Russian forces penetrating deeper into the Lithuanian heartland and northward into Latvia and Estonia would encounter "difficult" off-road mobility for wheeled vehicles, suggesting an advantage for light infantry. ⁵⁵ Still, the Baltics contain a "fairly robust network of roads and highways" that attackers could utilize en route to Riga and Tallinn. ⁵⁶ Additionally, if this aggression is successful, Hodges posits that the region's terrain is "conducive to holding and defense—rather than movement and counter-offensives," a product of the limited northbound roads and

^{50.} See H. . .ggblom, supra note 43.

^{51.} See Olevs Nikers, New Railroad Agreement a National Security Milestone for Baltic Allies, Poland, EU, and NATO, ATLANTIC COUNCIL (Oct. 24, 2016), available at https://www.atlanticcouncil.org/blogs/natosource/new-railroad-agreement-a-national-security-milestone-for-baltic-allies-poland-eu-and-nato/ (last visited Nov. 27, 2020) [hereinafter New Railroad Agreement]. In 2015, new construction extended standard-gauge track 123 km from the former break-of-gauge at Šeštokai to the city of Kaunas in central Lithuania. See also Keith Barrow, Poland – Lithuania Standard-Gauge Link Opens, INT'L RAILWAY J. (Oct. 16, 2015), available at https://www.railjournal.com/regions/europe/poland-lithuania-stand-ard-gauge-link-inaugurated (last visited Nov. 27, 2020).

^{52.} Olevs Nikers, Baltics to Build Stronger Logistics Within the EU and NATO, JAMESTOWN FOUND. (Oct. 19, 2016), available at https://jamestown.org/program/baltics-build-stronger-logistics-within-eu-nato/ (last visited Nov. 27, 2020). Rail Baltica is scheduled for completion in 2030 barring delays or budgetary complications. Id.

^{53.} Id.

^{54.} See Joshua Posaner, Struggle Over Rail Baltica Spills Into Brussels Budget Fray, POLITICO (Feb. 20, 2020), available at https://www.politico.eu/article/struggle-over-rail-baltica-spills-into-brussels-budget-fray/ (last visited Nov. 27, 2020).

^{55.} See Shlapak & Johnson, supra note 1, at 4. See also H. . .ggblom, supra note 43.

^{56.} See Shlapak & Johnson, supra note 1, at 4.

railways available to NATO.⁵⁷ Ultimately, even if Rail Baltica is completed, the Suwalki geographic layout appears to favor invading Russian armored forces over NATO defenders.

Beyond terrain, the NATO-Russia military balance also tilts toward Moscow. While NATO troop numbers outnumber Russian totals, the inverse is true in the Baltic region. As of 2018, Russia had an estimated 330,000 active duty troops in the WMD, including 14,611 in Kaliningrad.⁵⁸ Furthermore, as a 2018 RAND report finds, the WMD contains the "highest density of Russia's most-capable ground and air forces."⁵⁹ Belarus can also contribute 45,350 soldiers.⁶⁰ On the other hand, NATO maintains a force of around 35,000 active duty troops in the Baltics, although Poland adds another 105,000.⁶¹

Moscow could therefore deploy an estimated twenty-two WMD-based maneuver battalions, in contrast to the twelve NATO maintains in the region. Moreover, David A. Shlapak and Michael Johnson characterize the Estonian and Latvian battalions—which comprise seven of NATO's twelve—as "extremely light, lack[ing] tactical mobility, and . . . poorly equipped for fighting against an armored opponent." Russian armor will pose such a challenge. Moscow has 757 main battle tanks, 1276 infantry fighting vehicles, and 342 self-propelled howitzers in contrast to NATO's 129, 280, and 32, respectively. And despite NATO's

^{57.} See Hodges, Bugajski & Doran, supra note 4, at 52. Russia is also likely to hold a general advantage in defending seized territory against NATO forces seeking its recapture. See id. As O'Hanlon writes, Moscow may believe "that once it had succeeded in its aggression, NATO would find it difficult to dislodge Russian forces." See also SENKAKU PARADOX, supra note 34, at 23.

^{58.} Hodges, Bugajski & Doran, supra note 4, at 4, 37. See also Robin Emmott, Expect More Fake News From Russia, Top NATO General Says, REUTERS (Feb. 18, 2017), available at https://www.reuters.com/article/us-germany-security-russia-nato/expect-more-fake-news-from-russia-top-nato-general-says-idUSKBN15X08V (last visited Nov. 27, 2020) (Russia has 330,000 troops amassed in its WMD).

^{59.} Scott Boston, Michael Johnson, Nathan Beauchamp-Mustafaga & Yvonne K. Crane, Assessing the Conventional Force Imbalance in Europe: Implications for Countering Russian Local Superiority, RAND CORP. (2018), available at https://www.rand.org/content/dam/rand/pubs/research_reports/RR2400/RR2402/RAND_RR2402.pdf (last visited Nov. 27, 2020) [hereinafter Boston, Johnson, Beauchamp-Mustafaga & Crane].

^{60.} See Hodges, Bugajski & Doran, supra note 4, at 43.

^{61.} Id. at 50.

^{62.} See also Michael E. O'Hanlon & Christopher Skaluba, A Report From NATO's Front Lines, BROOKINGS INST. (June 13, 2019), available at https://www.brookings.edu/blog/order-from-chaos/2019/06/13/a-report-from-natos-front-lines/ (last visited Nov. 27, 2020).

^{63.} Id. at 50.

^{64.} See also O'Hanlon & Skaluba, supra note 62.

considerable airpower advantage—5457 available fighters and bombers to Russia's 1251— it maintains a fleet of only 363 "fifth-generation" fighters capable of penetrating advanced Russian air defenses. Moscow has deployed over twenty-four air defense battalions with a total of over 288 S-400 and S-300 batteries. Taken together, these aircraft and air defenses will "greatly complicate efforts to focus NATO airpower on Russian maneuver forces in the initial phase of a conflict." Moscow's armed presence in the WMD thus appears "more than adequate . . . to overwhelm whatever defense the Baltic armies might be able to present."

C. Russian Motivations

To observe that Russia possesses the capability to overrun the Baltics is not to presuppose that Putin would actually pursue a course bearing such immense risk. As NATO members, Estonia, Latvia, and Lithuania are entitled to the protection of Article 5 of the North Atlantic Treaty (NAT), which provides that in the event of an "armed attack" against any member, each of the other members "will assist the Party or Parties so attacked by taking . . . such action as it deems necessary, including the use of armed force." Despite ambiguity regarding the scope of state obligations and the threshold for implication, U.S. military leaders have consistently pledged to aid Allies in the event of Russian aggression, even if conducted via hybrid means. As former Georgian President

^{65.} Id.

^{66.} Id. NATO also refers to these systems as the SA-20/21, SA-23, and SA-11/17.

^{67.} Id. at 8.

^{68.} Shlapak & Johnson, *supra* note 1, at 4. *See also* Hodges, Bugajski & Doran, *supra* note 4, at 43 (concluding that Russia "benefits from a numerical advantage over NATO forces opposite the Eastern Flank in terms of manpower and in every major category of combat weaponry").

^{69.} North Atlantic Treaty, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 243 [hereinafter NAT].

^{70.} See, e.g., Aurel Sari, The Mutual Assistance Clauses of the North Atlantic and EU Treaties: The Challenge of Hybrid Threats, 10 HARV. NAT'L SEC. J. 405, 426 (2019) (examining, in part, the scope of member state commitments required upon Article 5 invocation).

^{71.} As O'Hanlon writes, if Russia "carried out the aggression in a way that maintained a semblance of deniability, with "little green men" instead of regular troops, few would really be fooled even for a short time. But some NATO countries looking to avoid confrontation might invoke Moscow's excuse as a reason to delay any military response and give diplomacy a chance to reverse the aggression." Senkaku Paradox, supra note 34, at 22-23.

^{72.} See, e.g., John Vandiver, Breedlove: NATO Must Redefine Responses to unconventional Threats, STARS & STRIPES (July 31, 2014), available at https://www.stripes.com/news/breedlove-nato-must-redefine-responses-to-unconventional-threats-1.296129 (last visited Nov. 23, 2020). See also Hodges, Bugajski & Doran, supra

Mikheil Saakashvili contends, the possibility of triggering Article 5 alone is presumably sufficient to deem the Baltics "safe" from Putin's reach.⁷³ NATO also has 3,128,520 total active troops to Russia's 831,000,⁷⁴ outspends Moscow on defense \$900 billion to \$66.3 billion,⁷⁵ and economically outproduces it eleven times over.⁷⁶ In the event of a Baltic incursion, Russia would therefore provoke consequent hostilities with an enemy by which it is militarily and financially outclassed.

Yet from Moscow's perspective, the potential benefits of successfully seizing Baltic territory could outweigh the costs of such a gamble. First, Putin may view Baltic territorial gains through an irredentist perspective of restoring past Soviet and imperial Russian glory. Capturing a historically significant location like Narva, Estonia, for example, would offer Putin a symbolic victory reminiscent of Peter the Great's 1704 triumph. As Kroenig notes, Moscow seeks "to re-establish a sphere of influence in Eastern Europe" and detests sharing borders with democratic NATO members. To this end, Moscow has pursued a "compatriot"

note 4, at 10 (arguing that the United States should "immediately act to unilaterally defend an ally under Article 5," even before an Alliance-wide vote is held).

^{73.} Mikheil Saakashvili, Russia's Next Land Grab Won't Be in an Ex-Soviet State. It Will Be in Europe., FOREIGN POL'Y (Mar. 15, 2019), available at https://foreignpolicy.com/2019/03/15/russias-next-land-grab-wont-be-in-an-ex-soviet-state-it-will-be-in-europe-putin-saakashvili-sweden-finland-arctic-northern-sea-route-baltics-nato/ (last visited Nov. 23, 2020).

^{74.} Hodges, Bugajski & Doran, supra note 4, at 36.

^{75.} See Alasdair Sandford, NATO Military Spending Continues to Dwarf That of Russia, EURONEWS (Mar. 5, 2018), available at https://www.euronews.com/2018/05/02/nato-military-spending-continues-to-dwarf-that-of-russia (last visited Nov. 23, 2020).

^{76.} NATO's combined GDP is approximately \$18.35 trillion, whereas Russia's is \$1.63 trillion. See Caleb Silver, The Top 20 Economies in the World, INVESTOPEDIA (Mar. 18, 2020), available at https://www.investopedia.com/insights/worlds-top-economies/ (last visited Nov. 23, 2020). See also NATO countries: Statistical Profile, NATIONMASTER (2020), available at https://www.nationmaster.com/country-info/groups/NATO-countries (last visited Nov. 23, 2020).

^{77.} Robert Coalson, Putin Pledges to Protect All Ethnic Russians Anywhere. So, Where Are They?, RADIO FREE EUROPE/RADIO LIBERTY (Apr. 10, 2014), available at https://www.rferl.org/a/russia-ethnic-russification-baltics-kazakhstan-soviet/25328281.html (last visited Nov. 23, 2020). The Soviet Union attained control over the Baltic states in 1939 per the terms of the Molotov-Ribbentrop pact with Nazi Germany. Subsequently, Soviet leader Joseph Stalin instituted "Russification" policies that prompted the deportation of around 200,000 Estonians, Latvians, and Lithuanians. Id.

^{78.} See Daniel Berman, Will Narva Be Russia's Next Crimea?, THE DIPLOMAT (Apr. 8, 2014), available at https://thediplomat.com/2014/04/will-narva-be-russias-next-crimea/ (last visited Nov. 23, 2020). Notably, more than 80% of Narva residents are of Russian descent, and 36% hold Russian passports. Id.

^{79.} Kroenig interview, supra note 18. See also Emily Farris, Probing the Baltic States: Why Russia's Ambitions Do Not Have a Security Dimension, ROYAL U. SERV. INST. (Nov. 21,

policy", or *Russkiy Mir*, through which it claims "a legal right to protect Russian citizens wherever they reside." An assertive *Russkiy Mir* may encourage Putin to seek the physical reintegration of relinquished former holdings, like Ukraine. In the Baltics, where sizable ethnic Russian populations are "at best unevenly integrated" into "post-independence political and social mainstreams," Shlapak and Johnson observe that this "storyline is disturbingly familiar."

Acquiring Baltic territory could also advance Russian economic interests. Moscow would gain access to a series of warm-water ports, fulfilling a 300-year historical pursuit dating to the Great Northern War against Sweden. Latvia's Ventspils Nafta, which served as the second-largest exporting terminal for Russian oil until 2001, is particularly valuable. Furthermore, the Kremlin could enhance Kaliningrad's viability as an industrial port by establishing a physical connection to the mainland. Estonia's shale reserves in Ida-Viru County, which provide 80% of the country's electricity, offer another incentive. Closing the Gap would also create territorial contiguity between the Baltic and Black Seas, enabling Moscow to transport commercial goods and military equipment across the region.

^{2018),} available at https://rusi.org/commentary/probing-baltic-states-why-rus-sia%E2%80%99s-ambitions-do-not-have-security-dimension (last visited Nov. 23, 2020).

^{80.} Flanagan, Osburg, Binnendijk, Kepe & Radin, *supra* note 28, at 5. In 2014, Kremlin spokesman Dmitry Peskov described Putin as the "main guarantor of the safety" of the broader "Russian world." Coalson, *supra* note 77.

^{81.} See Kristina Kallas, Claiming the Diaspora: Russia's Compatriot Policy and its Reception by [the] Estonian-Russian Population, ETH ZÜRICH CTR. FOR SECURITY STUD. (Nov. 30, 2016), available at https://css.ethz.ch/content/specialinterest/gess/cis/center-for-securities-studies/en/services/digital-library/articles/article.html/59907ae2-3fe4-4d7d-88c4-de2e3e3b907e (last visited Nov. 23, 2020). Certain ultranationalist Putin allies refer to Ukraine as "Novorossiya" and advocate its return to Russian control. See also Coalson, supra note 77.

^{82.} See generally Kallas, supra note 81.

^{83.} Shlapak & Johnson, supra note 1, at 3.

^{84.} See A. Grace Buchholz, Putin Is Thirsty – the Troubling Problem of Kaliningrad, REALCLEAR DEF. (Aug. 7, 2017), available at https://www.realcleardefense.com/articles/2017/08/07/putin_is_thirsty___the_troubling_problem_of_kaliningrad_111983.html (last visited Nov. 23, 2020).

^{85.} Agnia Grigas, Russia's Motives in the Baltic States, FOREIGN POL'Y RES. INST. (Dec. 7, 2015), available at https://www.fpri.org/article/2015/12/russias-motives-in-the-baltic-states/ (last visited Nov. 23, 2020).

^{86.} See Buchholz, supra note 84.

^{87.} Grigas, supra note 85.

^{88.} Hodges, Bugajski & Doran, *supra* note 4, at 22. As Hodges notes, this would allow the Kremlin to more directly project force into the territorial integrity of Belarus and Poland. *Id.*

Last, Putin may perceive a successful Baltic campaign as a means to degrade and delegitimize NATO. Hodges perceives that Russia's foremost goal is to "disrupt, divide, make irrelevant, or eliminate NATO as a security organization and defense guarantor." As O'Hanlon similarly reasons, a NATO failure to effectively respond to Russian aggression would expose the Alliance as a "paper tiger," plunging it into an "existential crisis" and providing Moscow with a "major strategic victory." Aware of NATO's proclivity for indecisiveness, Russia aims to "leverage this bureaucratic sclerosis by expanding cleavages between allies to the point of fracture."

By this logic, Putin may believe that, in the event of a Baltic *fait accompli*, he could conquer NATO territory while avoiding conflict. If Russia fortified and prepared to defend seized Baltic lands, the Alliance would face the daunting prospect of mounting a "potentially huge conventional military operation, and possibly risking nuclear war" to recapture a small, remote corner of the allied territory. ⁹² Given the ambiguities inherent to the Article 5 mutual defense guarantee, the prospect of acquiescing to a Russian conquest could present a "serious dilemma" for NATO members that prefer to remain uninvolved. ⁹³ In particular, as

^{89.} Hodges, Bugajski & Doran, supra note 4, at 24.

^{90.} SENKAKU PARADOX, supra note 34, at 23.

^{91.} See id. North Atlantic Treaty (NAT) Article 4 reads, "The Parties will consult together whenever, in the opinion of any of them, the territorial integrity, political independence or security of any of the Parties is threatened." NAT, supra note 69. A NATO member generally requests Article 4 consultations before demanding collective defense under Article 5; Hodges characterizes such situations as when a state "asks for urgent support." See also Hodges, Bugajski & Doran, supra note 4, at 31. A request for Article 4 consultations, however, does not necessarily entail the Alliance's eventual invocation of Article 5. When Turkey considered invoking Article 5 in 2016 following an escalation in hostilities along the Syrian-Turkish border, for example, NATO firmly rejected this possibility. See also Michael Moran, Turkey's Article 5 Argument Finds No Takers, CARNEGIE CORP. OF N.Y. (Feb. 24, 2016), available at https://www.carnegie.org/news/articles/turkeys-article-5-argument-finds-no-takers/. (last visited Nov. 23, 2020).

^{92.} SENKAKU PARADOX, supra note 34, at 24.

^{93.} Id. at 22; see also Hodges, Bugajski & Doran, supra note 4, at 31. Moreover, as Gen. Philip M. Breedlove (Ret.) and Amb. Alexander R. Vershbow (Ret.) write in an Atlantic Council report, "the often-cited nightmare scenario of a limited Russian land grab of territory in the Baltic States could take place well before US and allied reinforcements from Germany, Western Europe, or the continental United States could be brought to bear. Such a fait accompli could ultimately break the Alliance's will and determination to live up to its Article 5 commitments." See also Philip M. Breedlove & Alexander R. Vershbow, Permanent Deterrence: Enhancements to the US Military Presence in North Central Europe, ATLANTIC COUNCIL 31 (Feb. 7, 2019), available at https://www.atlanticcouncil.org/in-depth-research-reports/report/permanent-deterrence/ (last visited Nov. 23, 2020) [hereinafter Breedlove & Vershbow].

Shlapak and Johnson note, fears of nuclear escalation could induce NATO leaders to "concede, at least for the near to medium term, Russian control of the territory they had occupied." Should the situation unfold in this manner, Moscow could accomplish the two-fold objective of shattering NATO's foundational collective security guarantee and emerging from its daring land grab unscathed.

