

AIR COMMAND AND STAFF COLLEGE

DISTANCE LEARNING

AIR UNIVERSITY

CONVENTIONAL DETERRENCE: THE EFFECT OF U.S.  
AIRPOWER ON RUSSIAN STRATEGIC CALCULUS

by

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### **Abstract**

Since Russia's annexation of Crimea in 2014, tensions between Russia and NATO have been on the rise. The U.S. and NATO have increased their military presence along NATO's Eastern flank to reassure allies and deter Russia from further "aggression." At the same time, Russia has increased their military exercises on the Western border and engaged in nuclear threats in response to NATO "encirclement." Considering Russia's fear and respect of NATO airpower, the appropriate posturing of combat aircraft could help deter Russian aggression while not going so far as to spur another arms race and further increase tensions. This study will explore Russian perceptions of U.S. and NATO airpower to determine how Western posturing affects their assessment of stability. Through an investigation of the current airpower laydown in Europe and the effectiveness of current NATO and U.S. aircraft posturing, a recommendation is made for necessary posture changes to best secure lasting stability in the region. In the end this paper concludes that current NATO and U.S. airpower posturing is effectively deterring Russian aggression against NATO member states, but appropriate care must be taken to ensure unnecessary escalations are avoided. Airpower has the unique ability to deter from afar, compared to ground forces, so this characteristic must be taken advantage of to deter while managing tensions.

## INTRODUCTION

### *The Nature of the Problem*

Tensions are on the rise between the West and the Russian Federation, as the latter has increasingly threatened to retaliate to provocations with nuclear weapons. Russia has shown a propensity to forcefully exert their influence through recent advances in Georgia, Crimea, and Eastern Ukraine. Their general reasoning was to guarantee security for the “Russian World” who were allegedly being threatened by violence. This is of particular concern for the future stability in Eurasia since the “Russian World” is a loose term for ethnic Russians who reside in many neighboring states. On top of this likelihood for future conflict, Russia has been engaging in nuclear brinkmanship in an effort to accomplish their objectives without Western interference. During the crisis in Ukraine, Russian President Vladimir Putin said “I want to remind you that Russia is one of the leading nuclear powers... It’s best not to mess with us.”<sup>1</sup> While Putin’s tone certainly has bluster, coming from a position of conventional disadvantage, the increased tensions leave the door open for a higher chance of an inadvertent confrontation through miscalculation.

With this threat of nuclear exchange, one might think that conventional airpower is of little consequence. On the contrary, it is conventional airpower that will be a key player in any conflict with Russia that is approaching the nuclear threshold. How the U.S. and NATO play their cards with conventional airpower will undoubtedly affect whether or not the first nuclear shot is fired. Therefore, it is essential that the U.S. pay close attention to how airpower affects Russia’s assessment of stability. Throughout this paper, the word stability will be used in the broader sense that encompasses a limitation of both conventional and nuclear conflict escalation.

### *Overview of the Study*

Russian strategic assessments and reactions will be studied against the current NATO and U.S. airpower force posture and deployment rotations. While the focus of the paper will be on U.S. forces, NATO combat aircraft numbers will be included in comparisons since the key strategic balance in Eastern Europe is between NATO and Russian bloc forces. A bloc is essentially a combination of countries sharing a common purpose. NATO is an alliance but can be referred to as a bloc for comparison. The makeup of NATO and the Russian bloc has certainly changed from the 1990's until now, and that will be accounted for to achieve a useful comparison of total airpower. Another factor for the comparison is the fact that the U.S. Air Force has been fielding fifth-generation fighters such as the F-22 Raptor and the F-35 Lightning in recent years. Assessing they would be behind in fifth-generation fighter capabilities, Russia decided to focus on the improvement of anti-access / area denial (A2/AD) capabilities like the S-400 surface-to-air missile system. This was an attempt to achieve parity in aerial combat by offsetting a U.S. aircraft advantage. All these factors will be considered to produce a solid comparison of airpower balance, helping lay the groundwork for an accurate assessment of regional stability.

Under Operation Atlantic Resolve (OAR), part of the European Deterrence Initiative (EDI), F-22's, A-10's, and many other joint forces have conducted a series of rotational deployments and training exercises in Eastern Europe designed to demonstrate U.S. commitment to its NATO allies.<sup>2</sup> The same initiative has allocated \$130 million in 2018 to establish and improve airbase infrastructure at seven locations in Eastern Europe which support NATO air operations.<sup>3</sup> In protest, Russia has stated clearly in their National Security Strategy that this increased military activity and build-up of military infrastructure along Russia's borders is

unacceptable.<sup>4</sup> In this case, Russia is implying that NATO posturing in the region is a destabilizing force which does not contribute to regional stability. Detailed analysis of Russian and NATO viewpoints will be accomplished to understand Russia's true view of NATO airpower efforts and how it plays into their assessment of stability. This understanding will be critical to discern since EDI efforts are growing at a fast pace every year. Between fiscal years 2016 and 2019, EDI spending has increased from \$0.8 billion to \$3.4 billion to \$4.8 billion to a proposed \$6.5 billion, respectively.

This study will show that if NATO and the U.S. pursue regional parity with Russian airpower through permanent forward basing of combat aircraft on Russia's periphery, it will threaten and push Russia to further expand their arms options intensifying the Eastern European stand-off. A newly coordinated conventional arms agreement, however, will show good faith to the Russians helping to secure improved stability in the region through transparency.

### ***Purpose of the Study***

The purpose of this study is to analyze long standing assumptions on conventional deterrence as it relates to great power conflict with Russia. Exploring the Russian perspective on U.S. and NATO airpower operations will help the reader better predict how Russia might respond to certain moves. With a better understanding, U.S. and NATO decision makers will be able to move forward with a balanced approach to airpower in the region that deters aggression without unnecessarily escalating tensions.

### ***Research Methodology***

The explanatory case study framework will be used to conduct this research. It will include an in-depth study of Russia's assessment of stability in relation to the current status of conventional airpower in Eastern Europe. First, there will be an assessment of whether or not



balance currently exists between Russian bloc and NATO air forces. This is important to be able to determine if Russian assessments on the balance of airpower are based in reality or not.

Comparisons will be made between the air forces balance today and the balance that Russia approved of during the successful days of the Conventional Armed Forces in Europe (CFE) Treaty. Then, the airpower efforts included in the European Deterrence Initiative (EDI), which includes Operation Atlantic Resolve (OAR), will be analyzed to determine if it is an appropriate deterrence or if it would be considered excessive dominance, driving an arms race.

Recommendations will be made for an appropriate U.S. and NATO airpower posture in Europe to balance deterrence with increased tensions.

## **LITERATURE REVIEW**

### ***The Cornerstone of European Security***

Following the Cold War, the Conventional Armed Forces in Europe (CFE) treaty played a pivotal role in establishing and maintaining stability in Europe through a system of checks and balances between NATO and Russian bloc conventional forces. In the latter half of the 1990's when the European security environment was changing, both sides worked hard to build an adapted CFE treaty that accounted for this change. This modernized CFE treaty was agreed on in 1999, altering the framework from a bloc-to-bloc approach to a nationally- and territorially-based system of armaments limitations.<sup>5</sup> After this, however, the treaty slowly fell apart as the Adapted CFE treaty was never ratified on the account of Russia failing to fulfill their promise to remove its forces from Moldova and Georgia. Russia also lost confidence in the treaty when NATO expanded to include the three Baltic States and Slovenia without incorporated them into the treaty limitations. In 2011, Mark Wilcox conducted an in-depth study of the Russian paradigm of understanding the treaty as “a cornerstone of European security that contributes to

stability and a reduction of tensions in Europe.”<sup>6</sup> Despite the unraveling of the treaty, he concludes that Russia still holds to this paradigm, and would look favorably upon the renegotiation of a new conventional arms control treaty. Wilcox quotes Russian officials claiming that the demise of the CFE treaty had left a ‘vacuum’ in conventional arms control that has resulted in a regional crisis.<sup>7</sup>

