

The US Army War College Quarterly: Parameters

Volume 49
Number 1 *Parameters Spring/Summer 2019*

Article 4

Spring 3-1-2019

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Recommended Citation

Keir Giles & Mathieu Boulegue, "Russia's A2/AD Capabilities: Real and Imagined," *Parameters* 49, no. 1 (2019), doi:10.55540/0031-1723.2860.

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Russia's A2/AD Capabilities: Real and Imagined

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ABSTRACT: This article discusses the myths surrounding Russia's A2/AD capabilities and the risks associated with the current counter A2/AD efforts among NATO countries. It offers recommendations for investing in a stronger defense of the Baltic states and Eastern Europe.

References to Russia's anti-access/area denial (A2/AD) capabilities are now standard in assessments of America's ability to protect its allies and its interests in Europe. Unclassified briefings on European military security now routinely include a slide showing a map of Europe with the reach of advanced Russian interdiction systems extending over a range of North Atlantic Treaty Organization (NATO) countries.

While awareness of the challenge posed by these capabilities is important, widespread and often unqualified reporting in open sources by both media outlets and nonspecialist think tanks has had unfortunate consequences. Exaggeration and hype suggesting Russia has the ability to interdict its adversaries across large areas of European air and maritime space in particular leads to a distorted picture. If left uncorrected, these inaccuracies could influence policy by constraining response options for assertive Russian maneuvers. A public perception that allied reinforcement of the Baltic states is not possible during a time of conflict, for example, will falsely limit the options palatable to US policymakers.

Neat circles on a map, while important for drawing attention to the problem, also foster the public impression of "no-go zones" that would be lethal for US or allied military assets. But Russian A2/AD systems will not prevent NATO forces from getting to frontline states. They could, however, prevent NATO from trying at all. This article, therefore, seeks to mitigate this problem by countering the deliberate effort of Russia to spread disinformation on its A2/AD systems.

Detail and Background

Since relations between Russia and the West entered their current crisis in 2014, Western military analysis appears to have rediscovered the classic use of interdiction capabilities as a tool of foreign policy. While discussion of China's A2/AD systems has been ongoing, Russia's recently increased activity in this domain has attracted sudden attention

due to perceptions of Russian behaviors: unpredictability, irrationality, and overt hostility toward the United States.

Russia's systematic deployment of A2/AD capabilities along NATO's northeastern and southern flanks is a genuine cause for concern. These offensive and defensive capabilities, especially in Kaliningrad and Crimea, form a perimeter around Russia's western periphery and into the Mediterranean Sea and Syria. The apparent reach of Russian systems over the airspace of key US allies, especially from Kaliningrad and the Kola Peninsula, poses obvious challenges to freedom of movement in times of crisis.



Map 1. Map of the Baltic and Black Sea region by Pete McPhail

Nevertheless, public analysis routinely underestimates the limitations of Russia's interdiction systems imposed by the range and effectiveness of their designated radars, the capabilities and limitations of their missiles, and the constraints of geography. Additionally, there has been little serious consideration of the policy limitations on Russian employment of these systems in anything short of direct and open war. Consequently, there is an urgent need to deconstruct exaggerated fears around Russia's A2/AD bastions.

Current Western public hype on this topic is detrimental to US interests because the sense of Russian technological superiority it creates emboldens Moscow. The relationship between Russian capabilities and intentions can be addressed by closely examining the gap between what Russian A2/AD systems *can* do and what the Kremlin wants US and allied politicians to *believe* they can do. Even though the capabilities of Russian interdiction assets have progressed significantly, they do not pose an insurmountable threat to the NATO Alliance and US military forces.

Moreover, Russia's conventional weapons systems do not represent the totality of its capabilities for interdicting the movements of the United States or its European allies. In times of crisis, when NATO might seek to reinforce its easternmost member states, Moscow will likely seek to deny joint reception, staging, onward movement, and integration efforts by a wide range of nonmilitary measures such as conducting cyberattacks, sabotaging logistics hubs, recruiting or coercing key personnel, applying political pressure and subversion, and supporting semideniable operations. While not part of classic A2/AD capabilities, these gray-zone tools can deliver comparable effects and should be the subject of future detailed study.¹

Understanding Russian A2/AD

The term "anti-access/area denial" does not exist in Russian military planning concepts or doctrine, except when discussing Western capabilities.² Like cyber and hybrid warfare, A2/AD is a Western construct imposed on Russian military thought with no intrinsic value in Russian military analysis. Contrary to what Western planners may have been led to believe, the Russian General Staff applies the concept merely to describe its perceptions of Western military actions.

Instead of a limited concept of exclusion using A2/AD capabilities strategically, Russian military planning considers military operations as a holistic approach that integrates assets. In this context, interdiction capabilities represent one component among a broad and coordinated range of others that make up a joint combat operation.³ Thus, A2/AD is not an end in itself but rather an enabler for additional action.