Ultimately, the doomsday scenario is unlikely to materialize in the near future. Putin has accused NATO planners who warn of a Suwalki incursion of "scaremongering" and seeking to start a new Cold War. Still, as O'Hanlon writes, while the odds of such a contingency seem "rather low," they are "significantly greater than zero" and could increase as Russia adopts a more "risk-tolerant strategic calculus." For Hodges, the possibility of aggression turns on whether Moscow is "certain that it will succeed in its objectives," a function of its perceived operational superiority and belief in the ineffectiveness of any anticipated response. The extent to which NATO signals readiness to defend Baltic territory, therefore, may directly influence the probability that Russia ever menaces in Suwalki in the first place.

^{94.} Shlapak & Johnson, supra note 1, at 7.

^{95.} Max Bearak, This Tiny Stretch of Countryside is all that Separates Baltic States from Russian Envelopment, WASH. POST (June 20, 2016), available at https://www.washingtonpost.com/news/worldviews/wp/2016/06/20/this-tiny-stretch-of-countryside-is-all-that-separates-baltic-states-from-russian-envelopment/ (last visited Nov. 23, 2020).

^{96.} SENKAKU PARADOX, supra note 34, at 23-24. O'Hanlon also suggests that the emergence of a future Russian leader "with a more reckless and risk-prone temperament" could increase the likelihood of the doomsday scenario coming to fruition. Id. Ultimately, an indepth analysis of Russian political trends is well beyond the scope of this paper. Still, as the 2017 U.S. National Security Strategy forecasts, Russia generally "seeks to restore its great power status and establish spheres of influence near its borders." Nat'l Security Strategy of the U.S. of Am., The White House 25 (Dec. 2017), available at https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905-2.pdf. (last visited Nov. 23, 2020).

^{97.} See Hodges, Bugajski & Doran, supra note 4, at 32.

^{98.} Id. Some may wonder whether Suwalki presents a unique hazard to NATO interests if emphasizing this challenge represents another example of unsustainable, perpetual worldwide vigilance. One could liken this categorization to former Vice President Dick Cheney's supposition that "if there's just a 1 percent chance of the unimaginable coming due, act as if it is a certainty." See John Allen Paulos, Who's Counting: Cheney's One Percent Doctrine, https://abcnews.go.com/Technol-**ABC** News (May 3, 2007), available at ogy/story?id=2120605&page=1 (last visited Nov. 23, 2020). As noted, however, not only do American and European military leaders consider Suwalki to pose an exceptional strategic danger, but Putin has threatened the Baltics and engaged in sufficient past aggression to suggest his warnings should not be ignored. See, e.g., Putin: Russian Troops Could be in Vilnius, Warsaw, and Bucharest in Two Days, ATLANTIC COUNCIL (Sept. 18, 2014), available at https://www.atlanticcouncil.org/blogs/natosource/putin-russian-troops-could-be-in-vilniusor-warsaw-in-two-days/ (last visited Nov. 23, 2020).

III. THE SSC-8 AND THE END OF THE INF TREATY REGIME

Moscow's deployment of the SSC-8 missile exacerbates an already volatile Baltic strategic environment. Evidence indicates that in designing, testing, and fielding this weapon, Moscow purposefully sought to circumvent INF range restrictions. Now, following the accord's termination, the Kremlin can likely strike almost all civilian and military assets in Europe with conventional or nuclear force in a manner undetectable by Allied defenses.

A. Background and Deployment

The origins of the modern SSC-8 may be traced back to the late 1970s when the Soviet Union introduced the SS-20 ground-launched ballistic missile (GLBM), a mobile, accurate system capable of striking Western Europe. The SS-20 exposed a gap in NATO's deterrence posture, as the United States possessed strategic intercontinental ballistic missiles (ICBMs) and tactical battlefield ordinances but lacked "the ability to attack Soviet cities with nuclear weapons forward-deployed in Western Europe." In response to the ensuing "Euromissile" crisis, the Carter administration implemented a "dual-track" approach; it installed 464 BGM-109G GLCMs and 108 Pershing II GLBMs in Western Europe while simultaneously engaging Moscow in negotiations to eliminate both sides' intermediate-range arsenals. While European allies, in particular West Germany, urged Washington to proceed with BGM-109G and Pershing II deployments, anti-nuclear protests soon swept across much of Western Europe. These demonstrations did not hamper operational readiness at the time, 103 although in countries like Belgium, where some

^{99.} Alexander Lanoszka, *The INF Treaty: Pulling Out in Time*, 13 STRATEGIC STUD. Q. 50. 46, 67 (2019) [hereinafter Lanoszka]. The SS-20 carried a range of 5,000 km, so it could strike targets in Western Europe but could not reach the U.S. heartland. *See* Missile Defense Project, *SS-20 "Saber" (RSD-10)*, CTR. FOR STRATEGIC & INT'L STUD. (June 15, 2018), *available at* https://missilethreat.csis.org/missile/ss-20-saber-rsd-10/. (last visited Nov. 23, 2020).

^{100.} Lanoszka, supra note 99, at 50. See also Helmut Schmidt, The 1977 Alastair Buchan Memorial Lecture, 20 SURVIVAL 1 (1978).

^{101.} Lanoszka, supra note 99, at 51. See also Special Meeting of Foreign and Defense Ministers, NATO OFFICIAL TEXTS (Dec. 12, 1979) (updated Nov. 9, 2010), available at https://www.nato.int/cps/en/natolive/official texts 27040.htm (last visited Nov. 23, 2020).

^{102.} See John T. Correll, *The Euromissile Showdown*, AIR FORCE MAG. (Feb. 1, 2020), available at https://www.airforcemag.com/article/the-euromissile-showdown/ (last visited Nov. 23, 2020).

^{103.} Id.

of the largest rallies took place, their memory continues to inform modern views of nuclear deterrence perspectives. 104

The United States and the Soviet Union signed the INF Treaty in 1987—a sweeping arms control triumph that vindicated the "dual-track" strategy. 105 The Treaty mandated the elimination of all nuclear and conventional GLBMs and GLCMs with ranges between 500 and 5500 kilometers, imposed obligations "not to possess, produce, or flight-test" any such system, and established a robust verification regime. 106 Following the dissolution of the Soviet Union, members of the Treaty expanded to include Belarus, Kazakhstan, and Ukraine. 107 In subsequent years, however. Russian perceptions of the Treaty's utility shifted. Soviet foreign policy under Premier Mikhail Gorbachev was characterized by openness to the West and a desire to recalibrate the USSR's previously confrontational approach to foreign policy, including in the area of arms control. 108 Yet by the mid-2000s, Russia's political climate had shifted considerably. as President Vladimir Putin began pursuing military modernization and augmenting existing missile capabilities. 109 In 2005, Russia inquired about terminating the agreement, asserting the illogicality of abiding by restrictions to which the rest of the world was not subjected. 110

^{104.} See Manuel Lafont Rapnouil, Tara Varma & Nick Witney, Eyes Tight Shut: European Attitudes Towards Nuclear Deterrence, EUR. COUNCIL ON FOREIGN REL. (Dec. 2018), available at https://www.ecfr.eu/specials/scorecard/eyes_tight_shut_european_attitudes_towards_nuclear_deterrence (last visited Nov. 23, 2020) [hereinafter Rapnouil, Varma & Witney] ("During the Euromissile crisis, large demonstrations against the deployment of US nuclear weapons took place on Belgian soil. This led the government to postpone the installation of the weapons").

^{105.} See John D. Maurer, The Dual-Track Approach: A Long-Term Strategy for a Post-INF Treaty World, WAR ON THE ROCKS (Apr. 10, 2019), available at https://waron-therocks.com/2019/04/the-dual-track-approach-a-long-term-strategy-for-a-post-inf-treaty-world/ (last visited Nov. 23, 2020).

^{106.} See Daryl Kimball & Kingston Reif, The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance, ARMS CONTROL ASS'N (Aug. 2019), available at https://www.armscontrol.org/factsheets/INFtreaty (last visited Nov. 23, 2020) (Result of the Treaty requirements, the US and USSR eliminated 2692 short-, medium-, and intermediate-range missiles between 1988 and 1991).

^{107.} Id.

^{108.} See Lanoszka, supra note 99, at 51.

^{109.} See generally Marcel de Haas, Russia's Military Reforms: Victory after Twenty Years of Failure?, NETHERLANDS INST. OF INT'L REL. (Nov. 2011), available at https://www.clingendael.org/sites/default/files/pdfs/20111129_clingendaelpaper mdehaas.pdf (last visited Nov. 23, 2020).

^{110.} See Steven Pifer, The INF Treaty, Russian Compliance and the U.S. Policy Response, BROOKINGS INST. (July 17, 2014), available at https://www.brookings.edu/testimonies/the-inf-treaty-russian-compliance-and-the-u-s-policy-response/ (last visited Nov. 23, 2020) [hereinafter Pifer, Russian Compliance]; Telephone Interview with Steven Pifer,

Alternatively, Russia proposed "multilateralizing" the accord to establish a "global ban" on missiles within this range. When the Bush administration rejected both proposals, Putin decided, as Kroenig contends, "to go ahead and cheat." 112

U.S. intelligence services estimate that Russia initiated the development of the SSC-8 in the mid-2000s, 113 began flight testing in 2008, and test-fired the missile in 2014.¹¹⁴ During this period, Moscow attempted to preserve the appearance of INF compliance by first firing a warhead over 500 km from a fixed launcher, an action permissible under the Treaty if testing sea or air-launched missiles, and later mounting the SSC-8 on a mobile launcher to test it at under 500 km. 115 Combined, these tests demonstrate Russian capability to launch at INF-restricted ranges from a "ground-mobile platform," which is a Treaty violation. 116 The U.S. State Department declared Russia non-compliant in 2014 and reiterated this position until the Trump administration withdrew from the Treaty in August 2019.¹¹⁷ Moscow denied Washington's accusations. Deputy Foreign Minister Sergei Ryabkov claimed in January 2019 that the White House was "not interested in giving us the opportunity to disprove their erroneous or fabricated information."118 The Kremlin also retorted that the United States itself had violated INF restrictions by placing AEGIS-Ashore missile defense systems carrying SM-3 Block IIA and Block IIB interceptors in Poland and Romania. These installations,

Nonresident Senior Fellow, BROOKINGS INST. (Feb. 27, 2020) [hereinafter Pifer interview]. North Korea, South Korea, China, Pakistan, and India, among others, possessed missiles in this range at the time. *Id.*

- 111. Pifer, Russian Compliance, supra note 110.
- 112. Kroenig interview, supra note 18.
- 113. Daniel Coats, Director of National Intelligence Daniel Coats on Russia's INF Treaty Violation, Off. Of the Dir. Of NAT'L Intelligence (Nov. 30, 2018), available at https://www.dni.gov/index.php/newsroom/speeches-interviews/item/1923-director-of-national-intelligence-daniel-coats-on-russia-s-inf-treaty-violation (last visited Nov. 23, 2020).
- 114. Missile Defense Project, SSC-8 (9M729), CTR. FOR STRATEGIC & INT'L STUD. (Sept. 4, 2019), available at https://missilethreat.csis.org/missile/ssc-8-novator-9m729/ (last visited Nov. 23, 2020).
 - 115. Id.
 - 116. *Id*.
- 117. Bureau of Arms Control, Verification, and Compliance, *The Intermediate-Range Nuclear Forces Treaty*, U.S. DEP'T OF STATE (2020), *available at https://www.state.gov/inf (last visited Nov. 23, 2020).*
- 118. Tom O'Connor, Russia Gives First Look at Weapon That Is Causing U.S. to Leave Nuclear Missile Treaty, Newsweek (Oct. 5, 2020).
 - 119. See Lanoszka, supra note 99, at 55.

Moscow alleged, could be repurposed for offensive uses at INF-prohibited ranges. 120

Regardless of any potential validity to the Kremlin's claims regarding AEGIS-Ashore, Russia's development of the SSC-8 appears to constitute an intentional, strategic decision to prioritize operational advantages over any political benefits incurred by continued Treaty adherence. "Russia concluded that at the end of the day, it was prepared to lose the INF Treaty over the missile," Pifer asserts, "but there was likely a hope that they could disguise the missile and get away with it." Evidence of this intent may be inferred from Russia's overt SSC-8 deployments even while the INF regime remained technically intact. As of February 2019, Russia had stationed at least one hundred operational missiles, 122 including spares, and sixteen launchers in four battalions located in the Western, Southern, Central, and Eastern military districts. Moreover, a January 2020 article by Viktor Litovkin, head of the Kremlinowned TASS military news office, claimed that Russia transferred the SSC-8 to "the European part of the country, namely in the Kaliningrad

^{120.} Id. The question of whether the U.S. complied fully with INF treaty requirements is largely beyond the scope of this paper, but the State Department has refuted Russia's charges on this matter. See, e.g., Bureau of Arms Control and Verification, Refuting Russian Allegations of U.S. Noncompliance with the INF Treaty, U.S. DEP'T OF STATE (Dec. 8, 2017), available at https://www.state.gov/refuting-russian-allegations-of-u-s-noncompliance-with-the-inf-treaty/ (last visited Nov. 23, 2020).

^{121.} Pifer interview, supra note 110.

^{122.} By comparison, Russia possesses around 820 sea-based non-strategic warheads mounted on the SS-N-30 Kalibr land-attack cruise missile (LACM), the older SS-N-21 Sampson LACM, and the SS-N-19 Shipwreck anti-ship cruise missile (ASCM). According to a report published by the Center for Strategic and Budgetary Assessments (CSBA), however, the breakdown amongst the various delivery systems is "unknown." See Jacob Cohn, Adam Lemon & Evan Braden Montgomery, Assessing the Arsenals: Past, Present, and Future, CTR. FOR STRATEGIC & BUDGETARY ASSESSMENTS 19 (2019), available at https://csbaonline.org/uploads/documents/Assessing_Web_FINAL.pdf (last visited Nov. 23, 2020).

^{123.} The missiles are presently deployed to the following locations: Kapustin Yar, Kamyshlov, Mozdok, and Shuya. See Report: Russia Has Deployed More Medium-Range Cruise Missiles Than Previously Thought, RADIO FREE EUROPE/RADIO LIBERTY (Feb. 10, 2019), available at https://www.rferl.org/a/report-russia-has-deployed-more-medium-range-cruise-missiles-than-previously-thought/29761868.html (last visited Nov. 23, 2020). See also Hans M. Kristensen & Matt Korda, Russian Nuclear Forces, 2019, 75 BULL ATOMIC SCIENTISTS 73 (2019); Russia Has Apparently Stationed Far More Missiles Than is Known, DER SPIEGEL (Feb. 9, 2019), available at https://www.spiegel.de/politik/ausland/russland-hatoffenbar-mehr-umstrittene-raketen-stationiert-als-bekannt-a-1252500.html (last visited Nov. 23, 2020); Michael R. Gordon, On Brink of Arms Treaty Exit, U.S. Finds More Offending Russian Missiles, WALL ST. J. (Jan. 31, 2019), available at https://www.wsj.com/articles/on-brink-of-arms-treaty-exit-u-s-finds-more-offending-russian-missiles-11548980645 (last visited Nov. 23, 2020).

region;"¹²⁴ Russia Today, another Moscow propaganda arm,¹²⁵ also reported Kaliningrad deployments.¹²⁶ Even if these unsubstantiated claims represent mere Kremlin signaling intended to intimidate European capitals, they reflect at a minimum that Moscow has no qualms flaunting the newest addition to its arsenal.

B. Why is the SSC-8 Unique?

The SSC-8 offers Moscow several otherwise unavailable operational capacities. First, the GLCM's stealth capability and in-flight maneuverability allow for evasion of enemy detection and attempted interception. Although cruise missiles are markedly slower than ballistic variants, ¹²⁷ a ballistic trajectory may carry a warhead approximately 2000 km into the atmosphere, whereas the SSC-8 can fly below the radar sightline at only 50 to 150 meters above the ground. ¹²⁸ The missile also

^{124.} Viktor Litovkin, NATO Secretary-General Announces Deployment of US Missiles in Europe, InfoRos (Jan. 23, 2020), available at https://inforos.ru/en/?module=news&action=view&id=104013 (last visited Nov. 23, 2020). As Ukrainian defense commentator Semen Kabakaev notes, "if the Iskander system with 9M729 [SSC-8] missile was deployed in the Kaliningrad region, it could easily reach Germany and the UK." See also Semen Kabakaev, Russia Deploys Banned Missile and Brags About It, ATLANTIC COUNCIL (May 10, 2017), available at https://www.atlanticcouncil.org/blogs/ukrainealert/russia-deploys-banned-missile-and-brags-about-it/ (last visited Nov. 23, 2020).

^{125.} See, e.g., Jim Rutenberg, RT, Sputnik and Russia's New Theory of War, N.Y. TIMES (Sept. 13, 2017), available at https://www.nytimes.com/2017/09/13/magazine/rt-sputnik-and-russias-new-theory-of-war.html (last visited Nov. 23, 2020).

^{126.} Russia Offers NATO a Moratorium on Missile Deployment, but Won't Sacrifice its Own Security to Prove its Goodwill, RUSS. TODAY (Sept. 26, 2019), available at https://www.rt.com/news/469701-putin-message-nato-missile-inf/ (last visited Nov. 23, 2020).

^{127.} The SCC-8 has a likely maximum flight speed of around 240 m/s or 537 mph. See 9M729 - SSC-8, GLOBALSECURITY (2020), available at https://www.globalsecurity.org/wmd/world/russia/ssc-8.htm (last visited Oct. 5, 2020). A ballistic missile, conversely, may reach speeds of 7.9 km/s, or over 17,650 mph. See, e.g., The 10 Longest Range Intercontinental Ballistic Missiles (ICBMs), ARMY TECH. (Nov. 3, 2013), available at https://www.army-technology.com/features/feature-the-10-longest-range-intercontinental-ballistic-missiles-icbm/ (last visited Oct. 5, 2020).