### ***Concerns for NATO Expansion***

When Russian concerns started growing over potential NATO expansion, they were reassured by NATO in the 1997 NATO-Russia Founding Act that “the Alliance will carry out its collective defense...by ensuring the necessary interoperability, integration, and capability for reinforcement rather than by additional permanent stationing of substantial combat forces.”<sup>8</sup> Subsequently, NATO expanded by ten nations in just five years with the Czech Republic, Hungary, and Poland entering in 1999, and Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia, and Slovenia in 2004. Helping to understand the Russian perspective amidst this changing security environment, Andrew Radin recently published a formative study for RAND detailing Russia’s core interests and their view of the international order. It concluded that Russia had become more skeptical and suspicious of the West, in part due to NATO expansion and the West’s refusal to recognize Russia’s basic interests, or their sphere of influence. This sphere of influence refers to the former Soviet Union buffer states that Russia tries to maintain a level of influence over for security on their periphery. Radin highlights Russia’s concern for the threat of NATO forces in those states and on Russia’s border as a result of NATO expansion.<sup>9</sup> This type of insight is key for this study, in understanding Russian thoughts on NATO air operations at their doorstep. Other key findings from Radin identified that the Russian military community has essentially no variance from the government perspective on international order,

and that the outlier geopolitical opinions are a small minority and therefore of little consequence.<sup>10</sup> Radin's observations are supported by a prominent Russian Doctor of Political Science, Vladimir Batyuk, who cited Russia's "well-justified concerns" in 2011 due to NATO military build-up in Latvia, Lithuania, Estonia, and Poland, along with NATO's desire to do the same in Ukraine and Georgia.<sup>11</sup> Batyuk's article is a well-articulated reasonable explanation of Russia's problem with NATO expansion, and he recommends resolution through meaningful dialogue that leads to NATO checking "its eastward expansion in exchange for Moscow's promise to respect independence and sovereignty of the near abroad."<sup>12</sup>

### *Forward Presence after Ukraine*

Regarding NATO air operations in Eastern Europe, the Air Policing mission is an element that had been conducted over NATO countries since 1961 during the Cold War.<sup>13</sup> This type of steady-state defensive aerospace control mission is generally executed with two fighters on a 24/7 ground alert status. Because the Baltic states lack any semblance of an air force, when they joined NATO in 2004, alliance members partnered to conduct the Air Policing mission with a rotation of about four aircraft based out of Šiauliai Air Base in Lithuania. After Russia annexed Crimea in March 2014, the Baltic states, Poland, and Romania all lobbied for NATO military support to help defend against the perceived Russian threat.<sup>14</sup> In response, NATO established the Readiness Action Plan (RAP) which increased the overall response force and made improvements to enable a swift and decisive reaction to sudden crises in Eastern Europe. NATO also increased Baltic Air Policing using a minimum of 10 fighters and established new basing at Ämari Air Base in Estonia.<sup>15</sup><sup>16</sup> The U.S. also temporarily forward deployed 12 F-16's to Poland, and moved to establish the European Reassurance Initiative (ERI) as a measurement to reassure Eastern NATO allies with increased exercises, improved infrastructure, and rotational

land, air, and sea deployments to the region.<sup>17</sup> While this limited support was provided, there was a major debate ongoing in NATO about the need to proactively defend NATO's Eastern Flank. Artur Kacprzyk of the Polish Institute of International Affairs authored a balanced review of alliance positions for and against permanent NATO deployments in the region. Kacprzyk argues for his country's position on a permanent forward presence, yet he briefly considers the Russian perspective by acknowledging Germany's fear that a permanent deployment near Russia's border could lead to an unnecessary escalation of tensions with Moscow due to a perceived violation of the NATO-Russia Founding Act.<sup>18</sup> Judy Dempsey, of the Carnegie think tank, similarly acknowledges Western European concerns with escalation, but simply explains away their opinions as "out of touch" because of their physical separation from the threat.<sup>19</sup> She makes the case for permanent deployments to Poland and the Baltic states arguing that the Russian threat is real and needs to be perceived as such by all NATO members no matter how distant they are.

The NATO Wales Summit in September 2014 did not result in permanent deployed forces, but it did establish a readiness action plan which included a Very High Readiness Joint Task Force (VJTF) able to deploy to Eastern Europe with very short notice.<sup>20</sup> Before the subsequent 2016 NATO Summit in Warsaw, RAND released a wargaming study by David Shlapak on NATO's ability to defend against a Russian invasion of the Baltics. It was a thorough wargame that showed how NATO's current posture would result in Russian ground forces arriving in the Baltic capitals in less than 60 hours. Shlapak claimed that the Russian Air Force would deny NATO air superiority for multiple days, leaving NATO ground forces susceptible to air attack.<sup>21</sup> While the wargame was done well, the associated report was unnecessarily alarmist in nature, making it sound like the invasion was imminent because NATO

was “inviting” Russia to attack. Shlapak countered those with alternate views claiming they must be relying merely on hope as a substitute for strategy.<sup>22</sup> Either way, the alarm was set off in Warsaw, and significant changes came out of the summit. For the first time since the Cold War, NATO deployed substantial combat forces on Russia’s “near abroad.” Called Enhanced Forward Presence (EFP), it took the form of four multinational battlegroups (approximately 1100 troops each), stationed on a continual but rotational basis in Estonia, Latvia, Lithuania, and Poland.<sup>23</sup> The U.S. also symbolically changed the European Reassurance Initiative (ERI) to the European Deterrence Initiative (EDI), bolstering the program with the fiscal year 2017 budget request of \$3.4 billion, four times larger than the previous. The 2017 EDI, executed as Operation Atlantic Resolve (OAR), planned to build upon the five core elements: increased rotational presence, exercises and training, improved infrastructure, enhanced prepositioning, and building of partner capacity.<sup>24</sup> The commander of U.S. Air Forces in Europe (USAFE), Gen. Frank Gorenc, communicated the desire to transition from basic air policing to a comprehensive air defense initiative that includes aircraft, surface-to-air systems, and air-space control measures.<sup>25</sup> Furthermore, EDI efforts have enabled the world’s premier operational fifth-generation fighter, the F-22 Raptor, to visit Estonia, Poland, Lithuania and Romania on rotational deployments.<sup>26</sup>

### ***Views on Deterring Russia***

These NATO and U.S. deterrence measures have had a significant effect on Russia’s analysis of regional stability. Lt. Col. Thomas McCabe makes a case that airpower has a special effect on Russia because of the speed with which it can be deployed and the perceived disadvantage Russia has in conventional airpower.<sup>27</sup> He reasons that Russia might lean on nuclear weapons because of this conventional deficiency.<sup>28</sup> While his analysis is helpful and will

add to this research, it is far from comprehensive as it mostly focuses on a Russian fear of and reaction to a full air campaign designed to defeat Russia.

From a Baltic nation perspective, Eerik Marme of Estonia does not appear to be concerned with provoking Russia and simply wants more defense provided by NATO and the U.S. He argues for continued increases in EDI efforts and echoes Gorenc's thoughts on transitioning the air policing mission to a more robust air defense mission.<sup>29</sup> This Baltic perspective is valuable, but one must understand the Baltic view is focused on the survival of their nation, and reasonably so, rather than the larger strategic context of the continent. A Heritage Foundation article by Luke Coffey also underscores the importance of growing Baltic air defense in a strictly defensive way. Coffey argues this capability would be essential for enabling reinforcements to arrive securely if they were needed.<sup>30</sup>

Keir Giles wrote a paper for the Strategic Studies Institute of the U.S. Army War College which provides invaluable insight into the Russian perspective as he digs into the reasons for their increased aggression. He concludes their aggression is due to the perception of greater threat from the West, and the realization that Russia has regained sufficient strength, both militarily and politically.<sup>31</sup> Giles observes that when it comes to the threat Russia feels, perception is a reality, whether the threat is real or imagined. While he acknowledges NATO should not posture forces on Russia's border that has the potential for an offensive threat; he affirms the deployment of NATO land forces under EFP since Russia understands and respects actions that show strength.