1 Sam J. Tangredi, *Anti-Access Warfare: Countering A2/AD Strategies* (Annapolis, MD: Naval Institute Press, 2013).

2 Dmitry Gorenburg, Michael Kofman, and Roger McDermott, "Russia's A2/AD Doctrine," (unpublished paper, Center for Naval Analysis, n.d.).

3 Tomas Malmöf (researcher, Swedish Defense Research Agency), interview by the author, December 8, 2017.

In addition to assigning maritime defense and territorial capabilities, Russia's military planners also create several layers of cross-domain standoff systems, such as coastal, air defense, and anti-submarine warfare. Any gaps in these conventional weapons are filled with electronic warfare systems. Interdiction capabilities, therefore, are present "*at almost every level of the Russian Armed Forces,*" especially within the Air Defense of the Ground Forces (PVO SV).⁴

Russia's continuity with the Soviet legacy of "concentric circles" to protect territory, especially to conduct out-of-area operations in contested maritime domains, creates Russia's modern A2/AD capability.⁵ The strategic bastions for conventional forces, especially in Kaliningrad, in the Kola Peninsula (where the Northern Fleet is deployed), and in Crimea (since its annexation in 2014) also provide examples of the influence of Soviet logic on Russia's interdiction capabilities.

This approach not only offers greater strategic depth but also deters Russia's near-peer competitors from attacking, avoiding escalation and contact warfare.⁶ Interdiction capabilities are, therefore, a defense-in-depth tool for deterrence, if not compellence, that limit the enemy's choices and freedom of action.⁷

Russian interdiction capabilities focus significantly on maritime and littoral protection, especially in the Black Sea and the Baltic Sea. Anti-submarine and coastal air defense systems are therefore paramount for effective A2/AD operations. Such capabilities are developed in line with the current Russian naval strategy of strengthening the projectability of its fleet of smaller surface vessels (frigates and corvettes) through the systematic procurement of standoff missile systems, such as the 3M-14 Kalibr land-attack cruise missile, the P-800 Oniks surface-to-surface anti-ship cruise missile, and anti-submarine warfare capabilities.

Standoff assets—notably the Iskander short-range ballistic missiles, the S-400 Triumf surface-to-air missiles, and the Kalibrs—deployed in the region present an access challenge for US and NATO troops in the event of a conflict with Russia. This vulnerability means NATO allies will only be able to gain superiority after neutralizing or successfully negotiating the interdiction threat. It also means Moscow would have an early advantage in escalation control, especially during the initial phase of a war.⁸ Reducing these interdiction capabilities would require combined naval and air operations, and offensive capabilities that NATO does not possess in the shared neighborhood of Eastern Europe.

Russia's military presence in the region creates a "reinforcement trap," whereby (a) NATO reinforcements may risk interdiction from

4 Gorenburg, Kofman, and McDermott, "Russia's A2/AD Doctrine."

5 Guillaume Lasconjarias (researcher, NATO Defense College), interview by Keir Giles and Mathieu Boulègue, December 7, 2017.

6 Matthew J. Wemyss, "The Bear's Den: Russian Anti-Access/Area-Denial in the Maritime Domain" (research paper, Air Command And Staff College, Air University, Maxwell AFB, AL, May 2016).

7 Interview with US military expert, December 2017.

8 Gorenburg, Kofman, and McDermott, "Russia's A2/AD Doctrine."

Russia and face important losses while (b) a lack of reinforcements would decrease NATO's security.⁹ It also means Moscow's deterrence strategy could successfully disrupt NATO's decision-making process and willingness to intervene. The net result would be a substantial increase in the operational and strategic challenges the Alliance would encounter while defending frontline states.¹⁰

Russia commonly demonstrates its air defense capabilities and exploits the myth of A2/AD "bubbles" among its neighbors to sow doubt among NATO allies. In doing so, the Kremlin uses Western insecurities regarding ensured access to its advantage and feeds a perception that NATO cannot operate effectively in a contested environment. The ongoing debate thus becomes a self-constructed psychological threat that reflects Western insecurities toward Russia, thus constituting a way for the Kremlin to be blamed for the West's capability shortfalls.¹¹ Emboldened by this response, Moscow continues to expand its A2/AD bubbles, and escalation dominance, on NATO's eastern flank.¹² In this manner, intentions and threats deter adversaries as effectively as actual military deployments.

The differences between notional maximum missile range in a straight line, missile range when maneuvering, and radar detection range are crucial to assessing A2/AD capability. Thus, simplistic assessments that use a single figure for the theoretical range of Russia's weapons are highly misleading. Missiles mounted on the S-400 system, for example, are routinely said to have a range of 400 km, but this range applies only to large, nonmaneuvering targets flying at high altitudes, which limits their application in operational terms.¹³

Furthermore, A2/AD environments are not glass domes that will cause all systems to stop operating or functioning after they have been penetrated.¹⁴ Although freedom of action and movement will be more challenging in the presence of a missile threat and in an environment where communications and command and control are degraded, it is not necessarily impossible to operate there without first destroying the defensive missile systems.