^{128.} See SSC-8, MILITARY-TODAY (2020), available at http://www.military-to-day.com/missiles/ssc_x_8.htm (last visited Oct. 5, 2020). The SSC-8 is equipped to carry either a low-yield nuclear warhead with a yield of around 10-50 kT, a conventional warhead with 500 kg of explosives, as well as "cluster, fuel-air explosive, and bunker-busting warheads." Id. The SS-N-30 Kalibr carries an estimated conventional explosive payload of 450 kg. See 3M-14 Kalibr (SS-N-30A), MISSILE DEF. ADVOCACY ALLIANCE (2020), available at https://missiledefenseadvocacy.org/missile-threat-and-proliferation/missile-proliferation/russia/ss-n-30a-kalibr/ (last visited Oct. 5, 2020). By comparison, conventionally armed ballistic missiles may carry a much larger payload; modified U.S. Peacekeeper missiles, for

utilizes an advanced astro-inertial navigation system and receives Russian GLONASS satellite updates, allowing operators to adjust destination coordinates in-flight. As the Department of Defense (DoD) 2019 Missile Defense Review warns, the difficulty of detecting and tracking an SSC-8 launch "presents a potentially major threat to U.S. regional military operations and deterrence goals." The SSC-8 also boasts considerable accuracy, with a reported circular error probable (CEP), or the typical distance by which a missile may stray from its target, of five meters. While this may appear substantial, as O'Hanlon notes, even a weapon with a CEP of 30 meters could inflict severe damage upon runways and ports "with salvos of no more than five to ten missiles." 132

A third key characteristic is the SSC-8's range. Although commentators disagree on whether the missile can travel a maximum of 2500 km or 5500 km, 133 as seen in Figure 2, any distance beyond 2500 km allows Moscow to strike almost all of Europe without relying on ICBMs. 134 Whereas an INF-complaint Kaliningrad-based GLCM could cover the Gap and Baltic Sea but not strike targets west of Poland, the elimination of Treaty restrictions places all of Central and Western Europe, including key Atlantic ports, in Moscow's crosshairs. 135

example, could carry as much as 8,000 pounds. See Amy F. Woolf, Conventional Warheads for Long-Range Ballistic Missiles: Background and Issues for Congress, CONG. RES. SERV. (Jan. 26, 2009), available at https://fas.org/sgp/crs/nuke/RL33067.pdf (last visited Oct. 5, 2020).

- 129. SSC-8, supra note 128.
- 130. See Office of Sec'y Def., Missile Def. Rev., DEP'T OF DEF. 18 (2019), available at https://media.defense.gov/2019/Jan/17/2002080666/-1/-1/1/2019-Missle-Defense-Review.Pdf (last visited Oct. 5, 2020) [hereinafter Missile Defense Review].
 - 131. See SSC-8, supra note 128.
 - 132. See SENKAKU PARADOX, supra note 34, at 31.
- 133. See SSC-8 (9M729), supra note 115; 9M729 SSC-8, supra note 130 (this may depend, in part, upon the size of the payload).
- 134. See Jacek Durkalec, European Security Without the INF Treaty, NATO REV. (Sept. 30, 2019), available at https://www.nato.int/docu/review/articles/2019/09/30/european-security-without-the-inf-treaty/ (last visited Oct. 05, 2020).
- 135. If Moscow does not place SSC-8 batteries in Kaliningrad, the next closest deployment site to Europe is likely Kapustin Yar, a launch and development facility in Astrakhan Oblast around 500 km from the Ukrainian border. See Steven Pifer, Multilateralize the INF problem, BROOKINGS INST. (Mar. 21, 2017), available at https://www.brookings.edu/blog/order-from-chaos/2017/03/21/multilateralize-the-inf-problem/ (last visited Oct. 05, 2020) (from this location, the missile's range would not extend beyond Poland).

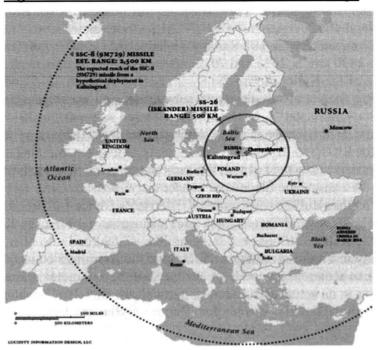


Figure 2: INF Prohibition and Minimum SSC-8 Range 136

Last, the SSC-8 is a dual-capable weapon that may carry a low-yield nuclear or conventional warhead. Questions remain about Moscow's preferred usage; Pifer claims the missile is "primarily intended for conventional purposes," while Kroenig suggests it could be used for several potential nuclear employments. Regardless of principal intent, dual-capability offers Moscow considerable flexibility in deploying the SSC-8 and for what objective. ¹³⁹

^{136.} See Rumer, supra note 14 (citing SSC-8, supra note 6, and Missile Defense Project, SS-26 ISKANDER, CTR. FOR STRATEGIC & INT'L STUDIES (Dec. 19, 2019), available at https://missilethreat.csis.org/missile/ss-26-2/ (last visited Oct. 5, 2020).

^{137.} See SSC-8, MISSILE DEF. ADVOCACY ALLIANCE (2020), available at https://missiledefenseadvocacy.org/missile-threat-and-proliferation/missile-proliferation/russia/ssc-8/ (last visited Oct. 5, 2020).

^{138.} Pifer interview, *supra* note 110; Kroenig interview, *supra* note 18 (noting that Russia could "go nuclear very early in a conflict to induce NATO into backing down altogether," by striking targets such as airbases in Poland or ships in the Baltic Sea).

^{139.} Some commentators ask whether the benefits of a dual-use weapon may be overstated given the fact that NATO forces, upon observing an incoming Russian cruise missile, may not know how the type of warhead it carries. See, e.g., Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues, CONG. RES. SERV. (Feb. 14, 2020), available at https://fas.org/sgp/crs/nuke/R41464.pdf (last visited Oct. 5, 2020) (noting that ground forces "might not know" whether an incoming missile "carried a nuclear

Russia also possesses sea- and air-launch systems that offer seemingly comparable advantages. The Kremlin introduced the SS-N-30A Kalibr land-attack cruise missile (LACM), which carries a range of 1500 to 2500 km, and the Kh-102 Raduga air-launched variant, with a range of 2500 to 2800 km, in 2015 and 2012, respectively. Russia made extensive use of the Kalibr during the Syria conflict between 2015 and 2017, launching dozens of missiles from submarines and warships against Islamic State militants. As Hans M. Kristensen suggested in 2015, Moscow's use of the Kalibr in Syria demonstrates that "there is no military need" for Russia to develop a GLCM, as "existing sea and air-launched cruise missiles can hold at risk the same targets." Russia, he argues, should thus scrap "the illegal and unnecessary" project. As

Why then did Moscow ignore Kristensen's advice and proceed with the SSC-8? Several factors may prove illustrative. First, as Kroenig notes, the Kalibr "still has accuracy problems" that call into question its reliability in a conflict situation. Despite the Kremlin's claims that the Kalibr can strike targets with an accuracy of "a few meters," questions remain as to its actual effectiveness, particularly after 2015 reports documented four Kalibrs bound for Raqqa, Syria crashing in Iran. 145

warhead or a conventional warhead"). Given the documented difficulties that current United States and NATO systems have experienced detecting and intercepting cruise missiles, however, it is likely that the enemy warhead would reach its target before planners would be faced with determining an appropriate retaliatory course. See, e.g., Bradley Bowman & Andrew Gabel, 3 ways America can fix its vulnerability to cruise missiles, DEF. NEWS (Oct. 29, 2019), available at https://www.defensenews.com/opinion/commentary/2019/10/29/3-ways-america-can-fix-its-vulnerability-to-cruise-missiles/ (last visited Oct. 5, 2020).

- 140. See, e.g., Missile Defense Project, SS-N-30A (3M-14 Kalibr), CTR. FOR STRATEGIC & INT'L STUDIES (June 15, 2018), available at https://missilethreat.csis.org/missile/ss-n-30a/ (last visited Oct. 5, 2020); Missile Defense Project, Kh-101 / Kh-102, CTR. FOR STRATEGIC & INT'L STUDIES (June 15, 2018), available at https://missilethreat.csis.org/missile/kh-101-kh-102/ (last visited Oct. 5, 2020).
- 141. See Russia Fires Cruise Missiles at IS Targets in Syria, BBC NEWS (May 31, 2017), available at https://www.bbc.com/news/world-middle-east-40104728 (last visited Oct. 5, 2020).
- 142. Hans Kristensen, *Kalibr: Savior of INF Treaty?*, FED'N OF AM. SCIENTISTS (Dec. 14, 2015), *available at* https://fas.org/blogs/security/2015/12/kalibr/ (last visited Oct. 5, 2020).
 - 143. Id.
 - 144. Kroenig interview, supra note 18.
- 145. See Russia Boasts of "High Efficiency" of Its Kalibr Missiles, As Fired At Raqqa, RADIO FREE EUR. LIBERTY (Sept. 12, 2015), available at https://www.rferl.org/a/live-blog-syria-islamic-state-isis/27363628/lbl0lbi78155.html (last visited Oct. 5, 2020); Helene Cooper & Eric Schmitt, Russia Denies U.S. Claim That Missiles Aimed at Syria Hit Iran, N.Y. TIMES (Oct. 8, 2015), available at

Additionally, whereas air- and ship-based delivery systems may become "prohibitively" expensive for a large arsenal, "putting a missile on the ground or a truck is much cheaper." ¹⁴⁶ As a February 2020 Congressional Budget Office (CBO) report claims, "[g]round-launched platforms are intrinsically cheaper than air or naval platforms." ¹⁴⁷

Last, ground-mobile systems are inherently less vulnerable to enemy attack than air- or sea-based missiles stored at bases or aboard naval vessels. As the CBO report asserts, truck-mounted mobile systems "are unlikely to remain in a location long enough for the United States to detect them, plan a strike mission, and execute that mission." Furthermore, as noted in a report co-authored by Gen. Wesley Clark, it is "very hard to target and destroy [mobile launchers] without the presence of ground troops inside Russia's borders." And as Pifer adds, there is "a huge expanse of Russian territory that they can hide in." NATO forces, on the other hand, could detect and target air- and sea-launched capabilities with greater effectiveness. Ulrich Kühn suggests that Russian planners "do not trust [air and sea-based] delivery platforms in a second-strike scenario and believe that they would lose them early on in a war with NATO." Russian military planners appear to share this mindset. In

https://www.nytimes.com/2015/10/09/world/middleeast/syria-and-russia-continue-coordinated-assault-on-militants.html (last visited Oct. 5, 2020).

^{146.} Id.

^{147.} Options for Fielding Ground-Launched Long-Range Missiles, CONG. BUDGET OFF. 15 (Feb. 2020), available at https://www.cbo.gov/publication/56143 (last visited Nov. 22, 2020).

^{148.} *Id.* at 21. (The report offers an example of these challenges by describing U.S. difficulties targeting Iraqi mobile Scud launchers during Operation Desert Storm. Despite the military sending "hundreds of aircraft over several weeks to locate and destroy a relatively small number of Iraqi Scud missile launchers in a barren desert environment"). *Id.* at 15 (after the conflict, "the United States could not confirm that it had destroyed any mobile Scud launchers"). *See also* Thomas Keaney & Eliot Cohen, GULF WAR AIR POWER SURVEY SUMMARY REPORT 89-90 (1993), available at https://apps.dtic.mil/dtic/tr/fulltext/u2/a273996.pdf (last viewed Nov. 22, 2020) ("Once again, there is no indisputable proof that Scud mobile launchers—as opposed to high-fidelity decoys, trucks, or other objects with Scud-like signatures—were destroyed by fixed-wing aircraft").

^{149.} Wesley Clark, Jüri Luik, Egon Ramms & Richard Shirreff, Closing NATO's Baltic Gap, INT'L CTR. FOR DEF. & SEC. (May 2016), available at https://icds.ee/wp-content/up-loads/2015/ICDS_Report-Closing_NATO_s_Baltic_Gap.pdf (last visited Nov. 22, 2020) [hereinafter Clark, Luik, Ramms & Shirreff] (referencing the S-300 and S-400 air defense units, but mobile launchers for those systems and the SSC-8 are of similar size and offer comparable mobility).

^{150.} Pifer interview, supra note 110.

^{151.} Ulrich Kühn, Preventing Escalation in the Baltics: A NATO Playbook, CARNEGIE ENDOWMENT FOR INT'L PEACE (2018), available at

January 2020, the Russian *Military-Industrial Courier*, the same newspaper in which General Gerasimov penned his seminal 2013 article, published a piece warning that Russian submarines at naval bases or on the open ocean are at risk of satellite detection and could be susceptible to preemptive enemy attack. ¹⁵² If the *Courier* piece accurately reflects the Russian military calculus, Moscow may have strong incentives to reduce reliance upon existing systems in favor of the SSC-8.

IV. POST-INF LANDSCAPE VULNERABILITIES

The SSC-8 elevates Russia's threat to Baltic sovereignty in two principal manners. First, following a Suwalki incursion, Moscow could employ the advanced missiles for de-escalation or warfighting purposes. Second, Russia could leverage the prospect of nuclear strikes to induce recalcitrance amongst NATO members to uphold mutual defense obligations.

A. Operational Impact

As a dual-capable weapon, the SSC-8 offers Moscow distinct advantages if it is armed with a nuclear or conventional warhead. The nuclear variant could enhance the Kremlin's ability to conduct de-escalatory detonations, though it already possesses a considerable sub-strategic arsenal. More concerning is the specter of conventional strikes against NATO military assets designed to impede the transportation of troops and equipment to reinforce the Baltic states.

1. Nuclear Capabilities

Moscow could acquire a potential operational advantage by integrating the SSC-8 into its nuclear planning. The famed doctrine of "escalate-to-deescalate" dictates that, should Russia face a "major non-nuclear assault that exceeded its capacity for conventional defense, it would 'deescalate' the conflict by launching a limited—or tactical—nuclear strike"

https://carnegieendowment.org/files/Kuhn_Baltics_INT_final_WEB.pdf (last visited Nov. 22, 2020) [hereinafter Kühn]. Moreover, as Pifer argues, Moscow developed the SSC-8 in part because it "did not believe, in a high-intensity conflict, that its navy would be around very long, and didn't fully trust its air-launched capabilities." Pifer interview, *supra* note 110.

^{152.} Media: Russian Submarines are 'Sitting Ducks,' UAWIRE (Jan. 5, 2020), available at https://www.uawire.org/media-russian-submarines-are-sitting-ducks (last visited Nov. 22, 2020) (citing Косихин Евгений, Is it Possible to Ensure Reliable Deployment of the Russian Submarine Fleet in the World Ocean, MIL. INDUS. COURIER (Dec. 3, 2019), available at https://ypk-news.ru/articles/53969 (last visited Nov. 22, 2020)).

against enemy military assets.¹⁵³ Such an attack would likely take one of two forms: a *counterforce* strike targeting enemy troops, equipment, or infrastructure near the battlefield; or a *demonstration* strike designed to "intimidate NATO governments" while inflicting minimal casualties.¹⁵⁴ Although commentators often debate the validity of this concept in practice,¹⁵⁵ Russian cognizance of conventional inferiority vis-à-vis NATO, the size of its tactical arsenal,¹⁵⁶ and its past exercises simulating a "strike with a single nuclear weapon at the end of a conventional conflict" all point to the continuing relevance of de-escalatory strikes in its military strategy.¹⁵⁷ Indeed, nuclear threats may have loomed as 'part of the backdrop' of Russian aggression in Ukraine and Syria.¹⁵⁸

ports/RR2700/RR2781/RAND_RR2781.pdf (last visited Nov. 22, 2020) [hereinafter Paul K. Davis et al.] (suggesting Russia could consider a tactical strike on NATO conventional forces in the Baltic states).

- 155. See, e.g., Jay Ross, Time to Terminate Escalate-to-Deescalate It's Escalation Control, WAR ON THE ROCKS (Apr. 24, 2018), available at https://waron-therocks.com/2018/04/time-to-terminate-escalate-to-de-escalateits-escalation-control/ (last visited Nov. 22, 2020) (arguing that the prospect of targeted tactical strikes is merely one facet of a broader strategy aimed at controlling escalation).
- 156. Russia is estimated to have over 2,000 tactical weapons, many of which are likely stored west of the Ural Mountains. See Kühn, supra note 150, at 18.
- 157. See id. at 19 (Kühn notes that there are two essential variants of escalate-to-deescalate: defensive, using a strike "to deter further aggression or terminate the conflict with an acceptable outcome"; and offensive, using it "to terminate such a conflict before Russia's opponent(s) could regain ground").
- 158. See Jacek Durkalec, Nuclear Backed "Little Green Men:" Nuclear Messaging in the Ukraine Crisis, POLISH INST. OF INT'L AFFAIRS (July 2015), available at

^{153.} Joshua Ball, Escalate To De-Escalate: Russia's Nuclear Deterrence Strategy, GLOBAL SEC. REV. (June 10, 2019), available at https://globalsecurityreview.com/nuclear-deescalation-russias-deterrence-strategy/ (last visited Oct. 3, 2020) ("Russian exercises do not preclude the possibility that Moscow plans for limited regional escalation using tactical nuclear weapons. Rather, the exercises suggest that Russia is also prepared to escalate in a limited fashion at the strategic level. Western analysts even assume that Russian escalation to the nuclear level, in general, could happen rather quickly in a conflict with NATO"); see also Frank Kirbyson, Escalate to De-Escalate: Speculation on Russian Nuclear Strategy, NAVAL POSTGRADUATE SCH. (Sept. 2019), available at https://calhoun.nps.edu/bitstream/handle/10945/63469/19Sep_Kirbyson_Frank.pdf?sequence=1&isAllowed=y (last visited Nov. 22, 2020).