In recent months, Canadian Senator Joseph Day, of NATO's Defense and Security Committee, released his draft report on *Reinforcing NATO's Deterrence in the East*. The timing of the report is important because his recommendations will feed directly into the upcoming July

2018 NATO Summit in Brussels where President Trump and other world leaders are scheduled to attend. Day explains how, despite EFP and EDI posture enhancements, Russia still has a significant conventional advantage in the Baltic region. He claims NATO must deploy additional ground forces and equipment to the East, as well as increase investments in ground-based air defense systems and fifth-generation fighters.<sup>32</sup> Day exaggerates the shortcomings of the current posture, however, stating the goal of a regional Allied advantage of conventional forces has not been achieved. This was never the goal, however, as the EFP and EDI forces were meant to be sufficient as a trip wire force to deter aggression, not actually deny aggression.

### *Seeking Stability with Russia*

In the context of broader stability with Russia, Samuel Charap states that the “middle way,” of trying to avoid a new Cold War without negotiating with Russia regarding the regional order on its periphery, has failed. He says Russia will continue its military buildups near the Baltics because they see NATO’s enhanced deterrence initiatives as “accelerating the post-Cold War process of moving its military infrastructure closer to Russia’s borders.”<sup>33</sup> Charap provides solid reasoning to back his claim that the only way to cool tensions and achieve stability is through negotiations where both sides make compromises to their influence of, or direct support for, nations on Russia’s periphery. A 2017 RAND paper by Christopher Chivvis echoes the same sentiment, emphasizing that to improve strategic or nuclear stability with Russia, the U.S. must exercise political and military self-restraint while working together on new nuclear and conventional arms control treaties.<sup>34</sup>

### *Analytical Framework*



In 2017, RAND published a report to provide an analytical framework for assessing

**Table 1: Key Factors Likely to Affect Russian Reactions to U.S. and NATO Posture Enhancements** (*Assessing Russian Reactions to U.S. and NATO Posture Enhancements*. RAND Report RR-1879-AF)

Category	Key Factor
Strategic context	<ul style="list-style-type: none"> <li>• NATO's relative overall capabilities</li> <li>• NATO's relative local capabilities</li> <li>• Russian perceptions of NATO's intentions</li> <li>• Russian perceptions of NATO's willingness to defend its members against aggression</li> </ul>
Russian domestic context	<ul style="list-style-type: none"> <li>• Extent of threats to regime legitimacy</li> <li>• Relative power and preferences of factions within Russia's elite</li> <li>• Preferences of Vladimir Putin</li> </ul>
Characteristics of posture enhancements	<ul style="list-style-type: none"> <li>• Effect on strategic stability</li> <li>• Effect on conventional capability</li> <li>• Location</li> <li>• Extent of infrastructure improvements</li> </ul>

Russian reactions to U.S. and NATO posture enhancements. The report outlines how NATO posture enhancements should be analyzed against 11 key factors to provide insight into how Russia might react. These key factors are broken down into the three categories of strategic context, Russia domestic context, and characteristics of posture enhancements, as shown in Table 1.<sup>35</sup> While the RAND report does provide an analysis of current NATO posture enhancements using the described framework, it focuses primarily on land forces, not air forces. Therefore, this paper will break new ground by focusing the provided framework specifically on airpower and its effects on Russia. After the two case studies, this paper will use the 11 key factors to analyze a potential future move for U.S. and NATO airpower deterrence measures.

Overall, this paper reviews an extensive array of sources that will help provide key insights into Russian perceptions of airpower posture enhancements, and the broader strategic



context with which they take place, helping to formulate recommendations for the way forward towards greater stability.

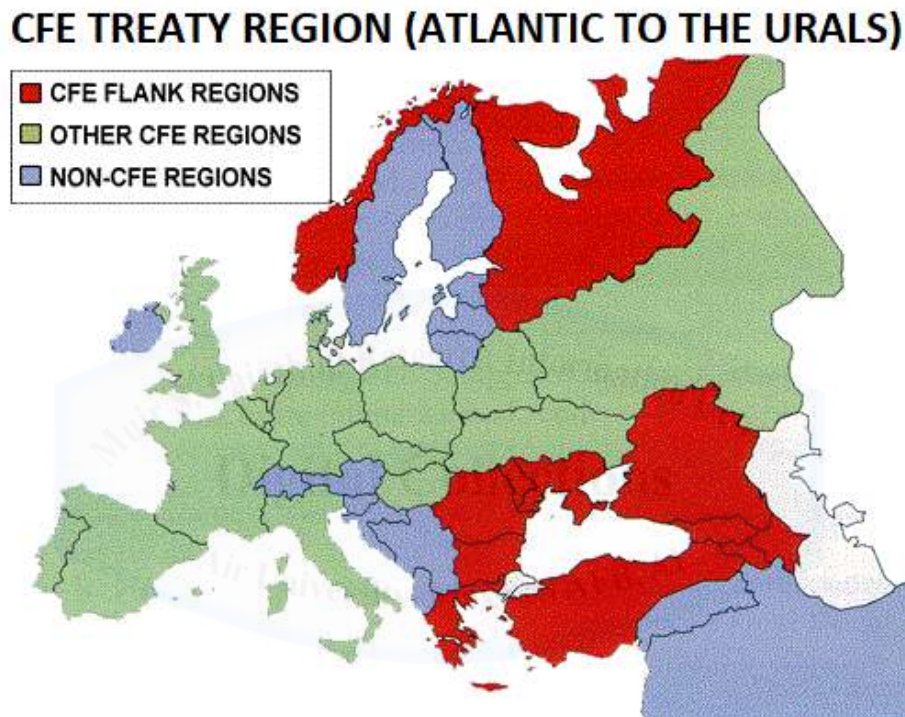
## **CASE STUDY: CURRENT AIRPOWER LAYDOWN IN EUROPE**

### ***CFE Treaty Baseline***

To generate a fair comparison of airpower numbers between the Russian bloc and NATO, one must first define some geographical and categorical boundaries. Since the assumed conflict is a regional air battle on NATO's Eastern flank, the aircraft considered for this comparison are those combat aircraft that could launch and reasonably be in the fight inside of a day or two. This type of comparison of conventional airpower was most recently conducted as part of the CFE treaty, signed into effect after the end of the Cold War in 1992. The purpose of the arms control treaty was to maintain stability in the region through mutual and balanced force reductions to keep arms equipment under the agreed-upon limits. The CFE treaty limited arms and equipment in the categories of battle tanks, armored combat vehicles, artillery, combat aircraft, and attack helicopters, while also prescribing on-site inspections for verification of treaty compliance.<sup>36</sup> Although the treaty was plagued with years of disagreement leading up to Russia's 2007 suspension of the treaty, it was heralded by Russia for many years as the "cornerstone of European security."<sup>37</sup> In November 2000 on the occasion of the tenth anniversary of the treaty's signing, President Putin himself proclaimed the CFE treaty played a "key role in strengthening European security."<sup>38</sup> Because of the stability it helped to maintain for a time, the CFE Treaty guidelines are a useful model with which to base this airpower study on. Using the CFE rules will also help in comparing the current laydown to the force disposition that was in place during years when both the Russian and NATO sides were satisfied. It will

give perspective to help achieve new insights upon the current situation. Of note, the rules of the adapted treaty from the 1999 Istanbul summit will not be used since it was never fully ratified.

The geographical boundary that will be adopted from the CFE treaty is the “area of application” from Article II of the treaty, otherwise known as the Atlantic to the Urals (ATTU) region. ATTU is depicted in figure 1, with the CFE regions shown in green and red. It includes



**Figure 1:**  
[http://www.unc.edu/depts/diplomat/item/2007/0709/andr/andres\\_cfe.html](http://www.unc.edu/depts/diplomat/item/2007/0709/andr/andres_cfe.html)

Portugal in the West, all the way to the Ural Mountains / Ural River boundary in the East. The distinction of the flank regions in red is not a concern for this study since the flank limitations were meant for ground forces and not aircraft. The main takeaway from figure 1 is the outer boundary of the applicable region, since within the continent there have been a number of changes in the bloc alignment of countries since the 1990’s. For this study, the only exception to

the overall CFE boundary is in the South since all forces in Turkey and deployed forces in Syria will be counted.