Russia does not have an inexhaustible quantity of precision-guided missiles and, thus, is likely to expend its stocks cautiously. Russian A2/AD systems can be saturated, therefore, and target acquisition and engagement capabilities will also be as susceptible as any others to failure against swarm attacks. To saturate Russian systems, however,

9 Fabrice Pothier, "An Area-Access Strategy for NATO," *Survival* 59, no. 3 (2017): 73–80.

10 Luis Simon, "The 'Third' US Offset Strategy and Europe's 'Anti-access' Challenge," *Journal of Strategic Studies* 39, no. 3 (2016): 417–45.

11 Jyri Raitasalo, "It Is Time To Burst the Western A2/AD Bubble," Royal Swedish Academy of War Sciences, June 16, 2017.

12 Luis Simon, "Demystifying the A2/AD Buzz," *War on the Rocks*, January 4, 2017.

13 Robert Dalsjö, Christofer Berglund, and Michael Jonsson, "Bursting the Bubble: Russian A2/AD in the Baltic Sea Region: Capabilities, Countermeasures, and Implications," FOI-R--4651--SE (Stockholm: Swedish Defense Research Agency [FOI], 2019), 31.

14 John Richardson, "Chief of Naval Operations Adm. John Richardson: Deconstructing A2AD," *National Interest*, October 3, 2016.

casualty-averse Western forces must expose themselves to risk and the likelihood of losses. More broadly, risk and casualty acceptance is an essential component of defeating Russia in the event of open conflict.

Recognizing Russian Bastions

To project power and to protect its outer approaches, Russia has systematically positioned interdiction capabilities on the northern, eastern, and southeastern flanks of the NATO Alliance in Europe. This deployment includes several concentrations of A2/AD capabilities: Kaliningrad, covering the Baltic Sea and the Scandinavian region; Crimea, covering the Black Sea; and the High North, covering the Barents Sea, the Kara Sea, and the Arctic region. Russia is also deploying A2/AD systems in out-of-area locations such as Syria and the South Caucasus. All of these areas demonstrate a pattern of positioning mobile air defense systems supported with electronic warfare capabilities.

Baltic Sea. The Kaliningrad exclave represents a Russian forward defense outpost located in the Baltic and Scandinavian region; thus, it is key for Russia's regional A2/AD architecture. Russia's A2/AD assets in Kaliningrad, mostly located around the naval bases harboring the Baltic Fleet, create a tightly knit mobile air, sea, and land interdiction bastion. Combined with mainland assets, the interdiction area essentially covers the Baltic states, one-third of Poland, southern Scandinavia, and the Gulf of Finland, as well as parts of Belarus. During the Zapad 2017 exercise, Russia's armed forces used the exclave to practice an increased forward presence and strategic air operations.¹⁵

As such, Kaliningrad presents the primary region NATO forces must neutralize to guarantee unrestricted access and freedom of operation in the Baltic Sea area.¹⁶ In the event of a crisis, however, Moscow could swiftly deploy additional capabilities intended to convince NATO that forced entry would be costly and potentially fruitless. Nevertheless, Kaliningrad's complicated geographical position renders it hard to defend in a general conflict and the risk inherent in large-scale westward military movements to preempt NATO operations would present a challenging strategic choice for Russia.¹⁷ In a conflict, Kaliningrad would be entirely isolated from Russia by land, barring invasion of Belarus, Poland, and Lithuania. This represents a vulnerability for Russia that NATO allies should openly acknowledge.

Kaliningrad will likewise prove complicated for NATO to deal with as any military movement on behalf of the Baltic states would first need to pass through Russia's integrated layers of A2/AD assets. It follows that, in a time of crisis, NATO would need to isolate Kaliningrad as efficiently as possible to mitigate its own access vulnerabilities and to

15 Sergey Sukhankin, "Russia's Changing Military-Strategic Perceptions of Kaliningrad Oblast between 2013 and 2017," *Eurasia Daily Monitor* 14, no. 140 (November 1, 2017).

16 Fredrik Westerlund, "Russia's Military Strategy and Force Structure in Kaliningrad," RUFBS Briefing no. 40 (Stockholm: FOI, 2017).

17 Stephan Frühling and Guillaume Lasconjarias, "NATO, A2/AD and the Kaliningrad Challenge," *Survival* 58, no. 2 (April-May 2016): 95–116; and Raitasalo, "It Is Time."

turn the exclave's isolation into its own strategic advantage.¹⁸ Short of hostilities, NATO could achieve this position by increasing force posture in the region and using its own A2/AD capabilities such as air and coastal defense systems and minelaying at sea.