^{154.} See Barry Blechman, Alex Bollfrass & Laicie Heeley, Reducing The Risk Of Nuclear War In The Nordic/Baltic Region, STIMSON CTR. (Dec. 15, 2015), available at https://www.stimson.org/2015/reducing-risk-nuclear-war-nordicbaltic-region-0/ (last visited Nov. 22, 2020) (describing a scenario in which Russians launch two nuclear-armed missiles on NATO forces); Paul K. Davis et al., Exploring the Role Nuclear Weapons Could Play in Deterring Russian Threats to the Baltic States, RAND CORP. 28 (2019), available at https://www.rand.org/content/dam/rand/pubs/research_re-

Russian planners could turn to the SSC-8 to execute an "escalate-to-deescalate" strike. If a NATO counter-offensive "went against its interests" to a sufficient extent, ¹⁵⁹ Moscow could initiate counterforce strikes against NATO ships and other "isolated military targets" or demonstration strikes in the high atmosphere designed to create an electromagnetic pulse (EMP) effect. ¹⁶⁰ In doing so, the Kremlin could choose from a plethora of low-yield options, including:

[Five hundred] air-to-surface missiles and bombs assigned to tactical air forces; 810 warheads assigned to tactical naval forces for delivery via cruise missiles, anti-submarine weapons, anti-air missiles, torpedoes, and depth bombs; 380 warheads for air-, ballistic missile, and coastal defense forces; and 140 warheads assigned to ground-launched, short-range ballistic missiles. ¹⁶¹

Yet despite this extensive arsenal, if the Kremlin selects a target within the 500-5000 km range—a NATO installation in Germany, for example—under INF restrictions, it could only employ air- or sea-based

https://www.files.ethz.ch/isn/193514/Nuclear%20Backed%20%E2%80%9CLittle%20Green%20Men%E2%80%9D%20Nuclear%20Messaging%20in%20the%20Ukraine%20Crisis.pdf (last visited Nov. 22, 2020) [hereinafter Durkalec, *Nuclear Backed*] ("There is evidence that indicates that nuclear weapons have played an important role during the Ukraine crisis"); *see also* Kroenig interview, *supra* note 18.

- 159. SENKAKU PARADOX, *supra* note 34, at 34. Moreover, as Davis, Gilmore, Frelinger, Geist, Gilmore, Oberholtzer, & Tarraf write, "it would seem that Russian doctrine would notably apply to a scenario of Russian aggression, such as a Russian invasion of the Baltic states that quickly suffered conventional reverses or looked as though it might be followed by a major NATO military response that would bring to bear NATO's overall military and economic strength, perhaps over many months or a few years." Paul K. Davis et al., *supra* note 153, at 28.
- 160. SENKAKU PARADOX, *supra* note 34, at 34-35. Russia notably threatened to target Danish ships joining a March 2015 American-led missile defense effort with nuclear missiles. *See* Teis Jensen & Adrian Croft, *Russia Threatens to Aim Nuclear Missiles at Denmark Ships if it Joins NATO Shield*, REUTERS (Mar. 22, 2015), *available at* https://www.reuters.com/article/us-denmark-russia/russia-threatens-to-aim-nuclear-missiles-at-denmark-ships-if-it-joins-nato-shield-idUSKBN0MI0ML20150322 (last visited Nov. 22, 2020).
- 161. Russia: Nuclear, NUCLEAR THREAT INITIATIVE (Oct. 2018), available at https://www.nti.org/learn/countries/russia/nuclear/ (last visited Nov. 23, 2020). The United States maintains a tactical nuclear arsenal of around 500 air-dropped weapons, although it is also in the process of deploying a new submarine-launched sub-strategic nuclear missile. See Amy F. Wolf, Nonstrategic Nuclear Weapons, Cong. Res. Serv. (May 4, 2020), available at https://fas.org/sgp/crs/nuke/RL32572.pdf (last visited Nov. 22, 2020); William Arkin & Hans Kristensen, US Deploys New Low-Yield Nuclear Submarine Warhead, Fed. OF Am. Scientists (Jan. 29, 2020), available at https://fas.org/blogs/security/2020/01/w76-2deployed/ (last visited Nov. 22, 2020).

capabilities for this mission.¹⁶² Considering the risk of interception by fighters or air defenses,¹⁶³ as well as the aforementioned Kalibr downsides of questionable accuracy, vulnerability to enemy attack, and the cost of production and maintenance,¹⁶⁴ Kremlin planners may see the SSC-8 as a more reliable option for intermediate-range de-escalatory strikes.¹⁶⁵

However, the most operational benefits that a nuclear-armed SSC-8 offers beyond existing aerial and naval capabilities may be offset by the Kremlin's unlikeliness to order a de-escalatory detonation at ranges beyond 500 km. If Moscow seeks a counterforce strike against a target in the Baltics or near the Gap, it could utilize the ground-launched SS-21 Scarab¹⁶⁶ and newer SS-26 Iskander-M,¹⁶⁷ which it has deployed to Kaliningrad.¹⁶⁸ During the 2012 KAZKAV exercise, the military conducted a live-fire Iskander-M test, which according to Roger McDermott "possibly suggests a rehearsal of a tactical nuclear use in a de-escalatory means."¹⁶⁹ Given that NATO forces and key military infrastructure, such

¹⁶². As Figure 2 illustrates, all of German territory lies outside the range of a $500 \ \text{km}$ INF-compliant missile.

^{163.} Ballistic and Cruise Missile Threat, FED. OF AM. SCIENTISTS (1998), available at https://fas.org/irp/threat/missile/naic/part02.htm (last visited Oct. 4, 2020). Missiles also require "fewer maintenance, training, and logistic requirements than manned aircraft").

^{164.} Kroenig interview, supra note 18.

^{165.} *Id.* ("Russia already had a number of nuclear and conventional options, but this does give them an additional one. If there is a fight, one possibility is they could use them for strategic strikes aimed at de-escalation").

^{166.} Missile Def. Project, SS-21 (OTR-21 Tochka), CTR. FOR STRATEGIC & INT'L STUD. (July 23, 2019), available at https://missilethreat.csis.org/missile/ss-21/ (last visited Nov. 23, 2020) (Russia refers to this missile, which has a 120 km range, as the OTR-21 Tochka).

^{167.} See Olga Oliker, Russia's Nuclear Doctrine: What We Know, What We Don't, and What That Means, CTR. FOR STRATEGIC & INT'L STUD. (May 2016), available at https://www.csis.org/analysis/russia%E2%80%99s-nuclear-doctrine (last visited Oct. 4, 2020). Moscow refers to this missile as the 9M723 Iskander, which it employs exclusively for Russian military use; it also produces a variant called the Iskander-E (9M720) for export. The Iskander has a 500 km range. See Missile Def. Project, SS-26 Iskander, CTR. FOR STRATEGIC & INT'L STUD. (Dec. 19, 2019), available at https://missilethreat.csis.org/missile/ss-26-2/ (last visited Oct. 4, 2020).

^{168.} See Jack Stubbs, Russia Deploys Iskander Nuclear-Capable Missiles to Kaliningrad: RIA, REUTERS (Feb. 5, 2018), available at https://www.reuters.com/article/us-russia-nato-missiles/russia-deploys-iskander-nuclear-capable-missiles-to-kaliningrad-ria-idUSKBN1FP21Y (last visited Nov. 16, 2020).

^{169.} Roger McDermott, Kavkaz 2012 Rehearses Defense of Southern Russia, JAMESTOWN FOUND. (Sept. 25, 2012), available at https://jamestown.org/program/kavkaz-2012-rehearses-defense-of-southern-russia/ (last visited Nov. 16, 2020); see also Dave Johnson, Russia's Conventional Precision Strike Capabilities, Regional Crises, and Nuclear Thresholds, LAWRENCE LIVERMORE NAT'L LAB. CTR. FOR GLOBAL SEC. RES. (Feb. 2018), available at https://cgsr.llnl.gov/content/assets/docs/Precision-Strike-Capabilities-report-v3-7.pdf (last visited Nov. 16, 2020).

as the Poland-Lithuania border railyard, likely fall within Iskander range,¹⁷⁰ the SSC-8 would only augment Moscow's escalate-to-deescalate capabilities if it selects a more distant target, a prospect seemingly at odds with the counterforce rationale.¹⁷¹ And if the Kremlin seeks a demonstration strike over the North Sea,¹⁷² it could employ the Kalibr for a task where pinpoint accuracy is ancillary to the visual effect.¹⁷³ Therefore, as Kühn observes, although the SSC-8 may be "consistent with the doctrine of escalate-to-deescalate," its utility is "somewhat questionable."¹⁷⁴

2. Conventional Capabilities

Beyond its possible nuclear role, the SSC-8, more importantly, offers Moscow the ability to conduct theater-range conventional strikes against NATO assets during an Allied effort to reinforce or recapture Baltic territory. Specifically, the SSC-8 augments and extends existing Russian area-denial/anti-access (A2/AD) capabilities: systems intended to "contribute to denying an adversary's forces access to a particular region or otherwise hinder freedom of maneuver." As Gen. Philip Breedlove and Amb. Alexander Vershbow note, Russia has "steadily built up" its A2/AD capabilities in Kaliningrad, including "integrated air defenses, counter-maritime forces, ballistic and cruise missiles, and other precision-guided munitions to create a layered array of strategic surface-to-air

^{170.} SENKAKU PARADOX, supra note 34, at 30.

^{171.} Paul K. Davis et al., supra note 153, at 28. As Justin Anderson and Amy Nelson argue, however, "should a future NATO-Russian conventional conflict begin to go badly for the Kremlin, the SSC-8 might be employed by Moscow to launch a theater nuclear strike to force a hard stop on NATO operations." Justin V. Anderson & Amy J. Nelson, The INF Treaty: A Spectacular, Inflexible, Time-Bound Success, 13 STRATEGIC STUD. Q. 107 (2019), available at https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-13_Issue-2/Anderson.pdf (last visited Nov. 16, 2020) [hereinafter Anderson & Nelson]. This paper does not discount this possibility but instead argues that an operational-level strike against NATO forces in the Baltic region is more likely.

^{172.} See Kühn, supra note 150, at 46. As Kühn notes, Moscow may now "hold at risk additional European targets not already targeted by Russian tactical nuclear weapons." *Id.* at 20.

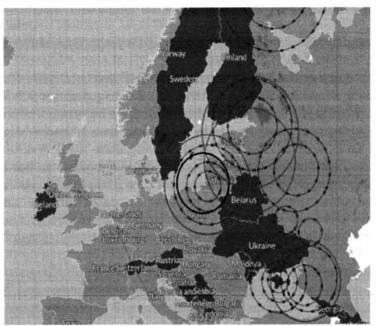
^{173.} Paul K. Davis et al., *supra* note 153, at 32 (explaining purpose of a de-escalatory strike is to demonstrate "Russia's determination and readiness to bring hostilities to a halt" rather than necessarily "defeat the alliance's military or strategic forces outright").

^{174.} Kühn, supra note 150, at 20.

^{175.} Ian Williams, *The Russia – NATO A2AD Environment*, CTR. FOR STRATEGIC & INT'L STUDIES (Nov. 29, 2018), *available at* https://missilethreat.csis.org/russia-nato-a2ad-environment/ (last visited Nov. 16, 2020) [hereinafter Ian Williams].

missiles aimed at denying an enemy's ability to operate in the region."¹⁷⁶ Breedlove and Vershbow cite the Iskander-M and advanced S-400 "Tri-umf" anti-aircraft system as examples of emergent technologies that contribute to creating an A2/AD "bubble" in this area. ¹⁷⁷





As Figure 3 illustrates, Russia possesses several A2/AD "layers" that may restrict NATO's ability to operate in the Baltic region. The dotted red rings represent Kaliningrad's integrated air defenses. The innermost ring depicts the 150 km range of the S-300, and the two wider rings correspond to variants of the newer S-400. The black circle represents the Bastion-P anti-ship coastal defense system with a 300 km range, and the solid red band connotes the aforementioned Iskander-M GLBM with

^{176.} Breedlove & Vershbow, supra note 93, at 18.

^{177.} Id. at 19.

^{178.} Ian Williams, *supra* note 175. *See* Figure 1 for an illustration of the SSC-8's range in contrast to previous capabilities.

^{179.} The S-400 supports the 40N6E-series missile, with a range of 400 km, and 48N6, with a range of 250 km. It also supports two other variants, the 9M96e2 (120 km) and the short-range 9m96e (40 km), which are not depicted on the map. See Stephen Bryen, Why Russia's S-400 Anti-Air System Is Deadlier Than You Think, NAT'L INTEREST (Nov. 9, 2019), available at https://nationalinterest.org/blog/buzz/why-russias-s-400-anti-air-system-dead-lier-you-think-94541 (last visited Nov. 16, 2020).

a 500 km range.¹⁸⁰ Taken together, these capabilities, Breedlove and Vershbow write, "create a potential threat to [the United States] or NATO forces attempting to enter North Central Europe to defend or reinforce the region in a potential crisis."¹⁸¹ As seen in Figure 3, however, Russian A2/AD capabilities under INF restrictions only extend 500 km beyond Kaliningrad, allowing Moscow to target forces in Poland and ships in the Baltic Sea, while Germany and Western Europe remain outside its reach. NATO forces en route to combat in the Baltics, therefore, would remain safe from Russian land-based attack until they approached the 500 km threshold of the first A2/AD layer.¹⁸²

Integrating the SSC-8 into its post-INF arsenal allows Russia to expand the scope of its A2/AD network. At ranges under 500 km, the missile provides an additional option but offers no groundbreaking advances given the presence of the INF-compliant Iskander-M and Iskander-K. Instead, the SSC-8 provides greater military utility as a "theater strike weapon": a missile category that can reach "far beyond operational ranges," but generally not past 3500 km. As Michael Kofman notes, theater strike assets allow Russia to conduct "single or grouped strikes against critical objects" and larger campaigns aimed at "destroying critically important objects and affecting a disaggregating strike on the enemy's command and control." In providing these capabilities, the SSC-8 adds another layer to existing A2/AD systems, extending the "bubble" beyond 2500 km to cover Scandinavia and Western Europe.

^{180.} Id.

^{181.} Breedlove & Vershbow, supra note 93, at 18.

^{182.} Senkaku Paradox, *supra* note 34, at 30 ("Russia could easily range the rail and road lines with shorter-range conventionally armed missiles of the type still allowed it under the INF Treaty"). NATO forces would, however, remain vulnerable to sea- and air-based attacks.

^{183.} See Kroenig interview, supra note 18 (noting that the SSC-8 offers Russia an "additional" nuclear and conventional option at operational levels); Durkalec, supra note 158 ("From a military perspective, these weapons became a valuable complement to other capabilities, increasing the number and the credibility of available strike options").

^{184.} See Michael Kofman, It's Time to Talk About A2/AD: Rethinking the Russian Military Challenge, WAR ON THE ROCKS (Sept. 5, 2019), available at https://warontherocks.com/2019/09/its-time-to-talk-about-a2-ad-rethinking-the-russian-military-challenge/ (last visited Oct. 9, 2020).

^{185.} John Pike, *Theater Ballistic Missiles*, FED'N OF AM. SCIENTISTS (Oct. 25, 1998), available at https://fas.org/nuke/intro/missile/tbm.htm (last visited Nov. 23, 2020).

^{186.} Kofman, supra note 184.

^{187.} See Figure 2 for a depiction of the SSC-8's estimated minimum range of 2,000 km.

In the event of a Russian Suwalki incursion and subsequent NATO counter-offensive. Moscow could employ the SSC-8 to "impede, delay or prohibit" the movement of reinforcements across the European continent toward the Gap. 188 The missile's minimum range of 2500 km allows strikes against not only European capitals but also "all the critical airports and seaports of embarkation for Allied reinforcement, as well as other critical infrastructure across NATO territory." Pifer sees the ports of Rotterdam and Hamburg as potential targets. 190 If the United States were to deploy several hundred thousand troops with heavy equipment to Europe, ¹⁹¹ Moscow would likely direct conventional SSC-8 strikes "early in the conflict" against these assets before and during debarkation. 192 Given the SSC-8's accuracy and satellite-enabled in-flight adjustable navigation system, Moscow could target U.S. LMSRs and SL-7 vessels in the North Sea or the Atlantic as troops and equipment are being transported to Europe. 193 In light of well-documented difficulties in defending against cruise missile attacks, O'Hanlon suggests that NATO "could easily see an armada largely destroyed." Kaliningrad-based missiles could also reach the Royal Air Force's six main operating bases in the United Kingdom. 195 Vice-Chairman of the Joint Chiefs of Staff Gen. Paul Selva expressed these sentiments before Congress in March 2017, testifying that the SSC-8 "presents a risk to most of our facilities in Europe." 196

Yet considering the presence of air- and sea-launched cruise missiles in the Russian arsenal, are conventional SSC-8 capabilities merely redundant? Not necessarily. First, as noted above, mobile ground-based missiles offer advantages in the realms of in-flight accuracy, concealability

^{188.} Durkalec, supra note 158.

^{189.} Id.

^{190.} Pifer interview, *supra* note 110. NATO would likely plan to use these ports "to receive American ships bringing across heavy equipment." *Id.*

^{191.} See SENKAKU PARADOX, supra note 34, at 25.

^{192.} See Kroenig interview, supra note 18; Ian Williams, supra note 175. As Ian Williams further notes, disabling "aerial and seaports of debarkation and embarkations," which are "essential to the rapid deployment of troops and equipment... would complicate NATO's ability to efficiently respond to crisis." Id.

^{193.} See SENKAKU PARADOX, supra note 34, at 33.

¹⁹⁴ Id at 32.

^{195.} See Carl Rehberg & Mark Gunzinger, Air and Missile Defense at a Crossroads: New Concepts and Technologies to Defend America's Overseas Bases, CSBA (Oct. 3, 2018), available at

https://csbaonline.org/uloads/docments/CSBA_Crossroads_Base_Defense_Report_web.pdf (last visited Nov. 23, 2020) [hereinafter Rehberg & Gunzinger].

^{196.} Military Assessment of Nuclear Deterrence Requirements: Hearing on Armed Ser., Before the H. Comm. on Armed Services, 115th Cong. 10 (2017) (statement of Gen. Paul Selva, Vice Chairman of the Joint Chiefs of Staff).

from enemy detection, and cost-effectiveness when compared to the Kalibr and Raduga. ¹⁹⁷ More specifically, whereas escalate-to-deescalate generally dictates attacks against forces in the Baltic region, conventional precision strikes offer Moscow the greatest utility if directed against enemy military assets and infrastructure in Western Europe. ¹⁹⁸ Unlike targets 500 km or closer, where Russia could alternatively employ the Iskander-M or other operational-range systems, Moscow maintains no other ground-launched conventional weapons capable of theater-level strikes. ¹⁹⁹ Consequently, the SSC-8 offers the Russian military a theater-range strike capacity it previously lacked altogether.