The categorical boundary that will be adopted from the CFE treaty is the definition of combat aircraft: fixed-wing or variable-geometry wing aircraft armed and equipped to engage targets as well as any aircraft that performs reconnaissance or electronic warfare.<sup>39</sup> For this study, it will include unmanned fixed-wing aircraft greater than 600kg, in the category of large or heavy according to the Military Balance catalog.<sup>40</sup> All rotary wing assets are excluded.

### ***NATO and the Russian Bloc***

NATO is defined by the current 29 members of NATO, who are bound by the collective defense principle in Article 5 of the treaty where “an attack against one Ally is considered as an attack against all Allies.”<sup>41</sup> The area of application as defined in the CFE Treaty includes all of Europe, so the forces in every NATO country will be counted with the exception of U.S. and Canadian forces that are not forward deployed to Europe. As depicted in figure 1, the Southeast portion of Turkey is excluded from the ATTU region. However, since that cut-out was generated primarily with ground forces in mind, for simplicity the combat aircraft in all of Turkey will be counted. NATO forces that were deployed outside of Europe were excluded from the totals.

The Russian bloc will be defined by participants in the Collective Security Treaty



**Figure 2:** <https://www.cfr.org/background/russian-military>

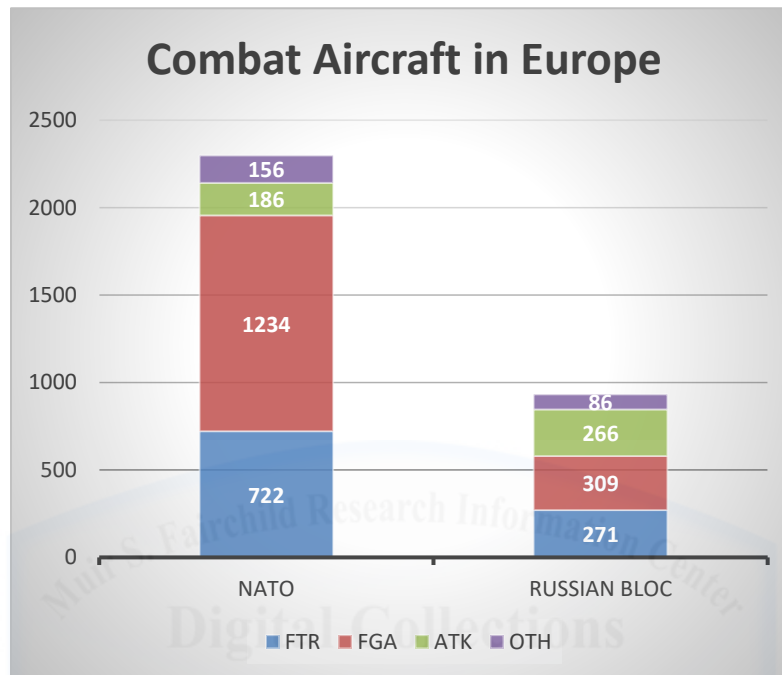
Organization (CSTO). Depicted in figure 2, this organization was established in 2002, born out of the Commonwealth of Independent States (CIS) for the purpose of a mutual defense alliance between Russia, Belarus, Armenia, Kazakhstan, Kyrgyzstan, and Tajikistan.<sup>42</sup> These countries conduct exercises together yearly and are likely to support each other if attacked, similar to the mutual support inherent in NATO.<sup>43</sup> Since the boundary line of the Ural Mountain range splits the bloc in half, forces from the nations of Kyrgyzstan and Tajikistan will not be considered in the tally. A small piece of Western Kazakhstan is split by the Ural River, but since almost all their combat forces are based on the East side of the country, their force totals will be excluded as well.<sup>44</sup> For Russia, the entirety of the Western and South Military Districts will be counted along with the associated naval aviation in the Baltic, Northern, and Black Sea fleets. The only

air base in the Central Military district West of the Ural line is Bol'shoje Savino in Perm, where there are approximately 20 fighter aircraft that will be counted.<sup>45</sup> Finally, Russian forces that are deployed to Armenia, Syria, and Ukraine (Crimea) will be counted since they could be used in a conflict with NATO. Syria is technically outside the ATTU boundary, however, for tabulation purposes, it was simpler to include the assets there in addition to the NATO assets in Southeast Turkey.

***Airpower Laydown Results***



The primary source for combat aircraft statistics was the Military Balance 2018 catalog produced by the International Institute for Strategic Studies (IISS). This comprehensive catalog has been produced yearly since 1961 and was praised by former SECDEF Leon Panetta as being



**Figure 3: Combat Aircraft in Europe as of Fall 2017**

“the best unclassified source of defense information on personnel, equipment, and budgets for every country.”<sup>46</sup> Aircraft totals were gathered from the catalog for each country, factoring in appropriate deployment details as required. A full break out of aircraft numbers according to country is located in appendix A, while figure 3 below shows a simplified bloc comparison. Of note, totals for rotational deployments are shown according to their status at the time of the catalog’s compilation: Fall of 2017. For example, four Canadian fighters are shown in theater because their CF-18’s were on a rotational deployment to Romania.<sup>47</sup> The aircraft categories are fighter (FTR), fighter ground attack (FGA), attack (ATK), and other (OTH), which includes electronic warfare, intelligence, surveillance, reconnaissance, and anti-submarine warfare.

Russia was the only country with bombers in the region, so their 72 bombers were rolled into the attack category. NATO totaled 2,298 combat aircraft compared to 932 in the Russian bloc.

At first glance, it appears NATO has the hands-down advantage in combat aircraft with a 2.5 to 1 ratio in the overall total. Regarding fighters (FTR & FGA), which are the key component to gaining and maintaining air superiority, NATO has a higher 3.4 to 1 advantage over the Russian bloc. Another concern for Russia is that NATO is beating Russia to the punch in fielding a fifth-generation fighter. The Military Balance shows that NATO countries in Europe currently have 32 F-35 Lightning II's.<sup>48</sup> Italy is the first to achieve initial operational capability (IOC) with their seven F-35's in the air-to-air role.<sup>49</sup> The other nations of the Netherlands, Norway, and U.K. are still undergoing testing and evaluation with their F-35's, and are therefore not included in the current NATO totals.<sup>50</sup> Russia, however, is still in development of their fifth-generation fighter, the Su-57, with no identified timeline for fielding.<sup>51</sup>

Despite the numerical advantage NATO has in airpower, their challenge is interoperability between combat aircraft from so many different nations. Most NATO countries participate in yearly live-fly exercises, yet this is a challenge nonetheless. The other advantage Russia has is that they are the sole owner of bombers in the ATTU area. These could be used quickly while American bombers would take a good amount longer to deploy forward.

### ***Comparison to the Good Days of CFE***

While two thousand aircraft is significant, the current totals do not come close to the CFE limits of 6,800 aircraft per bloc.<sup>52</sup> At the inception of the CFE treaty in 1992, the Russian bloc, or Commonwealth of Independent States (CIS) as it was known, had the edge with 6,800 combat aircraft to NATO's 6,662.<sup>53</sup> After three more years of reductions, in 1995 the Russian bloc had a larger advantage with 5,873 combat aircraft to NATO's 4,301.<sup>54</sup> One of the big differences



between the current situation and that of the 1990's is the makeup of the two blocs. Since 1995, NATO has added 13 new member states to its organization, all in Eastern Europe. Also, in that time, Russia lost its five CIS allies, and many other allies who were part of the former Soviet Union. That said, however, the numbers still give a useful comparison of the overall balance of conventional airpower between the Russian bloc and NATO from that time until now. In summary, Russia enjoyed a marked advantage in the airpower laydown of the 1990's, but now in 2018 are facing a significant disadvantage.