Suwałki Gap. The Polish-Lithuanian border is emblematic of the Kaliningrad conundrum. Instead of Kaliningrad itself becoming isolated, Russia could potentially prevent land access to the Baltic states during an armed conflict by blocking key road and rail assets in the border area by moving in force or infiltrating from Kaliningrad or



Map 2. Map of the Baltic Sea by Pete McPhail

Belarus (if Minsk could be persuaded or induced to cooperate). Both the initial move by the Kremlin onto NATO territory and any NATO response intended to evict Russian troops would have a high potential for escalation, with a presumption of an Article 5 discussion within NATO. Any Russian intervention would, therefore, be designed to remain deniable and below the threshold for a NATO response.

Gotland. In a crisis or an armed conflict, the Swedish island of Gotland could be used preemptively to position Russian A2/AD capabilities and to impose interdiction in the Baltic Sea. Mobile air defense systems and electronic warfare capabilities there would severely hinder NATO's freedom of movement and reinforcement capabilities. A bastion in this location could also isolate the Baltic states, the Gulf of Riga, and the Gulf of Finland. Since Sweden is not a NATO member, support from Sweden's European partners and the United States, while expected, could not be assumed. Moscow might consider such a move an

18 Frühling and Lasconjarias, "NATO."

acceptable risk, especially if other measures could prevent Sweden from escalating responses to Russian action.

Åland Islands. Finland's Åland Islands present a similar scenario with the additional complication that they are demilitarized under treaty and, therefore, unlike Gotland, have not been recently reinforced against potential Russian intervention. The arrival of Russian A2/AD assets there would both interdict Swedish and Finnish air and maritime space for NATO forces reinforcing the Baltic states. But if astutely leveraged, an expanding Russian presence could also present Finland with difficult political choices over its support for the Western alliance.

Bornholm. Despite some similarities with Gotland and the Åland Islands, Bornholm presents substantially greater challenges. The Danish island also presents a hypothetical target if Russia preemptively places interdiction assets there to block the Danish straits and the southern Baltic Sea. Russian forces would need to cover a much greater distance to reach Bornholm and would risk triggering an Article 5 response to even a covert and denied military intervention in Denmark, a NATO member state. Of the three popular “island grab” scenarios for Russian action in the Baltic Sea, a move on Bornholm, therefore, appears the least likely.

Crimea. Since its annexation in March 2014 and its subsequent militarization, Crimea has, in many ways, transformed into a military outpost, mirroring Kaliningrad, at the other end of Russia's border with Central Europe.¹⁹ From the seaport of Sevastopol and across the peninsula, Russian armed forces have established a comprehensive and multilayered A2/AD environment intended to challenge NATO allies at sea and in the air, potentially complicating deterrence and reassurance efforts in the region.²⁰

Black Sea. With its regenerated capabilities, the Black Sea Fleet has extended its interdiction assets. Air defense systems can potentially reach as far as the ballistic missile defense assets deployed at Deveselu Air Base in Romania while surface vessels and submarines can deploy south toward Turkey and the Mediterranean. Compared to Kaliningrad, Russian A2/AD capabilities in the Black Sea offer greater strategic depth. Access for the United States and NATO could be potentially restricted by a combination of anti-ship, anti-submarine, air defense, and electronic warfare systems across multiple domains.

Yet the Black Sea does not constitute an environment in which NATO forces face systematic or damaging interdiction. In fact, the arena is far more open than it was during the Cold War when Bulgaria and Romania were members of the Warsaw Pact. The Alliance would still be able to reinforce its members in the region during an armed conflict more easily than those in the Baltic Sea since the primary role of

¹⁹ Bleda Kurttdarcan and Barın Kayaoğlu, “Russia, Turkey and the Black Sea A2/AD Arms Race,” *National Interest*, March 5, 2017.

²⁰ George Vişan and Octavian Manea, “Crimea's Transformation into an Access-Denial Base,” Romania Energy Center, July 14, 2015.

Russian A2/AD assets is to interdict NATO's access to Russian territory from the southern flank.²¹

The Russian approach to interdiction in the Black Sea reflects NATO's less pronounced presence and level of attention there and the increased constraints of geopolitics.²² Should Russia decide to interdict US or NATO forces in the Black Sea onwards to the Mediterranean, it would have to extend the reach of its A2/AD sea-based assets to the Turkish straits—a potentially dangerous situation risking escalation with NATO. But differences of opinion between Turkey and the United States, and instances of Bulgaria's overt opposition to a NATO presence there, complicate NATO's goals for the region. In that sense, the level of Russia's offensive strategy in the Black Sea will heavily depend on NATO's posture in the region.²³

High North and the Arctic. The High North and the Arctic comprise the only officially designated region strategically important to Russia. The Kola Peninsula is particularly vital for protecting the Northern Fleet, one of the two Russian fleets that host submarines with nuclear-powered missiles crucial to Moscow's nuclear deterrent. The Arctic region is also systematically depicted as paramount for Russia's future energy security.