Additionally, while the objective in an escalate-to-deescalate detonation is to generally demonstrate "Russia's determination and readiness to bring hostilities to a halt," conventional strikes aim to inflict tangible damage upon discrete military assets. Accuracy, therefore, is at a premium, particularly when targeting mobile objects like warships. Given reports of Syria-bound Kalibrs landing in Iran and general concerns regarding the viability of its navy, the Kremlin is likely wary of relying upon sea-launched systems in a high-intensity conflict. 202

Last, stealth is particularly important for strikes against fortified and well-defended vessels and bases. As Jacek Durkalec writes, because GLCMs are "more capable of avoiding launch detection and tracking during flight, thus striking their distant targets with little or no warning," if Russia sought a surprise attack, the SSC-8 "would be the best choice, especially compared to the more easily tracked air and sea platforms for land-attack cruise missiles." ²⁰³

B. Strategic and Political Impact

Russia may also attempt to leverage SSC-8 threats to intimidate NATO members into re-assessing mutual defense obligations. During the Euromissile crisis, William Leonard writes, President Carter feared

^{197.} See, e.g., Kroenig interview, supra note 18.

^{198.} See Rehberg & Gunzinger, supra note 195, at 7.

^{199.} See Pifer interview, supra note 110. Pifer notes, "previously, the Russians had no other choice besides nuclear weapons" to attack targets of this nature. Id.

^{200.} Kühn, *supra* note 150, at 20, 32.

^{201.} See SENKAKU PARADOX, supra note 34, at 31. See generally Pifer interview, supra note 110. As Pifer remarks, "I was hopeful a few years ago that the Russians would conclude that they didn't need this missile capacity, given the capabilities that they demonstrated in Syria." Id.

^{202.} See Cooper & Schmitt, supra note 144; Pifer interview, supra note 110.

^{203.} Durkalec, supra note 158.

the Soviet Union would "use threats of limited SS-20 strikes against Western Europe to intimidate and coerce political concessions from America's NATO allies." As Zbigniew Brzezinski recalls, the Soviets "sought to win through intimidation and not warfighting." Carter worried particularly about "Finlandization," or Soviet pressure compelling European allies into adopting "a more neutral foreign policy, as opposed to a foreign policy strictly aligned with the United States." As Brzezinski and David Aaron came to believe, if NATO "failed to counter SS-20 deployments with its own missile deployments," Western Europe would be forced to accept a "non-aligned political orientation." 207

Might deployment of the SSC-8 have a similar effect upon European decision-making regarding involvement in a Baltic conflict? Some commentators fear the SSC-8 could, like the SS-20, potentially induce recalcitrance among European capitals to take part in collective action against Russia. Kroenig believes that Moscow "does not want to use the SSC-8, but hopes this threat [will] lead Western European leaders to say that it is not worth war with Russia over Estonia." Durkalec similarly notes that the SSC-8 offers Moscow the "option of nuclear intimidation without relying on strategic intercontinental capabilities," while Kuhn writes that it may "put pressure on NATO members to formulate a political and military response, thereby exposing alliance members' divergent views on nuclear weapons."

Polling may support the possibility of a NATO fracture. Per 2015 data, majorities in key member states oppose military action to defend a NATO ally: 53% in France, 51% in Italy, and 58% in Germany say their state "should not" intervene.²¹¹ The advent of anti-establishment populist

^{204.} William Leonard, "Closing the Gap" The Euromissiles and President Carter's Nuclear Weapons Strategy for Western Europe (1977-1979), CSIS, available at https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/101221_Leonard poni essay.pdf (last visited Nov. 23, 2020) [hereinafter Leonard].

^{205.} Id. at 12.

^{206.} Id. at 4.

^{207.} Id. at 13.

^{208.} See Kroenig interview, supra note 18. As Kroenig argues, by deploying the SSC-8, Russia by deploying this capability, Russia can cast a "deterrent and coercive shadow over everything else it's doing in Europe." Id.

^{209.} Durkalec, supra note 158.

^{210.} Kühn, supra note 150, at 20.

^{211.} See Katie Simmons et al., NATO Publics Blame Russia for Ukrainian Crisis, but Reluctant to Provide Military Aid, PEW RESEARCH CTR. (June 10, 2015), available at https://www.pewresearch.org/global/2015/06/10/nato-publics-blame-russia-for-ukrainian-crisis-but-reluctant-to-provide-military-aid/ (last visited Nov. 23, 2020); see also Judy Dempsey, NATO's European Allies Won't Fight for Article 5, CARNEGIE ENDOWMENT FOR INT'L

parties in Europe, such as Marie Le Pen's National Front, could also "apply political pressure to governing leaders to minimize national contributions to a NATO operation." Therefore, as O'Hanlon suggests, fears of "further arousing the Russian bear" might induce certain NATO members to "opt-out of a military response and even disapprove of a formal NATO decision to use force." ²¹³

At the same time, several factors militate against a repeat of the Euromissile crisis. First, European attitudes toward the SSC-8 appear fundamentally different than the SS-20. As Justin Anderson and Amy Nelson note, whereas Europe greeted the arrival of the SS-20 with "alarm" and quickly pushed for the United States to deploy comparable missiles to quell doubts regarding its commitment to extended deterrence, the revelation of the SSC-8 did not "catalyze an alliance-wide assurance crisis." Instead, when the U.S. State Department declared Russia INF non-compliant, European leaders initially "had little concern about that violation," and none raised the issue with Putin when they had an opportunity to do so. While in the 1980s, allies "expressly lobbied for new U.S. delivery vehicles that could range the Soviet Union," the same partners strongly oppose similar deployments today. These actions,

PEACE (June 15, 2015), available at https://carnegieeurope.eu/strategiceurope/?fa=60389 (last visited Nov. 23, 2020). Kroenig considers this data "shocking," observing that "for a strong alliance, it's not the type of response you'd want to see." Kroenig interview, supra note 18.

^{212.} Anika Binnendijk & Miranda Priebe, An Attack Against Them All? Drivers of Decisions to Contribute to NATO Collective Defense, RAND CORP. 12 (2019), available at https://www.rand.org/content/dam/rand/pubs/research_reports/RR2900/RR2964/RAND RR2964.pdf (last visited Nov. 23, 2020).

^{213.} SENKAKU PARADOX, supra note 34, at 22.

^{214.} Anderson & Nelson, supra note 171, at 106.

^{215.} See Steven Pifer, RIP INF: The End of a Landmark Treaty, STAN. CTR. FOR INT'L SEC. & COOP. (Oct. 31, 2018), available at https://cisac.fsi.stanford.edu/news/rip-inf-end-landmark-treaty (last visited Nov. 23, 2020). European NATO members did, however, charge Russia with violating INF obligations. A 2014 NATO communiqué called upon Russia "to preserve the viability of the INF Treaty through ensuring full and verifiable compliance," while a 2018 communiqué stated the following: Allies have identified a Russian missile system, the 9M729, which raises serious concerns. A pattern of behavior and information over many years has led to widespread doubts about Russian compliance. Allies believe that, in the absence of any credible answer from Russia on this new missile, the most plausible assessment would be that Russia is in violation of the treaty. NATO urges Russia to address these concerns in a substantial and transparent way, and actively engage in a technical dialogue with the United States. Id.

^{216.} Anderson & Nelson, supra note 171, at 93. As German Foreign Minister Heiko Maas stated in December 2018, "Stationing of new medium-range missiles would be met with broad resistance in Germany." See Maria Sheahan, Germany would oppose new nuclear missiles in Europe: Foreign Minister, REUTERS (Dec. 27, 2018), available at

according to Pifer, send a message: "Europeans didn't worry much about the treaty violation or the [SSC-8]."²¹⁷

More broadly, Europeans appear to have developed a general resignation towards the prospect of Russian nuclear threats. As Manuel Lafont Rapnouil, Tara Varma, and Nick Witney found in a 2018 survey, European governments chose "to react to the appearance of the SSC-8 by looking the other way" in part because they believe "that they can go on taking advantage of the comfort blanket of the post-cold war order" as well as for fear of opening a "Pandora's box of difficult questions and possible political opposition." In Germany, for example, the short-lived debate over the merits of pursuing a national deterrent "concluded quickly by settling back into its more traditional stance." Thus, while arguing that "no one seems to care much" about the Russian nuclear menace is likely an overgeneralization, the proclivity of Europeans to "ignore nuclear issues almost entirely" suggests that SSC-8 deployments alone are insufficient to radically alter allied decision-making regarding commitments to collective defense.

Pifer also disagrees with Kroenig's doubts regarding European willingness to defend a besieged NATO member, responding that "most allied governments would recognize that failure to protect one ally would be the end of the alliance." The SSC-8, therefore, "would not tip the balance to the point where key capitals would not engage in mutual defense" and cannot be seen as a strategic "game-changer." Public opinion polling may also matter less in Germany, France, and Italy, where there is an "elite consensus" regarding foreign involvements that have the effect of "inoculating the leadership from electoral punishment" during

https://www.reuters.com/article/us-usa-russia-treaty-germany/germany-would-oppose-new-nuclear-missiles-in-europe-foreign-minister-idUSKCN1OQ0BN (last visited Nov. 23, 2020).

^{217.} *Id.* Germany lobbied the United States in late 2018 to allow additional time for diplomacy, thus delaying the U.S. announcement. *See* Anderson & Nelson, *supra* note 171, at 108.

^{218.} Rapnouil, Varma & Witney, supra note 104.

^{219.} Id.

^{220.} Nick Witney, Nothing to See Here: Europe and the INF Treaty, EUR. COUNCIL ON FOREIGN REL. (Aug. 5, 2019), available at https://www.ecfr.eu/article/commentary_nothing_to_see_here_europe_and_the_inf_treaty (last visited Nov. 23, 2020). In justifying this assertion, Witney writes, "there have been no panicky appeals from European politicians for the US to match the Russian deployments, to maintain deterrence and transatlantic confidence." Id.

^{221.} Pifer interview, supra note 110. "At that point," he says, "there would be no credibility." Id.

^{222.} Id.

times of conflict.²²³ Indeed, Rapnouil, Varma, and Witney note that while the German public "has long been overwhelmingly hostile to NATO's nuclear policy," German governments have supported it.²²⁴

Furthermore, despite Article 5's noncommittal wording²²⁵ and some European sentiments suggestive of hesitancy to enforce collective security,²²⁶ the prospect of SSC-8 strikes appears unlikely to dislodge the Alliance's foundational guarantee. Chancellor Angela Merkel has continuously reaffirmed Germany's adherence to Article 5 obligations,²²⁷ while France's Armed Forces Minister, Florence Parly, stated in March 2019 that the Alliance should be "unconditional, otherwise it is not an alliance."²²⁸ NATO Secretary-General Jens Stoltenberg also characterized

^{223.} Sarah Kreps, Elite Consensus as a Determinant of Alliance Cohesion: Why Public Opinion Hardly Matters for NATO-led Operations in Afghanistan, 6 FOREIGN POL'Y ANALYSIS 192 (July 2010), available at https://academic.oup.com/fpa/article-abstract/6/3/191/1819987?redirectedFrom=fulltext (last visited Nov. 23, 2020).

^{224.} Rapnouil, Varma & Witney, supra note 104.

^{225.} Whereas a 1948 draft provision stated that in the event of an armed attack, the Parties "will assist" the aggrieved party "as may be necessary" to restore security, the final version required a member state to undertake only "such action as it deems necessary." Report of the International Working Group to the Ambassadors' Committee, U.S. DEP'T OF STATE (Dec. 24, 1948), available at https://history.state.gov/historicaldocuments/frus1948v03/d199 (last visited Oct. 5, 2020). As Broderick C. Grady notes, it was "clear that the United States would not accede to any agreement that forced it to automatically commit its forces." Broderick C. Grady, Article 5 of the North Atlantic Treaty: Past, Present, and Uncertain Future, 31 GA. J. INT'L & COMP. L. 167, 179 (2002).

^{226.} French President Emmanuel Macron stated in a November 2019 interview that NATO is experiencing "brain death," and when asked about the future viability of the Article 5 guarantee, responded, "I don't know." See Michel Rose, France's Macron Says NATO Suffering 'Brain Death', Questions U.S. Commitment, Reuters (Nov. 7, 2019), available at https://www.reuters.com/article/us-nato-france/frances-macron-says-nato-suffering-brain-death-questions-us-commitment-idUSKBN1XH1GG (last visited Nov. 18, 2020).

^{227.} See Alexandra Hudson, Merkel Pledges NATO will Defend Baltic Member States, REUTERS (Aug. 18, 2014), available at https://www.reuters.com/article/us-ukraine-crisis-baltics-merkel/merkel-pledges-nato-will-defend-baltic-member-states-idUSKBN0GI1JI20140818 (last visited Nov. 18, 2020). Germany did, however, oppose both sending lethal weapons to Ukraine and permanently stationing NATO combat troops in the Baltic states, positions that suggested a more conciliatory approach to relations with Russia. See Eoin McNamara, France and Germany Must Work With The US On Baltic Security, FOREIGN POL'Y RES. INST. (Jan. 5, 2016), available at https://www.fpri.org/article/2016/01/france-and-germany-must-work-with-the-us-on-baltic-security/ (last visited Nov. 18, 2020).

^{228.} Idrees Ali, French Minister Expresses Concern About Long-Term U.S. Commitment to NATO, REUTERS (Mar. 18, 2019), available at https://uk.reuters.com/article/uk-france-usa-nato/french-minister-expresses-concern-about-long-term-u-s-commitment-to-nato-idUKKCN1QZ29E (last visited Nov. 18, 2020). Like Germany, France has taken some actions viewed as representing a more pro-Russian stance. In 2009, it attempted to sell two Mistral assault vessels only months after the 2008 Georgia conflict. Moreover, in January

the Article 5 mandate as "ironclad,"²²⁹ and numerous allied commanders have emphasized its fundamentality.²³⁰ Moreover, whereas the presence of "little green men" or proxy forces could engender hesitation in immediately launching a military response,²³¹ it is impossible to dismiss the Article 5 implications of a conventional assault across the Gap.

Last, while the SS-20 carried three 150-kiloton nuclear warheads, the dual-capable SSC-8 is "seen as a largely conventional weapon." As Anderson and Nelson claim, U.S. concerns with the SSC-8 pertain principally to its use in conjunction with "other Russian theater nuclear assets, conventional forces, and A2/AD capabilities" that threaten Washington's ability to deter Kremlin aggression. Meanwhile, Europeans view "the Russian violation as an arms control compliance problem rather than a security threat." Since the conventional SSC-8 is, therefore "not as intimidating as the SS-20 was in the late 1970s," Russian attempts to induce a modern "Finlandization" of NATO appear unlikely to succeed. See 1970 is a largely conventional SSC-8 is a largely conventional

- 231. SENKAKU PARADOX, supra note 34, at 22.
- 232. Pifer interview, supra note 110.
- 233. Anderson & Nelson, supra note 171, at 106.
- 234. Id.
- 235. Pifer interview, supra note 110.

^{2015,} President François Hollande announced he would consider dropping EU economic sanctions against Russia and suggested this possibility again in November of that year. *See* McNamara, *supra* note 227.

^{229.} Press Conference, By NATO Secretary-General Jens Stoltenberg following the meeting of the North Atlantic Council at the level of Heads of State and/or Government, NATO (Dec. 4, 2019), available at https://www.nato.int/cps/en/natohq/opinions_171554.htm (last visited Nov. 18, 2020).

^{230.} See Vandiver, supra note 72 (quoting Breedlove on Article 5 obligations in a hybrid context); Hodges, Bugajski & Doran, supra note 4, at 10-11 (emphasizing the importance of signaling to Moscow that "the individual response of all allies to defend members of the Washington Treaty is an obligation, not an option"); Senate Committee On Armed Services, Advance Policy Questions for General Tod D. Wolters, USAF Nominee for Appointment to the Position of Commander, United States European Command and Supreme Allied Commander, Europe, U.S. SENATE COMMITTEE ON ARMED SERVICES (Oct. 3, 2019) (statement of General Tod Wolters) ("NATO is the 'gold standard' of alliances and Article 5 represents the enduring commitment that binds our nations together").

^{236.} Another potential factor influencing the political dynamic between the United States, Europe, and Russia is President Donald Trump's criticism NATO, and demands for European members to increase defense expenditures. See, e.g., Julie Hirschfeld Davis, As Trump Criticizes NATO, E.U. Leader Warns: You 'Won't Have a Better Ally', N.Y. TIMES (July 10, 2018), available at https://www.nytimes.com/2018/07/10/world/europe/trump-donald-tusk-nato.html (last visited Nov. 18, 2020). The personal relationships between President Trump and European leaders, as well as the larger political implications of such dynamics, are largely beyond the scope of this paper. It should be noted, however, that the administration has made some efforts to reassure NATO allies of its commitment to upholding Article 5

V. HOW SHOULD THE UNITED STATES AND NATO RESPOND?

In light of Russia's emergent capacity to direct conventional theaterrange SSC-8 strikes against NATO assets, the United States and its partners should pursue an integrated four-part strategy designed to augment defensive capabilities and, in doing so, establish a more effective deterrent posture. First, NATO should enhance the "tripwire" and "speedbump" functions of Baltic forward deployments and enact logistical improvements to Suwalki infrastructure. Second, Congress should increase investments in two developmental cruise missile defense technologies, the Indirect Fire Protection Capability Increment 2-Intercept (IFPC Inc. 2) and the High Energy Laser-Indirect Fire Protection Capability (HEL-IFPC). Third, the United States should deploy ground-launched intermediate-range conventional missiles to Europe while concurrently engaging Moscow in negotiations designed to precipitate a bilateral reimposition of INF restrictions. Finally, Washington should expand economic assistance to and security cooperation with Belarus to induce Minsk to refrain from assisting Russian aggression.

A. Enhance Allied Forward Deployments

Initially, NATO should enact a series of improvements to forward deployments in the Suwalki region. The Alliance must first ensure that forces can effectively perform the "tripwire" function of acting as a "deployable guarantee of alliance solidarity" whose presence certifies that an attack against an individual member simultaneously implicates other major Allies. NATO can enhance tripwire capabilities by first augmenting their mobility. As Hodges asserts, if Russia "knows the location of a tripwire, they might simply avoid it." To ensure a rapid repositioning of units and equipment wherever a threat emerges, Hodges recommended deploying the Avenger Air Defense System, which is a Humvee-mounted short-range anti-aircraft unit equipped with Stinger missiles, to the Baltic

obligations. See, e.g., Opening Remarks by US Secretary of State Mike Pompeo and NATO Secretary-General Jens Stoltenberg at the Reception to Celebrate the 70th Anniversary of NATO, NATO (Apr. 3, 2019), available at https://www.nato.int/cps/en/natohq/opinions_165208.htm (last visited Nov. 18, 2020).