### ***Laydown Implications***

Some argue that exact aircraft quantities matter less in today's digital world. At the Joint Air Power Competence Centre (JAPCC) conference, it was said, "the key to credible deterrence and collective defense will be considering the future from a data/network lens rather than a 'how many planes are on the line today?' perspective."<sup>55</sup> This is a legitimate claim, especially when considering the intangibles a fifth-generation fighter brings, and the networking inherent in aerial surveillance and ground-based air defense systems. At the same time, however, aircraft numbers are commonly advertised and simple to assess, making it a reliable means of comparison which has a clear effect on deterrence. For example, a Russian news article made it clear that Russia was paying close attention to the deployment of a certain number of F-22's to Europe, and in the event of any conflict, numbers will definitely matter.<sup>56</sup>

The overall NATO aircraft advantage in Europe means that Russia will likely avoid a protracted air conflict because they are outnumbered and are highly sensitive to military costs.<sup>57</sup> If Russia thinks offensively, it is expected they would invade quickly, setting up an anti-access / area denial (A2/AD) umbrella as fast as possible in the new territory. If completed in time, the A2/AD environment would help offset the imbalance of the air battle once NATO was able to



mount a sufficient aerial response to the invasion. With defense in mind, Russia has set up a complex integrated air defense system throughout their country with a total of 844 long range surface to air missile launchers on hand (288 S-400's / 556 S-300's), most of which are in the ATTU region.<sup>58</sup> This is a significant number compared to the 480 Patriot launchers the U.S. has in inventory.<sup>59</sup> The effort Russia has made to make up for the conventional airpower gap is confirmation that NATO airpower significantly affects their stability considerations. And because of NATO's military advances toward the East, and the speed, range, and responsiveness of airpower, there is no doubt that Russia feels the weight of a threat from all of NATO's combat aircraft in the ATTU region. This is evidenced by the fact that Russia daily employs approximately 80 S-400 launchers in defense of the Moscow area, both for air defense and ballistic missile defense.<sup>60</sup> This type of defense is certainly not in response to the NATO Air Policing mission since the number of aircraft involved is limited. Deterrence value is difficult to assess for certain, yet because of the characteristics already mentioned on airpower's flexibility, it is reasonable to conclude that combat aircraft in Central and Western Europe have a significant deterrence value against Russia, albeit less value than if they were pre-positioned in Eastern Europe. Bringing those aircraft from places like Norway, Germany, or Italy could theoretically be done inside of a days' time. However, it would take a good amount of coordination for air-to-air refueling support and divert basing options. Therefore, the total of NATO combat aircraft in the ATTU region provide a significant deterrent value even from their normal basing.

### **CASE STUDY: NATO's FORWARD AIRPOWER ENHANCEMENTS**

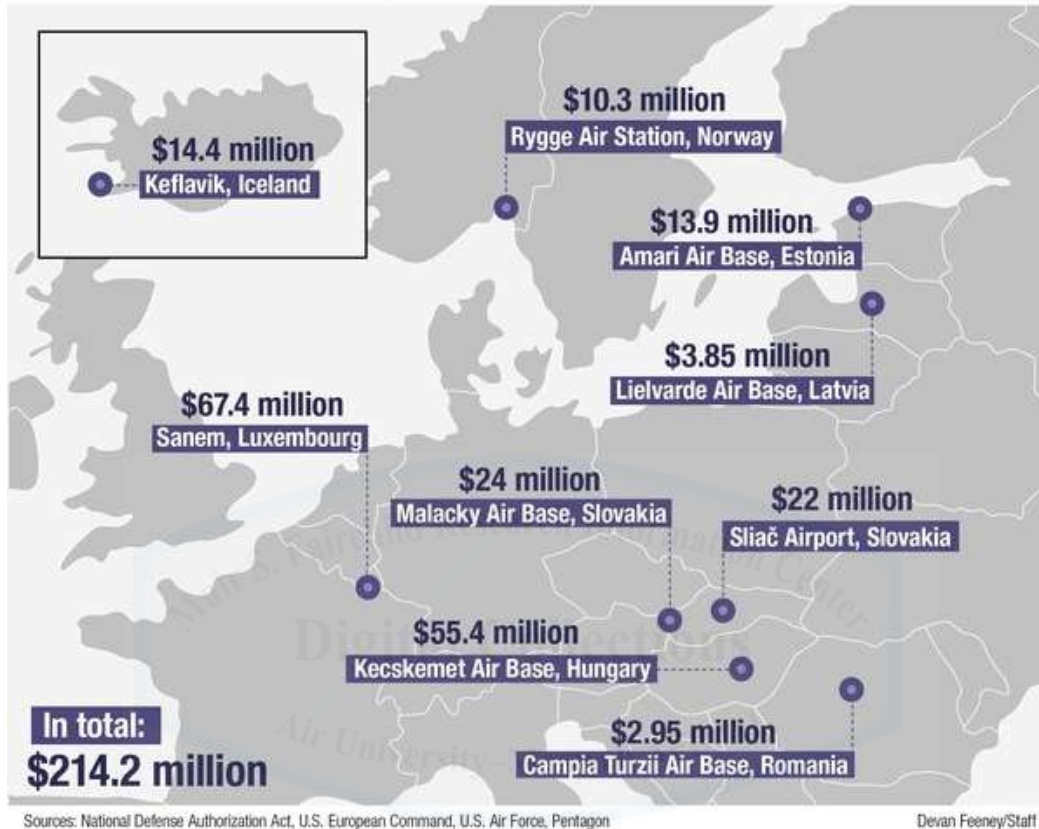
#### ***Summary of Air Operations***

U.S. and NATO forward air operations in Eastern Europe can be described generally in three categories: steady state air operations, rotational deployments and exercises, and airfield

infrastructure improvements. As described previously, the steady-state operation is primarily the air policing mission. At Šiauliai Air Base Lithuania since 2004, Ämari Air Base Estonia since 2014, and Mihail Kogalniceanu (MK) Air Base Romania since 2016, NATO normally maintains four fighters from various NATO countries that swap out on a four-month rotation. Šiauliai currently has four Portuguese F-16's and an extra augmentation of six Spanish Eurofighter Typhoons, which were added at the beginning of the current rotation in May 2018.<sup>61</sup> Ämari has four French Mirage 2000's. Finally, MK has four British Typhoons, which the United Kingdom has recently agreed to keep there on a permanent basis.<sup>62</sup> These air policing missions are on alert 24/7 and are scrambled to intercept any aircraft not following the established air traffic rules. The other steady-state mission is intelligence, surveillance, and reconnaissance (ISR), which is conducted in the region by U.S. remotely piloted aircraft (RPA), the E-8 Joint Surveillance Target Attack Radar System (JSTARS), and the Navy's P-3 Orion or P-8 Poseidon.<sup>63</sup>

Rotational deployments above and beyond the air policing mission are conducted on a regular but random basis by the U.S. Air Force as part of Operation Atlantic Resolve (OAR). These deployments are called theater security packages (TSP) and generally consist of a dozen jets going to a forward base for a couple months while they train with the host nation or take part in a NATO exercise. Sometimes these TSP's and exercises will be scheduled concurrently with large Russian exercises like ZAPAD to ensure a heightened state of readiness while Russia masses troops on the border.<sup>64</sup> In addition to the deployments, there were at least four major NATO flying exercises in 2017 with various scenarios that appear to be based on a Russian type of threat.<sup>65</sup> A couple of these exercises even included U.S. B-1 and B-52 bombers, which are of particular concern for Russia with their standoff cruise missile capabilities.

Finally, airfield infrastructure improvements have been a big part of the EDI, enabling rapid deployment and support for military aircraft missions. Improvements were modest through 2017, then in 2018, there was a boost with \$214.2 million allocated for the nine bases shown in



**Figure 4: FY2018 EDI Air Base Improvements, (Snow AF Times, US plans \$200 million buildup of European air bases flanking Russia)**

figure 4. The budget for the fiscal year 2019 is even greater with \$363.8M allocated for air base improvements in Slovakia, Norway, United Kingdom, and Germany.