In July 2017, Russia updated its naval strategy and for the first time expressed in it clear Arctic ambitions.²⁴ As these ambitions encompass ensuring access for Russia and restricting the movement of potential competitors, interdiction capabilities are instrumental to delivering Russia's Arctic strategy. The aim is to transform the region and its sea lanes into a strategic base that projects power in the region and counters the anticipated strategic competition for military access and energy resources in the Arctic.

In late 2014, the Russian Ministry of Defense created a special Arctic Joint Strategic Command, which included the Northern Fleet, to secure Russia's northern border and the Arctic and to increase its military footprint in the region.²⁵ Air defense forces and antiaircraft defense systems are deemed a priority for the development of military infrastructure in the Russian Arctic, both onshore and in the Arctic Zone of the Russian Federation.²⁶ The Northern Fleet is also operating multilayered air defense and coastal defense capabilities. During 2018, two Arctic motorized brigades were created and an Arctic naval group

21 Loic Burton, "Bubble Trouble: Russia's A2/AD Capabilities," Foreign Policy Association (blog), October 25, 2016.

22 Sergey Sukhankin, "Russia Pours More Military Hardware into 'Fortress Crimea,'" *Eurasia Daily Monitor* 14, no. 147 (November 14, 2017).

23 Sukhankin, "Russia Pours."

24 Dmitry Gorenburg, "Russia's New and Unrealistic Naval Doctrine," *War on the Rocks*, July 26, 2017; and Atle Staalesen, "What Russia's New Navy Strategy Says about the Arctic," *Barents Observer*, August 3, 2017.

25 Roger McDermott, "Russia Creates Arctic Military Command," *Eurasia Daily Monitor* 11, no. 215 (December 3, 2014).

26 "V Rossii sformirovana 45-ya armia VVS i PVO Severnogo flota" [The Northern Fleet 45th Air and Air Defence Army was formed in Russia], RIA Novosti, January 29, 2016.

was established. A new command and control center for the Northern Fleet was also scheduled for delivery at the Severomorsk-1 airbase during 2018.

In addition to structural changes in the Russian armed forces, the Ministry of Defense has been remilitarizing the Arctic region by investing in the construction and modernization of airfields and bases in northern Siberia and on Novaya Zemlya and Franz Josef Land. These facilities will eventually constitute a chain of air defense radar stations, early warning assets, and electronic warfare systems. The Nagurskoye airbase on Alexandra Land, Franz Josef Land, for example, is intended to host Su-34s, MiG-31s, and a range of A2/AD systems.