^{237.} Martin Zapfe, *NATO's "Spearhead Force"*, ETH ZÜRICH CTR. FOR SEC. STUDIES (May 2015), *available at* https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/CSSAnalyse174-EN.pdf (last visited Nov. 18, 2020).

^{238.} Hodges, Bugajski & Doran, supra note 4, at 3, 13.

theater.²³⁹ In December 2019, the Army followed Hodges' advice and redeployed seventy-two Avengers from the Letterkenny Army Depot in Pennsylvania to active service in Germany.²⁴⁰ The Army should build upon this positive step by continuing Avenger deployments beyond Germany to Polish and Baltic territory.²⁴¹

The U.S. military can further develop its mobile tripwire through greater utilization of Stryker Combat Vehicle brigades. The Stryker, an eight-wheeled armored combat vehicle with a maximum speed of 62 mph and capable of firing TOW 2 and Javelin anti-tank missiles, is presently deployed to the Germany-based 2nd Cavalry Regiment. Although Congress appropriated \$300 million for Stryker improvements in 2015, the Pentagon is delaying Javelin integration for three years due to interface problems with the weapons control system. Moving forward, the Army must prioritize resolving these technical issues, as the Javelin could prove particularly effective against Russian armor. The

^{239.} See id. at 5.

^{240.} Dylan Malyasov, U.S. Army Brings Back Avengers in the Face of Russian Aggression, Defence Blog (Dec. 27, 2019), available at https://defence-blog.com/army/u-s-army-brings-back-avengers-in-the-face-of-russian-aggression.html (last visited Nov. 18, 2020).

^{241.} Breedlove & Vershbow also advocate deploying "some of the short-range Avenger air-defense systems and multiple-launch rocket systems now slated for stationing in Germany (to be completed by 2020) to Poland, on a rotational basis." Breedlove & Vershbow, *supra* note 93, at 41.

^{242.} See M1126 Stryker Combat Vehicle, MILITARY.COM (2020), available at https://www.military.com/equipment/m1126-stryker-combat-vehicle (last visited Nov. 18, 2020).

^{243.} See David Axe, Why the Army is Outgunned in Europe Compared to Russia, TASK & PURPOSE (Feb. 8, 2019), available at https://taskandpurpose.com/analysis/army-outgunned-europe-russia-wargames (last visited Nov. 18, 2020). The 2nd Cavalry Regiment recently deployed a squadron-sized detachment of Strykers to Orzysz, Poland near the Suwalki Gap. See Maciej Szopa, US Dragoons Getting Ready to Deploy to Orzysz, Defense24 (Jan. 10, 2020), available at https://www.defence24.com/us-dragoons-getting-ready-to-deploy-to-orzysz (last visited Nov. 18, 2020).

^{244.} See Jen Judson, Army to Outfit Double V-Hull Strykers with 30mm Firepower, DefenseNews (May 1, 2019), available at https://www.defensnews.com/land/2019/05/01/army-to-outfit-all-double-v-hull-strykers-with-30mm-firepower/ (last visited Nov. 18, 2020).

^{245.} See Samuel Arlington Page, This Army Unit Might Have Issues Fighting Russia in a War, NAT'L INT. (Mar. 21, 2020), available at https://nationalinterest.org/blog/buzz/army-unit-might-have-issues-fighting-russia-war-135567 (last visited Nov. 18, 2020).

^{246.} See Tyler Rogoway, U.S. Army's "Upgunned" Stryker Armored Vehicles Will Soon Be On The Front Lines, THE DRIVE (Aug. 18, 2017), available at https://www.thedrive.com/the-war-zone/13610/u-s-armys-upgunned-stryker-armored-vehicles-will-soon-be-on-the-front-lines (last visited Nov. 18, 2020); see also Sebastien Roblin, Need to Stop a Tank? Meet America's Javelin Missile (Russia Fears Them), NAT'L INT.

2nd Cavalry Regiment should also expand Stryker deployments beyond Germany and Poland into the Baltic territory where, alongside Avengers, their presence would deliver needed firepower and mobility.²⁴⁷

NATO can also improve the deterrent function of Baltic tripwire forces by ensuring the continuity of American deployments. As Clark argues, the presence of U.S. troops "remains key" as it "strengthens the deterrent effect" of NATO battalions.²⁴⁸ Because Russia, according to Kroenig, "really only respects U.S. military power," American forces are necessary to "create a more effective tripwire."²⁴⁹ Breedlove and Vershbow agree, writing that U.S. deployments offer Allied forces "greater confidence, continuity, and much-needed visible deterrence."²⁵⁰

While largely concurring regarding the importance of a United States presence in the Baltics, military leaders disagree as to whether a permanent presence is necessary or if a rotational system will suffice. Hodges advocates a permanent presence, as do Breedlove and Gen. Curtis Scaparroti.²⁵¹ Clark contends, however, that the "debate about permanence should not be at the forefront if the continuous presence of combatcapable forces can be ensured through rotation."²⁵² One consideration is the 1997 NATO-Russia Founding Act (NRFA), an agreement whose terms likely bar "permanent stationing" of NATO forces in the countries of former Soviet members.²⁵³ While NATO could breach the NFRA²⁵⁴

- 248. Clark, Luik, Ramms & Shirreff, supra note 148, at 22.
- 249. Kroenig interview, supra note 18.
- 250. Breedlove & Vershbow, supra note 93, at 41.

- 252. Clark, Luik, Ramms & Shirreff, supra note 148, at 6.
- 253. The Act states in part: "NATO reiterates that in the current and foreseeable security environment, the Alliance will carry out its collective defense and other missions by ensuring the necessary interoperability, integration, and capability for reinforcement rather than by additional permanent stationing of substantial combat forces."
- 254. See, e.g., Luke Coffey & Daniel Kochis, The 1997 NATO-Russia Founding Act Does Not Prohibit Permanent NATO Bases in Eastern Europe, HERITAGE FOUND. (Apr. 29, 2016) available at https://www.heritage.org/europe/report/the-1997-nato-russia-founding-act-does-not-prohibit-permanent-nato-bases-eastern (last visited Oct. 5, 2020). Clark argues that "despite the Alliance's current commitment to maintaining it, the NRFA is not sacrosanct and that the Alliance would be ready for a thorough review, or even abolition, of the

⁽Sept. 2, 2019), available at https://nationalinterest.org/blog/buzz/need-stop-tank-meet-americas-javelin-missile-russia-fears-them-77501 (last visited Nov. 18, 2020).

^{247.} The 2nd Cavalry Regiment (2 CR) deployed its 3rd Squadron "Wolf Pack" to Estonia, Latvia, Lithuania, and Poland in January 2015 for a nine-month rotation as part of Operation Atlantic Resolve. See, Operation Atlantic Resolve, U.S. ARMY (Jan. 7, 2015), available at https://www.army.mil/standto/archive 2015-01-07/ (last visited Oct. 5, 2020).

^{251.} See Hodges, Bugajski & Doran, supra note 4, at 5 (advocating for at least one Avenger battalion to be "always permanently forward-deployed in the Baltic States"); Breedlove & Vershbow, supra note 93, at 21.

following Russia's own possible violations,²⁵⁵ reneging could provide Moscow a propaganda victory and an impetus for further buildups in the WMD.

Rather than risk this scenario, NATO should seek a means of increasing the United States' Baltic presence without implicating questions of permanence. Breedlove and Vershbow suggest that American forces lead the Enhanced Forward Presence (eFP) Battle Group at Orzysz, Poland, near Suwalki, "for the indefinite future." They also advocate deploying an additional brigade combat team to Germany "on a permanent or rotational basis," which would in-turn deploy one battalion to the Baltics "on a regular basis for training/exercises." Along similar lines, Clark proposes increasing the size of U.S. units in each Baltic state "ideally to at least a battalion combined arms group." Last, Hodges supports integrating U.S. Special Forces into existing Baltic units to plan for possible "insurgency operations against Russian occupation." Taken together, these proposals strengthen deterrence while avoiding the pitfalls of permanent basing.

In addition to enhancing "tripwire" functionality, NATO should augment the ability of Baltic deployments to defend against an armored Russian incursion. Clark argues forward-based forces ought to serve a "speedbump" role in which they "prevent a fait accompli by Russia and, should an attack occur, delay the opposing forces for NATO to be able to deal with the A2/AD threat and deploy additional units and capabilities to the region." In pursuit of this objective, NATO pledged in 2016 to deploy four multinational battalions to the Baltic states and Poland to demonstrate "to the potential aggressor the readiness to trigger the 40,000-strong rapid-reaction force and a full-scale NATO counter-assault." In 2018, the Alliance adopted the "Four 30s" initiative, a

document, should it hinder NATO in ensuring the defense of each and every Ally." Clark, Luik, Ramms & Shirreff, supra note 148, at 19.

^{255.} As Clark notes, the NRFA commits Russia to respect states' "inherent right to choose the means to ensure

their own security," a promise "it has broken." Id. at 8.

^{256.} Breedlove & Vershbow, supra note 93, at 41.

^{257.} Id.

^{258.} Clark, Luik, Ramms & Shirreff, supra note 148, at 21-22.

^{259.} Hodges, Bugajski & Doran, supra note 4, at 9.

^{260.} As Clark argues, "NATO's conventional military posture in the Baltic states should be capable of convincing Russia that it is able to delay and bog down an invading force and inflict unacceptable damage on it." Clark, Luik, Ramms, & Shirreff, *supra* note 148, at 18.

^{261.} Andis Kudors, Regional Security of the Baltic States: Challenges and Solutions, LATVIAN INST. OF INT'L AFFAIRS 18 (2018), available at http://appc.lv/eng/wp-content/up-loads/sites/2/2018/10/A.Kudors_RegionalSecurity2018.pdf (last visited Oct. 5, 2020). See

commitment to mobilize thirty troop battalions, thirty squadrons of aircraft, and thirty warships within thirty days following a crisis.²⁶²

Yet, although the Four 30s is an encouraging step, more must be done to address a vulnerability Breedlove and Vershbow term the "time-distance gap." Specifically, NATO is "seriously hampered in rapidly deploying additional units to the Baltics," a problem SSC-8 theater-range capabilities will only exacerbate. In the time the U.S. and Western-Europe-based forces take to arrive, even if only thirty days, Moscow may execute a *fait accompli* and cement its hold on seized Baltic lands, rendering any "largely reinforcement-based strategy" destined to fail. Consequently, instead of the commonly cited "defense-in-depth" approach, hat O must expand its forward deployments in the Baltic territory. As Shlapak and Johnson argue, a force of "about seven brigades, including three heavy armored brigades—adequately supported by airpower, land-based fires, and other enablers on the ground" could prevent "the rapid overrun of the Baltic states."

Currently, NATO's eFP stations a battalion-size battle group in each Baltic state in addition to a larger U.S. brigade-sized unit in Poland.²⁶⁸

- 263. Breedlove & Vershbow, supra note 93, at 31.
- 264. Clark, Luik, Ramms & Shirreff, supra note 148, at 21.
- 265. Id.; see also Breedlove & Vershbow, supra note 93, at 25.

also Warsaw Summit Key Decisions, NATO (Feb. 2017), available at https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2017_02/20170206_1702-factsheet-warsaw-summit-key-en.pdf (last visited Oct. 5, 2020).

^{262.} Press Conference by NATO Secretary-General Jens Stoltenberg Following the Meeting of the North Atlantic Council (NAC) in Defence Ministers' Session, NATO (June 8, 2018), available at https://www.nato.int/cps/en/natohq/opinions_155264.htm (last visited Oct. 5, 2020).

^{266.} As Hodges defines the concept, "NATO is willing to concede land to an attacker (e.g., at Suwałki) in exchange for the time needed to roll out reinforcements or mount a liberation campaign." Hodges, Bugajski & Doran, *supra* note 4, at 20. This approach, he warns, leaves Baltic territorial defense to "small national militaries, local citizen reserves, and paramilitary cadres, together with the limited combat power of allied tripwires." *Id.* at 3.

^{267.} Shlapak & Johnson, supra note 1, at 2.

^{268.} See Michael E. O'Hanlon & Christopher Skaluba, A Report from NATO's Front Lines, BROOKINGS INST. (June 13, 2019), available at https://www.brookings.edu/blog/order-from-chaos/2019/06/13/a-report-from-natos-front-lines/ (last visited Nov. 24, 2020). Currently, NATO's eFP consists of four battlegroups: the Estonia-based United Kingdom-led battlegroup contains one armored battalion, one armored infantry company, and 1073 total troops; the Latvia-based Canada-led battleground contains one mechanized infantry battalion, three mechanized infantry companies, and 1401 total troops; the Lithuania-based Germany-led battlegroup contains one armored infantry company, two mechanized infantry companies and, 1055 total troops; and the Poland-based United States-led battlegroup contains one armored cavalry squadron and 1218 total troops. See NATO's Enhanced Forward

Although this posture is an improvement over pre-2014 figures, it is far from what Shlapak and Johnson recommend.²⁶⁹ To effectively deter Russian aggression, NATO must expand the size of these deployments with the ultimate objective of reaching the seven-brigade level.

Last, NATO should augment logistical capabilities and improve infrastructure to better facilitate the transportation of troops and equipment into the Baltics. As Hodges writes, supply networks through Germany, Poland, and the Baltics are critical for supporting "aviation, ground movement, logistics, and Command & Control (C2) sites."270 On this front, the U.S. military can increase the size and capability of logistical units presently deployed to Marijampole and Lielvarde Air Base.²⁷¹ Furthermore, Hodges suggests improvements to key "rail, bridge, and port facilities" that forces would need to traverse in a Baltic conflict.²⁷² Of particular importance is the construction of the Rail Baltica line connecting Tallinn to Poland through the Suwalki Gap.²⁷³ Finalizing this project would confer two significant military advantages. First, troops and equipment could bypass the current "severe bottleneck" at the Poland-Lithuania railhead gauge break, eliminating the vulnerability of delayed forces to artillery and air assaults.²⁷⁴ Second, it would reduce reliance upon the Baltic ports of Klaipeda, Ventspils, Liepaja, Riga, and Tallinn; these shipping routes would expose NATO vessels to the 300 km range of Moscow's Bastion-P coastal defense system.²⁷⁵ Given the ability of an operational Rail Baltica to "dramatically improve this vulnerable transportation chain," NATO leaders must ensure budgetary concerns do not obscure the imperative strategic necessity of its completion.²⁷⁶

Presence, NATO (Mar. 2019), available at https://www.nato.int/nato_static_fl2014/as-sets/pdf/pdf_2019_04/20190402_1904-factsheet_efp_en.pdf (last visited Nov. 24, 2020).

^{269.} Shlapak & Johnson, supra note 1, at 8.

^{270.} Hodges, Bugajski & Doran, supra note 4, at 6.

^{271.} Id.

^{272.} Id. at 8.

^{273.} See Nikers, supra note 52.

^{274.} H. . .ggblom, supra note 43.

^{275.} Missile Defense Project, SS-N-26 "Strobile", CTR. FOR STRATEGIC & INT'L STUDIES (June 15, 2018), available at https://missilethreat.csis.org/missile/ss-n-26/ (last visited Nov. 24, 2020). See also Figure 3.

^{276.} See Posaner, supra note 54.

B. Accelerate Development of Cruise Missile Defense Technology

Second, Washington should commit to advancing cruise missile defenses by continuing to fund the developmental IFPC Inc. 2 and HEL-IFPC systems. The 2019 Missile Defense Review recognizes a clear need to counter cruise missile threats, noting that active defenses could "play a crucial role in countering missile strikes that underpin potential adversaries' A2/AD operations."

Specifically, in light of the SSC-8, Pifer argues that NATO "needs to be more serious about defending key airfields, airports, and port facilities."

According to Kroenig, the primary contemporary challenge is "greater political demand than actual capability."

Current capacities include the aforementioned Avenger, equipped to fire Stinger missiles, and ground-deployed naval Phalanx 20-millimeter guns.

Bespite the presence of these older technologies, however, the FY 2019 National Defense Authorization Act (NDAA) Report characterized the Army's cruise missile defense of fixed stations as "nonexistent."

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In light of this evident vulnerability, the Pentagon should prioritize the development of IFPC Inc. 2, a truck-mounted multi-launch missile system specifically designed to counter the threat of advanced Russian and Chinese cruise missiles. As Brig. Gen. Randall McIntire writes, IFPC Inc. 2 would replace the Stinger and Phalanx by offering "enhanced firepower protection to critical, more stationary fixed and semi-fixed assets." This capability, a Center for Strategic and Budgetary Analysis

^{277.} Missile Defense Review, supra note 130.

^{278.} Pifer interview, supra note 110.

^{279.} Kroenig, supra note 18.

^{280.} See Avenger Low-Level Air Defence System, USA, ARMY TECH. (2020), available at https://www.army-technology.com/projects/avenger/ (last visited Nov. 24, 2020).

^{281.} See John Pike, MK 15 Phalanx Close-In Weapons System (CIWS), FED. OF AM. SCIENTISTS (Jan. 9. 2003), available at https://fas.org/man/dod-101/sys/ship/weaps/mk-15.htm (last visited Nov. 24, 2020).

^{282.} S. Rep. No. 115-262 at 73 (2018). See also Pifer interview, supra note 110. As Pifer notes, it is "a lot easier to defend a ship than an airport or port."

^{283.} See Sydney J. Freedberg, Army Reboots Cruise Missile Defense: IFPC & Iron Dome, Breaking Def. (Mar. 11, 2019), available at https://breakingdefense.com/2019/03/army-reboots-cruise-missile-defense-ifpc-iron-dome/ (last visited Nov. 24, 2020).

^{284.} Randall McIntire, *The Return of Army Short Range Air Defense in a Changing Environment*, FORT SILL FIRES BULL. (Dec. 2017), *available at* https://sill-www.army.mil/firesbulletin/archives/2017/nov-dec/articles/1_McIntire.pdf (last visited Nov. 24, 2020).