### *Russian Reactions to Forward Air Presence*

The Russian state-directed media, such as Sputnik News and TASS, have consistently described U.S. and NATO forward posturing as aggressive moves, but this might not directly correlate with serious concern from Russian decisionmakers.<sup>66</sup> Regarding the air policing mission, Russia has not responded in a negative way. After all, it is a common defensive

measure that many militarized nations use for air traffic enforcement, nation-state threats and airborne terrorist threats. There have been many intercepts of Russian military aircraft, but most of them occur over international waters in the Baltic Sea where it is legal for anyone to fly. Gen. Petr Pavel, chairman of the NATO Military Committee, said that a vast majority of the fighter scrambles are due to technical mistakes like omitting transponder signals, flight plans, or failure to communicate with air traffic control.<sup>67</sup> That said, however, it is probable that Russia sometimes makes these “mistakes” on purpose to disguise their flights or to test the responsiveness of the NATO fighters. Even so, this would not be considered hostile, but somewhat normal, although slightly unsafe, behavior for an adversarial air force.

What would not be considered normal are the unsafe intercepts that Russian jets have initiated on ISR aircraft, like the U.S. Navy P-3 Orion, during missions off the Russian coast in international airspace. After an especially close pass within five feet of a P-3, Russia’s Defense Ministry stated, “The Aerospace Force will continue to maintain the reliable protection of Russian airspace. Should American pilots, knowing this fact, fall into depression or succumb to any phobias, we advise the U.S. side to exclude these flight routes near Russia’s borders in the future, or return to the negotiating table and agree on their rules.”<sup>68</sup> This is a strong and clear sign that Russia does not like ISR missions close to their border.

It is also clear that Russia does not appreciate significant forward deployments of fifth-generation aircraft or large exercises. A Russian Deputy Foreign Minister stated that “Russia is deeply concerned about the growing number of NATO drills near our borders,” claiming that such actions lead to destabilization and increased tensions in the region.<sup>69</sup> And when the U.S. announced its first potential deployment of F-22’s to Europe, a prominent Russian political analyst, Vladimir Batyuk, stated the move would provoke conflict with Russia as they would be

compelled to respond, possibly with a provocative deployment of more Iskander short-range ballistic missiles to Kaliningrad.<sup>70</sup> This fear of a significant aerial threat in close proximity to Moscow correlates with Lt. Col. McCabe's assessment of Russia's concerns. He explains that Russia is worried about a Western air campaign against Moscow based on the capabilities and willingness to intervene exhibited in the air war over Kosovo.<sup>71</sup> In summary, the significant forward positioning of NATO combat aircraft in Eastern Europe usually sets Russia on edge with their concern of an attack on their homeland.

Regarding airfield infrastructure build-up, it is apparent that Russia views it as an indirect threat to their nation because of NATO's increased ability to launch a strategic attack. In Batyuk's International Affairs article, he describes America's threatening force posture in the post-Soviet expanse in part by detailing the airbase improvements in the Baltics.<sup>72</sup> And that was in 2011, well before the significantly expanded airbase improvements made under the ERI/EDI program. So, there is little doubt that today's airbase improvements are giving Moscow reason for concern.

### ***Assessment of Current Air Operations***

To begin with, there were no official assessments found in reference to the forward air operations conducted under NATO or the U.S. EDI. An ERI Inspector General (IG) report states that the U.S. European Command cannot currently assess ERI because the efforts are not separate from all the other associated U.S. efforts in the region.<sup>73</sup> Therefore, objectives must first be identified to initiate a general assessment. The primary and overarching objective of the forward air operations is to deter Russia through boosting the credibility of NATO's Article 5 collective defense guarantee. A subordinate implied objective is to minimize or at least keep NATO-Russia tensions under control to help achieve regional stability. This objective follows

the concept of military self-restraint that Christopher Chivvis identifies as a means of reducing tensions.<sup>74</sup> Lastly, there is the debated objective of defense. Some think the objective is to be in a position to defend the Eastern NATO countries. Others think the objective is to be ready to respond in defense of these NATO countries via a quick reaction force according to the established Readiness Action Plan. The difference is the crux of the debate.

### *Effectiveness of Deterrence*

Looking at all the posture enhancements NATO and the U.S. have implemented in recent years, RAND analyzed how Russia will respond using the 11 key factors framework. The study concluded that the enhanced posturing had sent a strong signal that NATO would respond militarily to any attack on the Eastern European NATO states, and therefore lessened the likelihood of Russia carrying out an attack.<sup>75</sup> So far, this assessment matches with reality since Russia has chosen not to attack a NATO member. It is impossible to know for certain if deterrence measures are working without reading the mind of Putin, but they appear to be successful. Narrowing down to airpower moves, the IG report on the ERI claimed the TSP deployments of Air National Guard F-16's to Lask Airbase in Poland have been fruitful. Interoperability has increased between U.S. and Polish pilots, airfield operators, and maintenance crews.<sup>76</sup> The same is likely to be true for the other TSP deployments, which is expected to deter Russia through the messaging that the U.S. is willing to show up in force, and when they do show up, it will be an organized and efficient air operation. The airfield infrastructure improvements also support this same line of messaging.

Another indicator that deterrence is working is seen in the previous section on Russia's reaction to the forward air presence. They clearly take notice of increased airpower capabilities on the NATO side because it raises the risk they are required to accept if they choose to invade a

NATO state. Russian state communications will always play the victim as if these capabilities are threatening their homeland, but if they are secretly planning an offensive, NATO's improved airpower readiness will make them think twice.

### *Effectiveness of Minimizing Escalations*

It is common knowledge that tensions have been escalating between NATO and Russia since the annexation of Crimea, as both sides have been increasing their defense posturing near the border. This is to be expected when making a stand in response to Russia's illegal invasion of another sovereign state; therefore, this assessment will try to highlight unnecessary escalations. The RAND study on Russian reactions to posture enhancements provides key insight into what type of presence Russia views as excessive in their border region. It explains how Foreign Minister Sergei Lavrov proposed a conventional forces agreement in 2009 that called for no permanent deployments of substantial forces in new NATO states (those joining after 1997), echoing the agreement from the 1997 Founding Act.<sup>77</sup> Lavrov's proposal stipulated that permanent forces should be smaller than a brigade, and anything larger could not be deployed for more than 42 days, unless special approval was granted.<sup>78</sup> Forces beyond these Russian expectations might result in increased tensions.

Overall, the airpower enhancements in the region have minimized the potential for escalations. The air policing mission has been communicated strictly as a defensive mission. This has been reinforced by the established standard of four jets as a minimal force that could not reasonably go offensive against Russia. NATO's Gen. Pavel said of the airpower presence, "We're doing our best to keep the level of this military presence below being a threatening force to Russia. We didn't want to create any competition that will bring more forces to the region."<sup>79</sup>



The problem is that the current rotation has exceeded the established standard at Šiauliai Air Base with a two and a half fold increase up to 10 fighters. Increases like this have occurred previously on a temporary basis for specific events, but this has the appearance of a permanent change. NATO public affairs gave no specific reason for the increase, saying it was the result of “additional aircraft offers made by Allies.”<sup>80</sup> Russia has not openly responded but is likely to interpret this as an insidious creep towards an offensive airpower capability on their borders. They might think that if 10 fighters are placed in Lithuania, there will soon be 10 fighters in Estonia and Romania as well. While 30 fourth-generation fighters are admittedly no match for Russia’s integrated air defenses, Russia would still categorize it as an offensive force due to numbers. This type of action by the Alliance appears to discredit former NATO statements about air policing being a minimal defensive force and are liable to cause an escalation in tensions due to a degraded trust between sides.

TSP deployments appear to have caused minimal escalations because they are communicated accurately as opportunities for multinational training and interoperability testing. Also, when high visibility fifth-generation fighters have rotated through Eastern Europe, the contingent has been limited to a modest number of jets, usually four to six, to communicate that the focus is training and interoperability as opposed to a force to intimidate Russia.<sup>81</sup> According to TSP press releases, the deployments generally range from 2 to 6 months. Due to Lavrov’s 42 day expectation, however, there is little doubt that TSP rotations greater than 2-3 months cause some concern and a response from Russia.

Various NATO and U.S. exercises have increased tensions with Russia because of the enlarged presence and the Russian mindset that exercises can be used to disguise a real-world attack.<sup>82</sup> However, these exercises should not be considered unnecessary escalation because they



are essential for training and multinational integration, and NATO is faithful to publicize to Russia the timing and size of the exercises to ensure mutual trust through transparency. Next, the airbase infrastructure program has not caused significant escalation because most of the improvements have been the minimum required to get the neglected airfields up to baseline NATO standards.