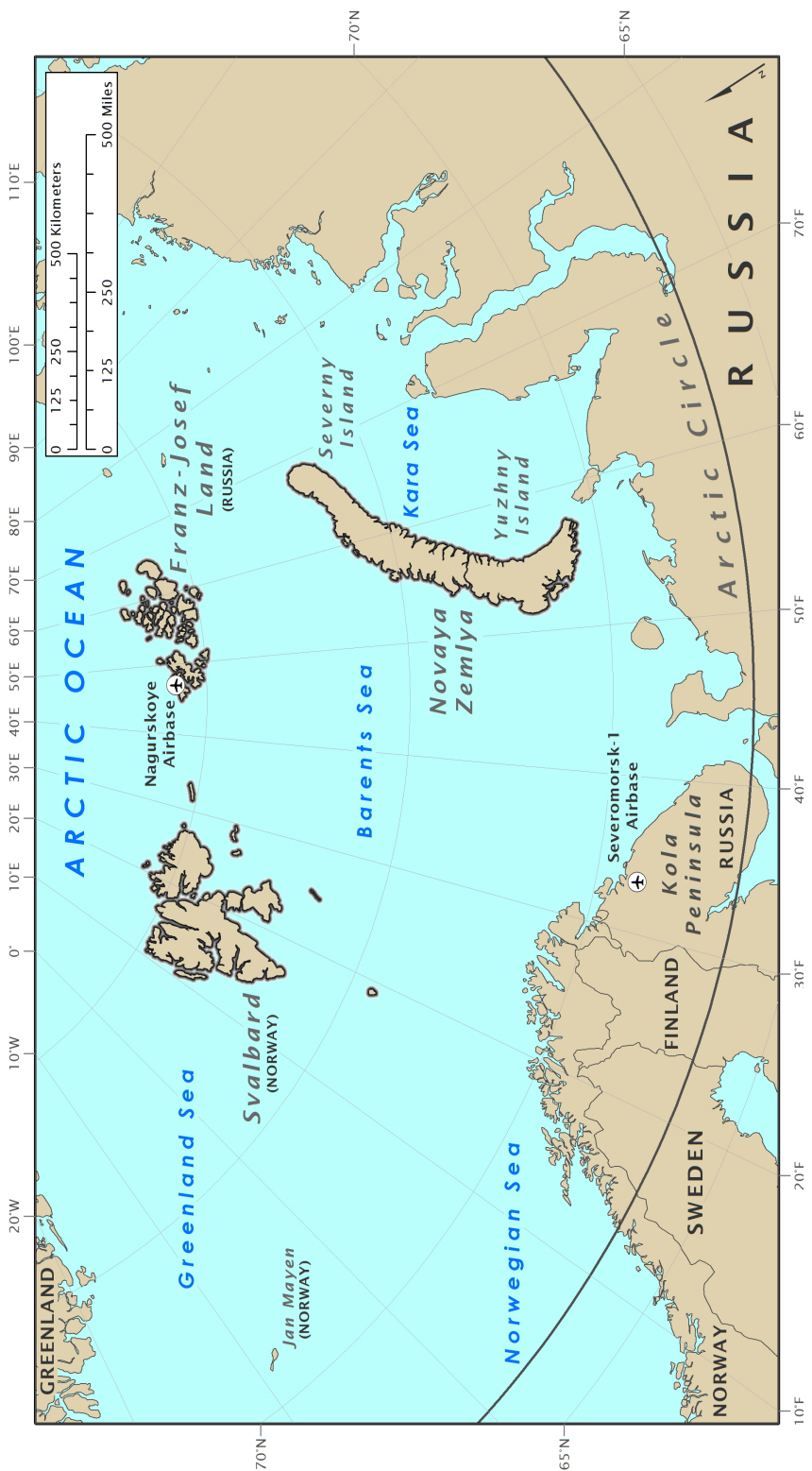
All of these systems create a comprehensive front that could be used to deny NATO naval and air forces access to the region, particularly to the Barents Sea and onwards to the High North. Nevertheless, Russia's current interdiction capabilities in the Arctic remain incomplete and relatively weak compared to other areas. Furthermore, Russia is not yet able to threaten the North Atlantic sea-lanes between North America and Europe.

Kola Peninsula. Harboring the Northern Fleet, the Kola Peninsula is critically important not only to Russia's but also Norway's regional defense and access to the High North. With the peninsula now heavily equipped with A2/AD assets such as Iskanders, S-400s, and shorter-range Pantsir S-1 surface-to-air missiles, the reach of Russian interdiction could potentially extend as far south as the Norwegian Sea. In addition to interdiction capabilities, Russia's bastion defense system is designed to protect the nuclear assets of the Northern Fleet and safeguard second-strike capabilities by keeping enemies away from the Kola Peninsula.

Svalbard. Even though Moscow has no stated plans to increase its military footprint on the Norwegian archipelago of Svalbard, placing interdiction assets in its vicinity could challenge US and NATO access to the Norwegian and Barents Seas as well as hamper reinforcement efforts along commercial sea lines. It could also strengthen its naval presence surrounding Svalbard for the same effect, potentially without violating the Svalbard Treaty that established a 200-nautical-mile boundary around the archipelago. Such activities would also disrupt coordination between NATO forces and Norway as well as their Swedish and Finnish partners.

Syria. Russia's use of A2/AD assets in Syria expands its A2/AD coverage over the eastern Mediterranean and extends the reach of its Black Sea interdiction assets. In addition to direct military goals, the Russian A2/AD complex in Syria serves the purpose of suggesting to foreign military forces that their access to the eastern Mediterranean depends on Russia's goodwill.²⁷ These out-of-area assets are not formidable, yet they are sufficiently capable of complicating the entry of US and allied forces into the region. Russia bolstered its A2/AD assets

²⁷ Emily Kangas, "Containing NATO: Russia's Growing A2/AD Capability in the Mediterranean," *Georgetown Security Studies Review*, February 21, 2017.



Map 3. Map of the High North region by Pete McPhail

and military presence in Syria with long-term lease agreements of the port in Tartus and the Hmeimim airbase in Latakia. After declaring “mission accomplished” in Syria during December 2017, Russia slowly replaced the combat air wing in Hmeimim with more interdiction assets. Meanwhile, Russia conversely relies on Turkey for the safe passage of Russian naval assets and cargoes to and from Syria through the straits.²⁸

South Caucasus. The South Caucasus also extends Russian A2/AD coverage in the region. In June 2016, the Armenian parliament ratified a bilateral united regional air defense system with Moscow, consolidating interdiction capabilities for the Russian Southern Military District.²⁹ The deployment of S-300 surface-to-air missiles at the Russian 102nd base in Armenia during 2014 further strengthened Russia’s interdiction capabilities over the eastern part of the Black Sea and eastern Turkey.³⁰ Such assets could prove problematic for NATO reinforcements and overflights in the eastern part of the Black Sea and Turkey.