(CSBA) report notes, "should significantly improve the Army's ability to defeat cruise missiles and UAVs." ²⁸⁵

Although NATO leaders have expressed a need to augment allied missile defenses, ²⁸⁶ funding and delays have produced doubts regarding IFPC Inc. 2's future viability. As the FY 2019 NDAA Report notes, the Army "continues to deprioritize IFPC." CSBA found that DoD "allocated insufficient resources toward defending its bases against cruise missile salvos" while the IFPC program is now "delayed." Moreover, despite the Army's plans to spend \$517 million on IFPC through 2023, the 2020 NDAA withheld half of the request "until the service produces a report on its plans to develop and field such a system." Therefore, even though the 2019 NDAA mandates the military to "field at least two batteries of cruise missile defenses by 2020 and two additional batteries by September 2023," it is unclear whether necessary funds will be available to continue development at the desired pace. ²⁹²

A second emergent capability is HEL-IFPC laser technology. Lasers can intercept cruise missiles by "rapidly heating their external casings, aerodynamic features, or susceptible seekers." As the CSBA report observes, ground-based units "capable of generating 300 kW output power or greater" could be "postured around U.S. bases to defend against salvo threats." Lasers can also protect "command posts, helicopter rearming points, supply dumps, and other support sites." Still, distance restrictions and vulnerability to "atmospheric phenomena" dictate

^{285.} Rehberg & Gunzinger, supra note 195, at 12.

^{286.} Press Conference by NATO Secretary-General Jens Stoltenberg Following the Meetings of NATO Defence Ministers, NATO (June 26, 2019), available at https://www.nato.int/cps/en/natohq/opinions 167072.htm (last visited Nov. 24, 2020).

^{287.} S. Rep. No. 115-262 at 73 (2018).

^{288.} Rehberg & Gunzinger, supra note 195, at 44.

^{289.} See Freedberg, supra note 283.

^{290.} See Jen Judson, Congress to Withhold Funding for Army's Indirect Fire Protection System Until it Delivers Plan, DEF. NEWS (Dec. 24, 2019), available at https://www.defensenews.com/land/2019/12/24/congress-to-withhold-funding-for-armys-indirect-fire-protection-system-until-it-delivers-plan/ (last visited Oct. 2, 2020).

^{291.} Rehberg & Gunzinger, *supra* note 195, at 12. This request is subject to certification from the Secretary of Defense that "there is a need for the Army to deploy an interim missile defense capability." *Id.*

^{292.} Kroenig interview, supra note 18.

^{293.} See Rehberg & Gunzinger, supra note 195, at 19.

^{294.} Id.

^{295.} See Sydney J. Freedberg, Army Boosts Investment In Lasers, BREAKING DEF. (Oct. 16, 2018), available at https://breakingdefense.com/2018/10/army-boosts-investment-in-lasers/ (last visited Oct. 9, 2020).

optimal usage "over short-to-medium ranges." Lasers under the 300 kW threshold may also lack military utility because "attack geometry requires a head-on shot," and lower intensity lasers cannot neutralize the missile in the requisite timeframe. 297

HEL-IFPC is a prototype for a 250-300 kW-class laser that the Army plans to deliver to platoons by FY 2024.²⁹⁸ Before attaining this capacity,however, the Army first aims to field 50 kW²⁹⁹ and 100 kW³⁰⁰ variants.³⁰¹ As with Inc. 2, budgetary questions persist as a limiting factor. For FY 2021, the Pentagon is asking Congress for \$212.3 million to develop a Stryker-mounted 50-kW laser, an increase of 209% from FY 2020.³⁰² Notably, the request also describes securing funding for "a 300KW mobile, ground-based laser" integrated onto a medium tactical vehicle as an "essential" modernization task, but provides no specific timeframe for its deployment.³⁰³

^{296.} Rehberg & Gunzinger, supra note 195, at 19.

^{297.} See Sydney J. Freedberg, Army Boosting Laser Weapons Power Tenfold, Breaking Def. (July 18, 2017), available at https://breakingdefense.com/2017/07/army-boosting-laser-weapons-power-tenfold/ (last visited Oct. 9, 2020). By some estimates, the range for successfully downing a cruise missile may extend from 300 to 600 kW. Id.

^{298.} See Claire Heininger, Army Awards Laser Weapon System Contract, U.S. ARMY (Aug. 2, 2019), available at https://www.army.mil/article/225276/army_awards_laser_weapon_system_contract (last visited Oct. 9, 2020). In August 2019, the Army announced a \$203 million contract with Kord Technologies, Northrop Grumman, Raytheon, and General Dynamics to develop the prototypes and integrate these systems into the Stryker armored vehicle. Id.

^{299.} See Jen Judson, Soon to Come to the Army: A High-Power Microwave to Take Out Drone Swarms, DEF. News (Aug. 7, 2019), available at https://www.defensenews.com/digital-show-dailies/smd/2019/08/07/the-armys-indirect-fires-protection-system-is-getting-a-high-power-microwave/ (last visited Oct. 9, 2020).

^{300.} See Jen Judson, Rolls-Royce Unveils Hybrid Power System for Laser Weapons, DEF. News (May 10, 2019), available at https://www.defensenews.com/indus-try/2019/05/10/rolls-royce-unveils-hybrid-power-system-for-laser-weapons/ (last visited Oct. 9, 2020).

^{301.} In 2017, the Army reallocated over \$1 billion in science and technology funding over FY 2019-2023 to address military modernization objectives. See Sydney J. Freedberg, Army Accelerates Air & Missile Defense Five Years: MSHORAD, MML, Lasers, Breaking Def. (Mar. 29, 2018), available at https://breakingdefense.com/2018/03/army-accelerates-air-missile-defense-five-years-mshorad-mml-lasers/ (last visited Oct. 9, 2020). As defense procurement commentator Sydney Freedberg notes, however, "actually producing and fielding new equipment is markedly more expensive than developing the technology." Id.

^{302.} See Sydney J. Freedberg, Army Ramps Up Funding For Laser Shield, Hypersonic Sword, BREAKING DEF. (Feb. 28, 2020), available at https://breakingdefense.com/2020/02/army-ramps-up-funding-for-laser-shield-hypersonic-sword/ (last visited Oct. 9, 2020).

^{303.} Office of the Undersecretary of Def. (Comptroller)/Chief Fin. Officer, Defense Budget Overview: Irreversible Implementation of the National Defense Strategy, U.S. DEP'T

Ultimately, neither the IFPC Inc. 2 nor the HEL-IFPC projects may prove viable means of countering Russia-based cruise missile threats. Taking this possibility into account, Congress hedged its bets by committing over \$1 billion to purchase the Israeli Iron Dome as an interim measure until more advanced systems could be acquired. Although Israel delivered two Iron Dome batteries, the Army eliminated plans to acquire two more by 2023, citing interoperability challenges and insufficient capabilities. Given the inadequacy of this stopgap, the Pentagon should press onward with Inc. 2 and HEL, continuing to demand requisite funding to achieve the ambitious objective of deploying at least one system to Europe by FY 2024.

C. Pursue Conventional "Dual Track" Arms Control

Third, the United States should advance a two-pronged arms control initiative to induce Moscow into accepting a reimposition of INF restrictions. In line with the "dual-track" approach that precipitated the Treaty's inception, this strategy would first entail the deployment of U.S. conventional intermediate-range missiles to the European theater. Similar to Carter leveraging the presence of Pershing II and BGM-109 missiles "to give the United States bargaining leverage" in arms control talks, 308 U.S. negotiators should employ a comparable threat to persuade

OF DEF. (Feb. 10, 2020), available at https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2021/fy2021_Budget_Request_Overview_Book.pdf (last visited Oct. 9, 2020).

^{304.} See Marcy Oster, US Military Cancels Plans to Purchase Iron Dome Missile Defense Batteries, JERUSALEM POST (Mar. 10, 2020), available at https://www.jpost.com/Israel-News/US-military-cancels-plans-to-purchase-Iron-Dome-missile-defense-batteries-620399 (last visited Oct. 9, 2020). As Congressman Doug Lamborn (R-CO) stated in a committee hearing, "I don't want to see the perfect be the enemy of the good . . . I don't want to see a perfect hoped for and expected capability deters us from using something that is available and usable right now and will save lives." See also Joseph Trevithick, Lawmakers Grill Army Officer Over Lack Of Missile Defenses In Iraq After Fatal Rocket Attack, The Drive (Mar. 12, 2020), available at https://www.thedrive.com/the-war-zone/32562/lawmakers-grill-army-officer-over-lack-of-missile-defenses-in-iraq-after-fatal-rocket-attack (last visited Oct. 9, 2020).

^{305.} See Charlie Gao, The U.S. Army Just Dumped Israel's Iron Dome Rocket Defense System, NAT'L INT. (Mar. 21, 2020), available at https://nationalinterest.org/blog/us-army-just-dumped-israels-iron-dome-rocket-defense-system-135727 (last visited Oct. 9, 2020).

^{306.} See Maurer, supra note 105 (John D. Maurer makes a similar argument in favor of a new dual-track strategy, although he does not explicitly call for the U.S. deployment of conventional missiles to European territory).

^{307.} See generally Lanoszka, supra note 99.

^{308.} See Leonard, supra note 204, at 4.

the Kremlin to adopt a new accord that would mandate the elimination of the SSC-8.

The Pentagon has designed three systems that, according to Pifer, "almost certainly are being developed with European contingencies in mind." Washington could install these missiles—a Tomahawk GLCM with a range of 1000 km, a GLBM with a 3000-4000 km range, and the 499 km-range Precision Strike Missile³¹⁰—in locations within striking distance of Kaliningrad, Belarus, and the Russian heartland. Indeed, Secretary of Defense Mark Esper expressed a desire in August 2019 to deploy new intermediate-range options "sooner rather than later." ³¹²

Although these weapons likely offer dual capability,³¹³ U.S. planners should not seek placement of nuclear missiles in Europe for fear of incurring a Euromissile-type backlash.³¹⁴ NATO leadership, for one, appears hostile to this prospect, with Stoltenberg declaring in February 2019, "[that] NATO doesn't have any intentions of deploying new

^{309.} Steven Pifer, As US-Russian Arms Control Faces Expiration, Sides Face Tough Choices, BROOKINGS INST. (Mar. 23, 2020), available at https://www.brookings.edu/blog/order-from-chaos/2020/03/23/as-us-russian-arms-control-faces-expiration-sides-face-tough-choices/ (last visited Oct. 9, 2020).

^{310.} See Kingston Reif, Trump Increases Budget for Banned Missiles, ARMS CONTROL ASS'N (May 2019), available at https://www.armscontrol.org/act/2019-05/news/trump-increases-budget-banned-missiles (last visited Nov. 23, 2020).

^{311.} In August 2019, the U.S. military tested the intermediate-range ground-launched cruise missile, which flew over 500 km in one test. See Missy Ryan, U.S. Tests First Intermediate-Range Missile Since Withdrawing from Treaty with Russia, WASH. POST (Aug. 19, 2019), available at https://www.washingtonpost.com/national-security/us-tests-first-intermediate-range-missile-since-withdrawing-from-treaty-with-russia/2019/08/19/d480c692-c2a8-11e9-b5e4-54aa56d5b7ce story.html (last visited Nov. 23, 2020).

^{312.} Mark T. Esper, Secretary of Defense Esper Media Engagement En Route to Sydney, Australia, DEP'T. OF DEF. (Aug. 2, 2019), available at https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/1925072/secretary-of-defense-esper-media-engagement-en-route-to-sydney-australia/ (last visited Nov. 23, 2020).

^{313.} See Sebastien Roblin, U.S. Army is Bringing Back Land-Based Missiles With A Vengeance in a Post-INF World, FORBES (Aug. 7, 2019), available at https://www.forbes.com/sites/sebastienroblin/2019/08/07/army-will-soon-begin-testing-precision-strike-missiles-for-a-post-inf-world/#80ddcff25e15 (last visited Nov. 23, 2020).

^{314.} See generally Anderson & Nelson, supra note 171. See also Griff Witte, At Germany's Last Nuclear Base, Fears of a New Arms Race as U.S.-Russia Treaty Collapses, WASH. POST (Mar. 4, 2019), available at https://www.washingtonpost.com/world/europe/atgermanys-last-nuclear-base-fears-of-a-new-arms-race-as-us-russia-treaty-collapses/2019/03/03/90790ec4-391d-11e9-b10b-f05a22e75865_story.html (last visited Nov. 23, 2020) ("request from the United States to store and be ready to use new bombs and missiles would likely spark a furious backlash while exposing fractures in an alliance already strained by the mistrust between President Trump and his European counterparts."). See Maurer, supra note 105 ("conventionally armed missiles ought to provoke less opposition" than nuclear arms).

nuclear-capable ground-launched systems in Europe."³¹⁵ Germany has also expressed vehement opposition, ³¹⁶ and as German commentator Otfried Nassauer suggests, only Poland and "maybe one or two others" might be willing to accept such deployments. ³¹⁷ Conventional arms, on the other hand, would elicit less of a popular outcry. According to Kroenig, the Pershing II and BGM-109 elicited protests "because they were nuclear," whereas "deploying conventional weapons in INF ranges might be somewhat controversial, but much less than if we wanted nuclear missiles "³¹⁸"

Even conventional U.S. deployments are likely to provoke some backlash. Pifer argues that placing any intermediate-range systems in Europe would "further complicate the long-range precision-guide[d] conventional strike picture" and "impede [the] negotiation of a new agreement reducing and limiting nuclear weapons."319 Moreover, as Owen LeGrone writes, ground-launched missiles offer minimal military utility given Washington's "unrivaled arsenal of the sea and air-launched weapons."320 Yet as Pifer concedes, enticing Russia into a negotiation "will not be easy" if Moscow "looks at what the [United States] has on the table" and fails to see a "serious American countereffort."321 It was the Kremlin's perception of the Pershing II and BGM-109 as "particularly dangerous U.S. capabilities that could potentially launch a sudden, devastating surprise attack on its command and control," Anderson and Nelson write, "that strengthened the bargaining position of American negotiators."322 Therefore, if the U.S. military fails to introduce a novel threat to Russian interests. Moscow will lack an incentive to reduce or eliminate

^{315.} Press Conference by NATO Secretary-General Jens Stoltenberg Following the Meetings of NATO Defence Ministers, NATO (Feb. 13, 2019), available at https://www.nato.int/cps/en/natohq/opinions 163394.htm (last visited Nov. 23, 2020).

^{316.} See Maria Sheahan, Germany Would Oppose New Nuclear Missiles in Europe: Foreign Minister, REUTERS (Dec. 27, 2018), available at https://www.reuters.com/article/us-usa-russia-treaty-germany/germany-would-oppose-new-nuclear-missiles-in-europe-foreign-minister-idUSKCN1OQ0BN (last visited Nov. 23, 2020).

^{317.} Witte, supra note 314.

^{318.} Kroenig interview, *supra* note 18 (conventional weapons also offer military utility with regard to the suppression of Russian A2/AD assets such as air defense units and surface-to-surface missile sites).

^{319.} Pifer, supra note 301.

^{320.} Owen LeGrone, New U.S. Intermediate-Range Missiles Aren't Needed for Precision Strike in Europe, ARMS CONTROL ASS'N (Aug. 27, 2019), available at https://www.armscontrol.org/blog/2019-08-27/new-us-intermediate-range-missiles-aren%E2%80%99t-needed-precision-strike-europe (last visited Nov. 23, 2020).

^{321.} Pifer interview, supra note 110.

^{322.} Anderson & Nelson, supra note 171, at 97.

its weapons. Additionally, even if submarine-launched capabilities could hypothetically provide comparable operational benefit,³²³ only the presence of ground-launched systems could facilitate a straightforward proportionate drawdown under the parameters of the original agreement.

Commentators have proposed several other diplomatic approaches to alleviating the Russian missile threat. Pifer suggests that Washington could seek a "conventional only" agreement whereby Russia retains the SSC-8 but eliminates its nuclear payloads.³²⁴ Yet as discussed above, the weapon's primary threat lies not in its capacity as a tool of nuclear intimidation, but rather as a conventional precision strike asset targeting NATO forces and infrastructure in Central and Western Europe.³²⁵ For a negotiated accord to offer any strategic utility, it must therefore reinstate INF restrictions upon both nuclear and non-nuclear systems.

A second potential alternative is to simultaneously address the threat of China's burgeoning intermediate-range arsenal by including Beijing in trilateral arms control talks. As former U.S. Pacific Command Commander Admiral Harry Harris writes, China "controls the largest and most diverse missile force in the world, with an inventory of more than 2,000 ballistic and cruise missiles." Of which, 95% "would have been prohibited by the INF Treaty, had China been a signatory." Moreover, the "vast majority" of these missiles are conventional. Given the dangers that Beijing's considerable A2/AD capabilities could pose to freedom of navigation and the sovereignty of key allies like Taiwan, South Korea, and Japan, 328 Washington has a clear incentive to restrict China's development of missile technology. President Trump appears to support

^{323.} In February 2020, for example, the U.S. Navy deployed the new W76-2 low-yield, submarine-launched ballistic missile warhead. See Idrees Ali, U.S. Deploys 'More Survivable' Submarine-Launched Low-Yield Nuclear Weapon, REUTERS (Feb. 4, 2020), available at https://www.reuters.com/article/us-usa-nuclear-pentagon/us-deploys-more-survivable-submarine-launched-low-yield-nuclear-weapon-idUSKBN1ZY2EQ (last visited Nov. 23, 2020). Additionally, as Kroenig notes, the cost of maintaining a sufficient arsenal of air and sealaunched missiles could easily become "cost-prohibitive." See also Kroenig interview, supra note 18.

^{324.} See Pifer interview, supra note 110.

^{325.} See Durkalec, supra note 158 (noting that the SSC-8 can "hit all the critical airports and seaports of embarkation for Allied reinforcement").

^{326.} See Abraham Denmark, U.S.-China Military Competition Intensifying Over INF Missiles, WILSON CTR. (Nov. 13, 2019), available at https://www.wilsoncenter.org/blog-post/us-china-military-competition-intensifying-over-inf-missiles (last visited Nov. 23, 2020).

^{327.} Pifer interview, supra note 110.