### *Effectiveness of Defense*

All the experts agree that the NATO and U.S. airpower laydown on Russia's periphery is not sufficient to defend against an attack such as the hypothetical Russian invasion of the Baltics to create a land bridge from Belarus to Kaliningrad. Senator Day stated recently that despite the improvements made, "Russia would still dominate any conflict in the short- to medium-term until the Alliance would be able to bring...overwhelming resources to bear upon the conflict."<sup>83</sup> Shlapak stated that the Russian Air Force would be able to maintain air superiority over the Baltics for multiple days due to their overwhelming numbers advantage in the attack.<sup>84</sup> Even if a unit of 12 F-15's were deployed in a TSP to the Baltics, the Russian advantage would be insurmountable in the short term. Both Marme and Coffey argue that to be in position to defend against an attack, the NATO air policing mission must mature into a robust Baltic Air Defense mission with additional combat aircraft, aerial surveillance, and ground-based air defense.<sup>8586</sup>

Given a couple of days to organize an appropriate response to an invasion, however, NATO's overall airpower advantage with superior numbers and technology would allow them to eventually retake air superiority in the airspace over the conflict. The question is, must NATO be in position to immediately defend in order to deter further Russian aggression?

## **THE WAY FORWARD: TO DEFEND BY RESPONSE OR IN PRESENCE?**

### ***Potential Air Enhancement***

The current air force posture is defense by response with a minimal trip line force in the region along Russia's border. Many voices such as Judy Dempsey, Senator Day, and Poland and the Baltic nations themselves, however, are calling for a move towards defense in presence, also known as the concept of deterrence by denial. This position generally seeks to have the forces in place to hold off a Russian invasion for a few days until Alliance reinforcements arrive, which would deter Russia by convincing them they would not succeed. In a push to transition to defense in presence with a robust air defense mission, the proposals would likely require permanent basing of fighter squadrons in Eastern Europe along with the basing of required air support assets such as tankers and AWACS. Kacprzyk emphasizes that Poland and the Baltic states desire permanent basing of NATO air forces in their countries<sup>87</sup>, and Coffey states that a robust presence of fast-jet and airborne surveillance would be required for sufficient air defense.<sup>88</sup> Plus, the idea of a permanent NATO air base in Poland is within the realm of possible considering their Ministry of National Defense just offered to contribute \$2 billion towards a permanent U.S. army base in their country.<sup>89</sup> Poland already has sufficient runways like Lask air base for fighters and Powidz air base for heavy aircraft, positions that are strategically located for air support in the Baltics or the Black Sea region. Therefore, the concept of a permanent U.S. squadron of approximately 24 fourth-generation fighter aircraft at Lask air base will be considered for a potential way forward.

### ***RAND Framework Assessment of Russian Reaction***

Next the study will use the RAND analytical framework shown in Table 1 for assessing the Russian reaction to this NATO posture enhancement. Starting with the strategic context,

NATO's overall capabilities would remain relatively the same, but their local capabilities in the Eastern European region would be improved. Poland's total of 95 fighters shown in appendix A would be increased to 119. Also due to regular integration and training with the U.S., the Polish fighters would achieve a higher level of proficiency and capability. Despite this increase, however, the Russian bloc would still maintain a significant numerical advantage of fighter aircraft in close proximity to the Baltic region with their air bases in Kaliningrad, Belarus, and Russia's Western Military District. According to Charap, NATO advances like this would be perceived by Russia as another step towards "trying to extend its reach right up to Russia's borders (and even inside them)."<sup>90</sup> Because of their fear of an air campaign against Moscow, Russia would ignore NATO's explanation of a defensive posture and assume that it must be a part of an offensive plan of attack. In addition, Russia would perceive that NATO is even more willing than previous to fulfill their collective defense guarantee because of the pursuit of a credible air capability in the region.

The permanent forward basing of a fighter squadron in Poland would not significantly affect factors in Russia's domestic context. Vladimir Putin and his party have a strong hold on the leadership of the nation with little influence from alternative factions. However, because of Putin's "tough guy" approach to international relations, he would not idly stand by while NATO advanced their military laydown. He would be compelled to act.

Moving on to the characteristics of the posture enhancement, there would be no effect on strategic stability, or the nuclear balance, since one fighter squadron could have little to no effect on Russia's hardened and dispersed nuclear capabilities. The location would be the most significant factor in this enhancement because it would be the first permanent forward air

presence in a “new NATO state,” making an exception to the 1997 Founding Act and Russia’s long-standing expectations of NATO’s limitations on military expansion.

In the end, because of NATO’s increased credibility regarding collective defense, Russia would likely respond in a way that is not a direct attack on a NATO country. They might increase aggression on non-NATO countries like Ukraine or Georgia, but they are most likely to respond with a similar action by establishing a permanent base for Russian military forces in Belarus. The Belarussian Foreign Minister stated as much, saying they would refrain from allowing Russian basing in Belarus out of a desire for regional security and not wanting to be a troublemaker, but said he would reconsider if the U.S. established a base in Poland.<sup>91</sup> If this tit-for-tat escalation in basing occurred, it would be just one step closer to a return to the Cold War era where significant forces were positioned close-in on both sides of the border.

### ***Reasons for Russian Aggression***

Those who argue for defense in presence or deterrence by denial, of which the air base in Poland would be a step towards, are often driven to their conclusions because of an elevated view of the threat of Putin’s aggression. Senator Day claims that Russia underwent a significant doctrinal shift in 2014, moving from a nation willing to cooperate with NATO towards a “*de facto* competitor” who views NATO activities in Eastern Europe as a threat to Russian national interests.<sup>92</sup> Day uses this claim to underline the significant threat NATO faces in Russia, but he fails to fully explain what might have driven Russia to this doctrinal shift, and in so doing implies that Russia is being unreasonable in this shift. In another report, before making a case for defense in presence, Dempsey proposed that Russia’s intention is to rearrange Europe’s post-Cold War borders.<sup>93</sup> Lt. Col. McCabe goes so far as to suggest that “President Putin, as a Russian nationalist, ultimately intends to rebuild the Russian Empire,” implying that Putin

subscribes in part to the ultranationalist ideology of philosopher Alexander Dugin.<sup>94</sup> If this was the whole story, it would make good sense to shore up the borders as in the days of the Cold War.

An alternative explanation for Russian aggression is that they have responded in a more logical fashion against threats to their national interest of maintaining their current state of power and defense through their sphere of influence, with the ultimate goal of being a great power with influence throughout the globe. This view generally supports the position of a credible deterrence by response, seeing Putin as a somewhat reasonable leader who is sure to count the cost of invoking NATO's Article 5. Andrew Radin's analysis of the Russian perspective supports this line of thinking as he provides the reasoning behind Russia's doctrinal shift. Radin chronicles how Russia lost hope in cooperation with the West due to events such as, but not limited to, the push for Ukraine and Georgia's membership in NATO, the support of violent regime-change in Libya, and the support of the pro-Western Maidan protesters in Ukraine.<sup>95</sup> He explains how Russia saw this Western threat closing in on them, which convinced them that cooperation was not an option, leading them to pursue a proactive defense of their established sphere of influence. Keir Giles did an in-depth study on this exact question, trying to understand what led Russia to a foreign policy shift where they were willing to resort to direct military action, as in Ukraine and Syria, to settle foreign policy challenges. His conclusions fall right in line with Radin's observations, summarizing that it was due to "a greater and more urgent perception of threat...to Russia's own security" and "a recognition that Russia itself had regained sufficient strength...to assert itself and counter this threat."<sup>96</sup> As an example, Giles proposed that Russia intervened in Ukraine because its Westernization "constituted an immediate danger of losing the defense industry in the Donbass and the Black Sea Fleet's base in

Sevastopol, together with the often-overlooked supporting infrastructure scattered across the Crimean peninsula, to NATO.”<sup>97</sup>

Putin himself also explains the military advances as an effort to protect the Russian people abroad. It is very likely, however, that the priority of protecting ethnic Russian’s is significantly lower than the priority of Russian national security interests. It is plausible Putin makes the protection of people sound so important in an effort to gain popular support in his country appealing to a Nationalistic cause, and to attempt to gain international approval with a humanitarian cause, since a strict military power grab would not go over well.