Implications and Recommendations

Russian A2/AD is a multilayered problem that raises the costs of deterrence by forcing NATO to make highly challenging military and political decisions.³¹ Addressing this challenge requires acceptance of risk. But facing the challenge is necessary for the United States and NATO to maintain global freedom of movement and thus preserve the credibility of the Alliance’s conventional deterrence. Allies must be prepared either for kinetic action to neutralize defensive systems or for complex operations in their areas of coverage. In a preconflict phase, regional access has to be ensured while carefully managing the potential for escalation that might increase the risk to NATO forces deploying into a disputed environment.³²

Debunk the A2/AD Myths

Russia maintains an advantage as long as its A2/AD capabilities remain widely misunderstood. Even though the concept of A2/AD is misapplied, it should not be abandoned as a term Western military planners can use to explain Russia’s military modernization. The concept also captures the evolution of Russia’s way of war to maintain deterrence and territorial defense.³³ Within NATO, A2/AD is a comprehensible

28 Jonathan Altman, “Russian A2/AD in the Eastern Mediterranean: A Growing Risk,” *Naval War College Review* 69, no. 1 (Winter 2016): 72–84.

29 Eduard Abrahamyan, “Russia Creates Area Denial System in South Caucasus,” *Central Asia-Caucasus Analyst*, July 24, 2016; and “Соглашение между Российской Федерацией и Республикой Армения о создании Объединенной региональной системы противовоздушной обороны в Кавказском регионе коллективной безопасности,” *Pravo.ru*, October 28, 2015.

30 Eduard Abrahamyan, “Russia’s Newest A2/AD Sphere: The South Caucasus?,” *National Interest*, June 19, 2016.

31 Vincent Alcazar, “Crisis Management and the Anti-Access/Area Denial Problem,” *Strategic Studies Quarterly* 6, no. 4 (Winter 2012): 42–70.

32 Martin Zapfe and Michael Carl Haas, “Access for Allies?,” *RUSI Journal* 161, no. 3 (2016): 34–41.

33 Frühling and Lasconjarias, NATO; and Luis Simon, “Preparing NATO for the Future—Operating in an Increasingly Contested Environment,” *International Spectator* 52, no. 3 (2017): 121–35.

term useful to lobby for resources as well as the attention of policymakers. Characterizing the Russian threat as A2/AD also helps to identify Western shortcomings in technology and doctrine effectively.

The Army should lead America's armed services, allied armed forces, and the wider strategic community in debunking the myths surrounding A2/AD through efforts such as conducting military educational outreach programs and increasing information-sharing on Russian interdiction capabilities. Of critical importance, the public and political leaders should be included in efforts to communicate the real, rather than notional, range and reach of Russian systems. In addition, the impression that allied systems beyond that range are safe, but those even slightly within that range are doomed is false and must be corrected.

The government should facilitate the Army's education efforts since any action against Russian capabilities will require public support.

Develop a Counter A2/AD Toolkit

Alongside the need to burst A2/AD bubbles, a comprehensive approach for countering nontraditional A2/AD systems in the military and political domains must be developed. A doctrinal "toolkit" could help military planners and government policymakers adapt existing assets, produce new assets, develop new procedures, and foster information sharing to assess weaknesses and vulnerabilities in Russia's capabilities.

The Army should lead the armed forces and NATO in the creation of a counter A2/AD toolkit—consisting of assets, strategy, doctrine, and political preparedness. By conducting exercises with NATO allies, especially Sweden and Finland, possible A2/AD scenarios with Russia can be tested to help anticipate Russia's operational responses. Military exercises for countering Russian A2/AD assets should be held in the region as a way to demonstrate the Alliance's readiness, and to deter Russian aggression. The Army should also share data from the collaborative exercises to inform NATO efforts to develop a functioning doctrine to counter the Russian A2/AD threat. The Army should encourage military leaders of partner nations to convey the knowledge they gain during such exercises to their governments' leaders to inform assessments of NATO's conventional deterrence posture. In this way, the Army can help NATO determine whether new doctrine that encompasses Russia's interdiction capabilities and its implications should be developed or if the Readiness Action Plan should be updated to ensure NATO members, especially the frontline states, retain unimpeded access.³⁴

The government should allocate funds and resources to facilitate military measures to achieve kinetic and information superiority over Russian A2/AD assets. By systematically engaging NATO partners, including Sweden, Finland, Ukraine, and Georgia, the government can reinforce the importance of a comprehensive approach to developing a NATO strategy for countering Russia's A2/AD challenge. The United

34 Pothier, "Area-Access Strategy"; and Alcazar, "Crisis Management."

States should continue to recognize the critical importance of Turkey in regional security by avoiding policy decisions that could undermine Turkish willingness to take assertive action in support of NATO.