^{328.} See Denmark, supra note 326.

this objective, suggesting the United States engage in arms control talks with China immediately following INF withdrawal.³²⁹

Beijing, however, appears disinclined to participate. "China will in no way agree to mak[e] the INF Treaty multilateral," Foreign Ministry Spokesperson Hua Chunying stated in July 2019.³³⁰ Eric Edelman and Franklin C. Miller characterize prospects for trilateral arms control as "relatively slim," in part because China's "aversion to transparency" makes it "unlikely to accept intrusive verification inspection." This is not to say that Washington should wholly forsake a China-oriented arms control strategy. Dave Deptula suggests a dual-track approach aimed at reducing China's "inventory of conventional missiles in exchange for halting any deployment of new U.S. conventional land-based missiles" in Asia. Frank Rose similarly advocates for bringing China into "a future arms control and strategic stability framework." Both concepts merit consideration. Yet if policymakers seek to explore their viability, they can do so outside the discrete context of the INF regime. If the SSC-8 presents a truly pressing threat, the United States cannot allow hopes for desirable yet unrealistic progress with Beijing to derail the possibility of a less ambitious arms control achievement that could tangibly mitigate this risk.

The third category of proposals attempts to link Russian and Chinese concessions with a U.S. commitment to extend the expiring New START agreement.³³⁴ Kroenig suggests the Trump administration accept an

^{329.} Compare INF nuclear treaty: Trump says new pact should include China, BBC NEWS (Aug. 3, 2019), available at https://www.bbc.com/news/world-us-canada-49213892 (last visited Nov. 23, 2020) with Kroenig interview, supra note 18 (arguing that it "makes little sense to "negotiate with Russia without China being involved").

^{330.} China Reiterates Opposition to Multilateralization of INF Treaty, XINHUA (July 30, 2019), available at http://www.xinhuanet.com/english/2019-07/30/c_138270534.html (last visited Nov. 23, 2020).

^{331.} Eric Edelman & Franklin C. Miller, Russia is Beefing Up its Nuclear Arsenal. Here's What the U.S. Needs to Do., POLITICO (Dec. 31, 2019), available at https://www.politico.com/news/magazine/2019/12/31/russia-nuclear-arsenal-new-start-091487 (last visited Nov. 22, 2020).

^{332.} Dave Deptula, Whether the U.S. Scraps the INF or Stays In, China Must Be Checked, FORBES (Nov. 5, 2018), available at https://www.forbes.com/sites/davedeptula/2018/11/05/whether-inf-in-or-out-china-must-be-checked/#48a0ff06ce3c (last visited Nov. 22, 2020).

^{333.} Id.

^{334.} Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, art. XIV, 4, U.S.-Russ., Apr. 8, 2010, S. Treaty Doc. No. 111-5 (2010). (the agreement is slated to expire on February 5, 2021, unless the United States and Russia exercise an option to extend it by five years). See Matt Korda & Hans M. Kristensen, Count-Down for No-Brainer: Extend

extension "but reserve the right to pull out of New START if Russia cannot convince China to stay onboard for [a] new round of arms control negotiations that would include INF-type restrictions."335 Similarly, Edelman and Robert Joseph argue that any future talks must address all Russian and Chinese nuclear weapons types, even if this mandate precludes the continuation of New START. 336 Last. Edelman and Miller advocate extending New START only if Moscow agrees to negotiate a subsequent accord addressing "all [United States] and Russian nuclear weapons regardless of range" and Washington may condition New START adherence upon negotiating progress.³³⁷ Though an in-depth discussion of the merits and pitfalls of New START lies beyond the scope of this paper, the United States unquestionably derives tangible benefits from continued participation, including robust verification measures ensuring Russian adherence to strategic arsenal limitations.³³⁸ It appears unwise to sacrifice the final standing United States-Russia arms control accord for the rather dubious prospect of attaining bilateral or even trilateral agreement on intermediate-range restrictions in the near future.

Admittedly, neither the diplomatic initiative this paper advocates nor any that commentators propose stands a realistic probability of immediate fruition. As Nikolai Sokov writes, the dual-track approach succeeded largely due to a "fundamental change in Soviet foreign policy" inspired by Premier Mikhail Gorbachev's pursuit of reform and rapprochement with the West. Putin, conversely, will presumably follow the more confrontational "traditional Soviet pattern of response." Moscow, too, continues to dispute U.S. claims regarding the SSC-8's range and demand removal of AEGIS-Ashore, presenting a series of

New START Treaty, FED'N OF AM. SCIENTISTS (Feb. 5, 2020), available at https://fas.org/blogs/security/2020/02/count-down-begins-for-no-brainer-extend-new-start-treaty/ (last visited Nov. 22, 2020) (advancing six rationales for extending the accord).

^{335.} Kroenig interview, supra note 18.

^{336.} Robert Joseph & Eric Edelman, *New Directions in Arms Control*, NAT'L REV. (Apr. 29, 2019), *available at* https://www.nationalreview.com/2019/04/arms-control-treaties-russian-chinese-nuclear-forces/ (last visited Nov. 22, 2020).

^{337.} *Id.* (The piece also suggests that "both the U.S. and Russia should seek China's inclusion in arms control talks at some point," including through a potential multilateral commitment by the United States, Russia, China, France, and the United Kingdom to declare their stockpile sizes and freeze their arsenals at such levels).

^{338.} See, e.g., Brian L. Sittlow, New START: The Future of U.S.-Russia Nuclear Arms Control, COUNCIL ON FOREIGN REL. (Jan. 28, 2020), available at https://www.cfr.org/in-brief/new-start-future-us-russia-nuclear-arms-control (last visited Nov. 22, 2020).

^{339.} Robert Gallucci, Nikolai Sokov, James H. Lebovic & Alexandra Bell, *Correspondence*, 26 Nonproliferation Rev. 195, 198 (2019).

^{340.} Id.

seemingly insurmountable roadblocks likely to forestall any attempts at negotiation.³⁴¹ These factors, Sokov concludes, suggest a "high probability of a lengthy deadlock and growing tension."³⁴² Ultimately, while the United States should pursue arms control, in part to demonstrate its good faith commitment to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Article VI obligations, ³⁴³ it must strive toward this negotiated outcome without realistic expectations of rapid progress.

D. Deepen Engagement with Belarus

A final recommendation entails leveraging diplomatic inducements to urge Belarus toward denying Russia territorial access for a potential Suwalki assault. Hodges refers to Belarus as the "great unknown," as the former Soviet republic could submit to further integration into Russian strategic planning or, conversely, pursue rapprochement with the West.³⁴⁴ In 1999, Belarus and Russia signed the Union State Treaty, pledging to establish "a joint regional military force" and "coordinate effectively" their foreign and economic policies.³⁴⁵ This agreement has produced close bilateral security cooperation. Minsk is a member of the Collective Security Treaty Organization (CSTO), a Russia-dominated arrangement whose terms permit Moscow to "deploy its military on Belarusian territory in the event of war with a third party,"346 and it currently houses at least twenty-four Russian Su-27M3 fighters at its Baranovichi airbase.³⁴⁷ As Hodges asserts, Belarus "lacks operational decision-making powers over its armed forces" and has "in effect been incorporated" into Russia's Joint Operational Command. 348

As of late, however, cracks have emerged in this previously robust strategic partnership. Despite the Union State Treaty promising economic "parity" through "equal oil and gas prices for business entities

^{341.} Id. at 199.

^{342.} Id.

^{343.} Treaty on the Nonproliferation of Nuclear Weapons, art. VI, July 1, 1968, 21 U.S.T. 483 ("Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control").

^{344.} Hodges, Bugajski & Doran, supra note 4, at 44.

^{345.} Russia and Union State, Belarusian Diplomatic Serv. (2017), available at http://mfa.gov.by/en/courtiers/russia/ (last visited Nov. 22, 2020).

^{346.} Hodges, Bugajski & Doran, supra note 4, at 44.

^{347.} Id. at 45.

^{348.} Id. at 43.

across all participating states,"³⁴⁹ in the mid-2000s Moscow began to offer only "preferential" prices, placing Belarusian companies at a competitive disadvantage.³⁵⁰ When Belarus demanded Russia halt subsidies to domestic oil refineries, Russia responded by requesting to "condition all its economic relations within Belarus on deeper integration within the Union State," raising questions regarding Belarusian sovereignty.³⁵¹ More recently, in February 2020, Lukashenko complained that Russia was supplying only 25% of promised oil.³⁵² In the security sphere, tensions arose after Minsk declined a 2015 Russian proposal to establish an airbase on Belarusian territory, creating, in the words of Russian Foreign Minister Sergei Lavrov, an "unpleasant episode."³⁵³ Moscow, Hodges writes, has realized it cannot take for granted "the loyalty of all elements of the Belarusian army" or Lukashenko's automatic approval of an attack launched from Belarusian territory.³⁵⁴

This friction comes as prospects for expanded NATO-Belarusian coordination have begun to emerge. In February 2019, Assistant Minister of Defense Major General Oleg Voinov issued a statement calling for a "gradual improvement of relations with... NATO, the European Union, and other states that respect the sovereignty and territorial integrity of the Belarusian state."³⁵⁵ The next day, Lukashenko declared Belarus "ready for a [constructive] dialogue with NATO on the principles of equality and transparency."³⁵⁶ These statements, Arseny Sivitsky argues, "reflect a

NATO militaries).

^{349.} Yauheni Preiherman, Unsettled Union: The Future of the Belarus-Russia Relationship, Eur. Council on Foreign Rel. (Jan. 21, 2020), available at https://www.ecfr.eu/article/commentary_unsettled_union_the_future_of_the_belarus_russia_relationship (last visited Oct. 9, 2020).

^{350.} Id.

^{351.} Id.

^{352.} See Yarus Karmanua, Belarus Leader Bemoans Russia's Halt on Oil Supplies, ASSOC. PRESS (Feb. 6, 2020), available at https://anews.com/07ffc354f715a8f3a857bde6bf482622 (last visited Nov. 22, 2020).

^{353.} See Tom Balmforth, Russia Complains Over Belarus's Refusal to Host Air Base, REUTERS (Sept. 26, 2019), available at https://www.reuters.com/article/us-russia-belarus-air-base/russia-complains-over-belaruss-refusal-to-host-air-base-idUSKBN1WB1NT (last visited Nov. 22, 2020); see also Hodges, Bugajski & Doran, supra note 4, at 43 (Hodges also notes that Russian and Belarusian forces also do not train in the same "integrated fashion" as

^{354.} Hodges, Bugajski & Doran, supra note 4, at 43.

^{355.} Briefing with Military Attachés, MINISTRY OF DEF. OF THE REPUBLIC OF BELR. (Feb. 21, 2019), available at https://www.mil.by/ru/news/83438/ (last visited Nov. 17, 2020).

^{356.} Lukashenko: Belarus Ready for Dialogue with NATO Based on Equality, Transparency, BELTA (Feb. 22, 2019), available at https://eng.belta.by/president/view/lukashenko-belarus-ready-for-dialogue-with-nato-based-on-equality-transparency-118940-2019/ (last visited Nov. 18, 2020).

clear intention to promote relations with NATO to a more advanced level."³⁵⁷ Furthermore, in January 2020, Belarusian defense chief Oleg Belokonev stated that while "Russia is our strategic ally," Belarus is "ready for joint exercises with NATO."³⁵⁸ Minsk also held joint military drills with British Marines in March 2020, a practice it has conducted for the past two years.³⁵⁹

In light of these developments, the United States may attempt to offer inducements in exchange for Belarus refraining from abetting Russian aggression. Currently, Belarus receives the "lowest amount of the financial aid in the region," due to U.S. concerns regarding human rights and democracy. Washington could increase aid to at least the level provided to other former Soviet republics, and diversify distribution beyond the Obama administration's focus on atomic energy security. It could also facilitate a loan from the International Monetary Fund (IMF), which suspended talks with Belarus in 2018 after Lukashenko refused to accept the requested reforms. Another possibility is Secretary of State Mike Pompeo's offer to "deliver 100% of the oil you need at competitive

^{357.} Arseny Sivitsky, *Not an Enemy: Belarus Seeks Warmer Relations With NATO*, JAMESTOWN FOUND. (Mar. 21, 2019), *available at* https://jamestown.org/program/not-an-enemy-belarus-seeks-warmer-relations-with-nato/ (last visited Nov. 18, 2020).

^{358.} See John Vandiver, Russia's Close Ally Belarus Explores Working Closer with NATO, STARS & STRIPES (Jan. 3, 2020), available at https://www.stripes.com/news/europe/russia-s-close-ally-belarus-explores-working-closer-with-nato-1.613379 (last visited Oct. 9, 2020).

^{359.} See Andrei Makhovsky, With Russia Ties Under Strain, Belarus Holds Drills with British Marines, REUTERS (Mar. 3, 2020), available at https://www.reuters.com/article/us-belarus-defence/with-russia-ties-under-strain-belarus-holds-drills-with-british-marines-idUSKBN20Q29K (last visited Oct. 9, 2020) (statement of Alexander Klaskovsky) ("The Belarusian leadership knows how Moscow reacts painfully to such things... Lukashenko is simply showing Moscow once again that there are plenty more fish in the sea and that he has alternatives").

^{360.} See U.S. Aid to Belarus, Bela. Inst. of Am. (2018), available at http://belarusianinstitute.org/research/u-s-aid-to-belarus/ (last visited Nov. 18, 2020).

^{361.} See U.S. Foreign Aid by Country, U.S. AGENCY FOR INT'L DEV., available at https://explorer.usaid.gov/cd/ALB?fiscal_year=2018&measure=Obligations (last visited Nov. 18, 2020) (Washington provided \$10,186,538 in foreign aid to Belarus in Fiscal Year 2018, in contrast to, for example, \$17,750,285 for Romania, \$45,804,458 for Lithuania, \$20,225,308 for Albania, \$30,231,632 for Kazakhstan and \$142,202,517 for Georgia).

^{362.} See U.S. Aid to Belarus, supra note 360.

^{363.} See Michal Romanowski, Belarus' Strategic Solitude, REALCLEAR WORLD (Feb. 28, 2019), available at https://www.realclearworld.com/articles/2019/02/28/belarus_strategic_solitude_112977.html (last visited Nov. 18, 2020).

prices" to "help Belarus build its own sovereign country." Still, as Pifer notes, Russian financial incentives are "going to be much larger than anything the United States can offer, "365 suggesting economics alone cannot sway Minsk from Moscow's orbit.

Washington could also attempt to leverage security-related carrots and sticks to influence Minsk's behavior. NATO could consider inviting Belarusian troops to participate in joint exercises, although, as Hodges warns, "such an effort should only be pursued once Belarus demonstrates its clear and unswerving intention not to threaten NATO." On the other hand, the U.S. Treasury Department's Office of Foreign Assets Control could threaten to revoke a general license extending sanctions relief to certain Belarusian entities. Mario drastically, in the event of an impending Suwalki crisis, Washington can communicate that if Minsk acquiesces to, facilitates, or participates in an invasion, it should anticipate a significant NATO counter-strike. Whereas, as Pifer suggests, U.S. planners will be "careful about the targets we hit in Russia" due to fears of inadvertent escalation through incidental damage to air defense or command and control systems, they will "not be so careful" in Belarus. The U.S. military can accordingly convey a credible threat: stay out of the fight or "bear the full brunt" of the Allied response.

Engagement with Belarus could, of course, backfire. Hodges cites alleged NATO attempts to "tear" Belarus from Russia as a development that could precipitate a Russia-backed coup to remove President Lukashenko and create a "vassal state." As Kroenig asserts, Belarus

^{364.} Matthew Lee, *Pompeo Says the U.S. Can Supply Belarus with 100% of Oil, Gas*, ASSOC. PRESS (Feb. 1, 2020), *available at* https://apnews.com/863371d1353f29fb38b27fe0e5027b8e (last visited Nov. 18, 2020).

^{365.} Pifer interview, supra note 110.

^{366.} Hodges, Bugajski & Doran, supra note 4, at 44.

^{367.} See Evan Abrams, OFAC Renews Belarus Sanctions Relief, STEPTOE INT'L COMPLIANCE BLOG (May 2, 2018), available at https://www.steptoeinternationalcompliance-blog.com/2018/05/ofac-renews-belarus-sanctions-relief/ (last visited Nov. 18, 2020).

^{368.} See Hodges, Bugajski & Doran, supra note 4, at 44.

^{369.} Pifer interview, *supra* note 110. Pifer by no means suggests indiscriminate attacks that could violate the law of armed conflict. On the contrary, he argues that NATO operations against Russia would be carefully calibrated to avoid escalation to the point of Russian tactical or even strategic-level nuclear deployments. Given that Belarus does not possess equivalent nuclear or conventional capabilities, NATO planners would not need to exercise the same restraint before authorizing strikes against military objectives. *See, e.g.*, Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts art. 51(4)(b), June 8, 1997, 16 I.L.M. 1391.

^{370.} Id.

^{371.} Hodges, Bugajski & Doran, supra note 4, at 29 (this scenario could unfold with or without active U.S. efforts to actively court Minsk, as Moscow could employ disinformation

has "so little freedom of maneuver" that unless NATO were to offer membership, "there is not much it can do so long as Russia maintains military forces there." Given the inevitability of considerable Russian hostility to such a proposition, particularly in light of past opposition to NATO enlargement into former Soviet territory, the United States should proceed cautiously in any engagement in Belarus, neither expecting nor necessarily desiring an immediate return.

VI. CONCLUSION

At first glance, linkages between Russia's deployment of the SSC-8 and the Gap appear attenuated at best. Upon closer analysis, however, the missile's unique capabilities-range, mobility, accuracy, and stealth—permit the Kremlin to conduct precisely the manner of conventional strike necessary to prevent NATO reinforcements from reopening the Gap and recapturing lost Baltic territory. While the overt assault that the doomsday scenario portends is unlikely to materialize in the immediate future, the threats that the SSC-8 poses to NATO forces and infrastructure are already here. The Alliance must therefore undertake a critical evaluation of and formulate innovative solutions to the latent vulnerabilities that have consequently emerged. The prescriptions that this paper outlines are by no means guaranteed to avert these challenges, even if pursued vigorously and with a presently wanting spirit of multilateral unity. Still, even the act of exploring options in these realms will serve the crucial deterrent purposes of conveying the gravity with which NATO views the Russian peril and signaling the credibility of its commitment to resist and reverse any potential aggression.

to craft a narrative blaming NATO for ensuing disorder and providing cover for a "military Anschluss").

^{372.} Kroenig interview, supra note 18.

^{373.} See, e.g., Janusz Bugajski, Why Moscow Fears NATO, CTR. FOR EUR. POL'Y ANALYSIS (Feb. 7, 2018), available at https://www.cepa.org/why-moscow-fears-nato (last visited Nov. 19, 2020).