Establish A2/AD Surveillance

Accurate knowledge of the movement of Russian A2/AD assets and forces will help NATO anticipate future deployments of Russian A2/AD and thus help mitigate the risks to US and NATO forces. Since increased activity in the electromagnetic spectrum is considered an early indicator of the activation of A2/AD assets, electronic warfare monitoring will also be instrumental to maintaining a clear understanding of Russian A2/AD capabilities.³⁵

The Army should prioritize the development and fielding of technologies that provide early detection of A2/AD and electronic warfare assets as well as other intelligence, surveillance, and reconnaissance capabilities. Surveillance assets should yield information about Russia's command and control, communications, computers, intelligence, surveillance, and reconnaissance capabilities, which are fundamental to assertive interdiction operations. The Army should further deepen relationships with Norway, the Baltic states, and Poland, as well as Sweden and Finland, to increase collaborative surveillance capabilities and information- and intelligence-sharing arrangements and to provide reassurance.

The government should encourage the Navy to expand maritime surveillance and rotational presence, especially in the Black Sea and on the northern flank of the Alliance members' territory, as well as to leverage relationships with its partners in the Baltic Sea to monitor Russia's A2/AD deployments.

Raise the Cost of Interdiction

The perceived costs to Russia for employing its interdiction assets can be raised (and the perceived benefits can be reduced) by rendering active use of A2/AD capabilities a less politically attractive option.

The Army should increasingly confront Russia with the technological limitations of its A2/AD systems. When Alliance forces operate uncontested and without degradation of their capabilities in a Russian A2/AD environment, Moscow's narrative on the invincibility of its defenses is challenged. Key examples are US and allied strikes on Syria in April 2017 and 2018.

The government should make the failure of Russian and Russian-supplied defensive systems to engage incoming missiles—whether due to a lack of capability or an operational decision—a key component of its narrative on these systems. Care should be taken, however, not to place excessive emphasis on the limitations of Russian

35 Jyri Raitasalo, "It Is Time."

systems since decisionmakers may then underestimate Moscow's A2/AD capabilities altogether.

Invest in Countering A2/AD Capabilities

As previous recommendations imply, the United States alone cannot gain overwhelming out-of-area interdiction superiority against Russia.³⁶ The Army can make Russian A2/AD operations harder to implement and less effective. But military and technological superiority over Russia is best leveraged through NATO allies working with frontline states to develop the states' capabilities in a coordinated and coherent manner that avoids financial overburdening. Strengthening the defensive and force protection capabilities of US and allied militaries to distribute systems capable of countering Russian A2/AD reach more evenly would complicate Russia's interdiction capabilities.

The Army should support efforts to encourage frontline states to build and operate a layered and integrated Alliance system of at least minimal A2/AD capabilities. The Army should also rotate interoperable counter A2/AD assets—especially regional air and missile defense systems—in the Baltic states, Poland, and Norway within the framework of the European Reassurance Initiative. Some counter A2/AD assets that could extend protection in Eastern Europe include positioning radars; elevated sensors; interceptors, intelligence, surveillance, and reconnaissance; and electronic warfare.

The government should encourage its NATO allies, such as the Baltic states, Poland, and Denmark, and partners, such as Sweden and Finland, to invest in their own A2/AD capabilities. It should encourage NATO to reinforce multinational forces in Romania and Poland as well as bolstering defensive measures there.³⁷ America should demonstrate its commitment to countering the Russian A2/AD threat by financially assisting in the development of baseline adapted counter A2/AD assets, particularly air defenses. The United States should also consider limited technological transfers from the Third Offset Strategy to selected NATO allies.

Conclusion

Russia might consider US investments in countering A2/AD capabilities in Eastern Europe to be a threat to its security interests in the shared neighborhood. Past patterns of Russian behavior suggest, however, that despite alarmist rhetoric from Moscow, building counter A2/AD capabilities would be seen more as a normal and natural development of NATO's defensive capability.

The United States must establish an accurate understanding of the real threat posed by Russia's A2/AD capabilities by educating the public and policymakers. As a clearer picture of the threat emerges, America

36 Alexander Lanoszka and Michael A Hunzeker, "Confronting the Anti-Access/Area Denial and Precision Strike Challenge in the Baltic Region," *RUSI Journal* 161, no. 5 (2016): 12–18.

37 Altman, "Russian A2/AD."

can work to develop a counter A2/AD toolkit that can be used, first by the US military and then NATO members and allied partners, to respond to Russia's A2/AD threat. The United States should establish a network of surveillance systems that can monitor existing Russian assets as well as new ones entering the shared neighborhood. These steps will raise the technological and political costs of interdiction because Russia will have to take steps to prove the validity of its rhetoric. It will not be possible, however, to remove the risk completely or to eliminate casualties entirely in the event of an open conflict.

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