Finally, American’s can find it difficult to grasp the threat Russia feels because of our natural insulation from the world via two large oceans. What if Mexico, feeling alienated from the continent because of the divisive border policies, invited closer ties with Russia and permitted their military to build a few air bases on Mexican soil in return for economic support? What if Russia was a much stronger world power than the U.S., and they also built an air base for operations in Cuba? Would the U.S. not feel threatened and desire to push back in any way they could? Vladimir Batyuk’s article even mentioned reviving Russian activity on Cuba as an option, possibly to wake up American’s by responding in kind.<sup>98</sup> This hypothetical is just meant to show the legitimacy of Russian fears of a Western threat, no matter what the intent of NATO actually is.

### ***Defense by Response as the Way Forward***

This analysis of Russian thought helps to highlight that their acts of aggression, whether right or wrong, have been a logical response to the perceived threat in order to defend their national security interests, rather than an unreasonable desire to rearrange borders to rebuild the Russian Empire. Then when it is understood that permanent NATO basing on Russia’s doorstep

is seen as a significant increase to that threat to their national security, it becomes clear that a posture enhancement of that magnitude is certain to push Russia toward escalation and likely more aggression. Now Russian beliefs, of course, should not determine U.S. or NATO policy, but as Radin says, “Russia’s views do suggest policy options.”<sup>99</sup>

This understanding of Russian foreign policy also suggests that a deterrence policy of a promise to defend by response will be sufficient to deter Russian aggression against NATO members. Russia has always respected NATO’s collective defense policy, and the logical shift in their doctrine does not suggest any change to this long-standing respect. Therefore, instead of bolstering NATO’s Eastern flank with permanent forces, they should focus on improving the credibility of their response options for an effective deterrence against Russian aggression. Poland and the Baltic states would no doubt be disappointed with this approach, but they must manage their expectations with the understanding that NATO’s Article 5 is not a guarantee to bolster the defense of every member nation. It is a guarantee, however, that NATO will come to the rescue if they are attacked.

## **CONCLUSION AND RECOMMENDATIONS**

### ***Conclusion***

In conclusion, NATO and the U.S. should continue to follow the guidelines of the 1997 Founding Act by not deploying permanent forces on “new” NATO states. The West needs to show military restraint and trust in the power of deterrence via defense by response, so that tensions with Russia do not continue to escalate out of control. This restraint, however, cannot be one sided. It must be matched by restraint on the Russian side as well, and this mutual restraint can be most effectively implemented through a next generation conventional arms treaty. Such a treaty would be essential in maintaining limits and building trust through

transparency, just like the CFE Treaty accomplished in the 90's. And as Samuel Charap makes clear, there is little hope of agreeing to a conventional arms treaty unless it is pursued along with negotiations about the regional order in Russia's sphere of influence.<sup>100</sup>

This is a tall order to accomplish on the international stage of geopolitics, but this opportunity to pursue stability must not be squandered by over-aggressive use of airpower enhancements in Eastern Europe. A detailed review of NATO's overall airpower strength should bring confidence to the Alliance's ability to deter Russia through a promised response, even if it does take a few days to mount a response. This strength, however, does not mean there is no room for improvement. NATO's core airpower capabilities need to be strengthened further by investments as all member states increase spending to reach the 2% of Gross Domestic Product (GDP) threshold. In addition to refraining from permanent deployments in the region, NATO and the U.S. should be careful in how they execute current airpower force enhancement measures to keep from unnecessary escalations. Alliance airpower pressure should be placed on Russia when necessary for the sake of deterrence, but Russian perceptions should always be considered as a factor to give a higher chance of achieving the desired outcome.

### ***Recommendations***

The following are a few recommendations to guide airpower posturing in Eastern Europe.

1. Continue current EFP / EDI measures with the following limitations:
  - a. For the steady-state air policing mission, keep the aircraft count at five or less at each of the forward bases to underscore the defensive nature of the mission.
  - b. Because of the high threat that fifth-generation fighters portray, do not use them in the air policing mission at least until the Su-57 is fully operational.



- c. For TSP deployments, ensure that no more than 6 fifth-generation fighters deploy forward into Eastern Europe at a time.
  - d. Normally keep TSP deployments into Eastern Europe at or below two months in duration to show the intent is not a permanent presence.
2. Refrain from permanent aircraft deployments in the “new” NATO states.
  3. Communication is key: Be transparent by advertising to Russia upcoming exercises and deployments. Emphasize the minimal defensive nature of all air operations in Eastern Europe.
  4. Continue to improve NATO’s core airpower capabilities through investment and modernization of each nation’s indigenous air forces.

With this type of measured posture, NATO and the U.S. will benefit from airpower’s unique ability to deter effectively from a distance, while minimizing unnecessary escalations with Russia. This will keep the door open for potential negotiations for a better and lasting peace in the region.

## APPENDIX A

Table A.1. NATO Airpower in Europe

Country	FTR	FGA	ATK	Other	Country Total
Belgium	55	0	0	12	67
Bulgaria	16	0	0	1	17
Canada	0	4	0	0	4
Croatia	0	11	0	0	11
Czech Republic	0	14	21	0	35
Denmark	44	0	0	0	44
France	35	211	0	16	262
Germany	123	0	54	28	205
Greece	0	218	0	0	218
Hungary	0	14	0	0	14
Italy	86	94	53	28	261
Netherlands	61	0	0	0	61
Norway	57	0	0	6	63
Poland	33	62	0	0	95
Portugal	30	0	0	12	42
Romania	9	25	0	2	36
Slovakia	12	0	0	0	12
Spain	80	98	0	7	185
Turkey	53	280	0	23	356
United Kingdom	0	135	46	13	194
United States	<u>28</u>	<u>68</u>	<u>12</u>	<u>8</u>	<u>116</u>
Total	722	1,234	186	156	2,298

Table A.2. Russian Bloc Airpower in Europe

Country	FTR	FGA	ATK	Other	Country Total
Armenia	0	0	15	0	15
Belarus	34	0	22	0	56
Russia	<u>237</u>	<u>309</u>	<u>229</u>	<u>86</u>	<u>861</u>
Total	271	309	266	86	932

**Endnotes**

(All notes appear in shortened form. For full details, see the appropriate entry in the bibliography.)

- <sup>1</sup> Kroenig, *The Renewed Russian Nuclear Threat and NATO Nuclear Deterrence Posture*.
- <sup>2</sup> Frederick et al., *Assessing Russian Reactions to U.S. and NATO Posture Enhancements*, 16-17.
- <sup>3</sup> Snow, "US plans \$200 million buildup of European air bases flanking Russia."
- <sup>4</sup> Putin, *The Russian Federation's National Security Strategy*, 27.
- <sup>5</sup> Wilcox, "Russia and the Treaty on Conventional Armed Forces in Europe (CFE Treaty)—A Paradigm Change?," 570-571.
- <sup>6</sup> *Ibid.*, 580.
- <sup>7</sup> *Ibid.*, 580-581.
- <sup>8</sup> North Atlantic Treaty Organization, "Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation."
- <sup>9</sup> Radin and Reach, *Russian Views of the International Order*, 59.
- <sup>10</sup> *Ibid.*, 75.
- <sup>11</sup> Batyuk, "America's Post-Cold War Policies in the Post-Soviet Expanse," 87-90.
- <sup>12</sup> *Ibid.*, 94.
- <sup>13</sup> North Atlantic Treaty Organization, "Air Policing: securing NATO airspace."
- <sup>14</sup> Kacprzyk, *Deterring Russia after Ukraine: CEE Divided on the Future of NATO Policy*, 1.
- <sup>15</sup> *Ibid.*, 2.
- <sup>16</sup> North Atlantic Treaty Organization, "Air Policing: securing NATO airspace."
- <sup>17</sup> Kacprzyk, *Deterring Russia after Ukraine*, 2.
- <sup>18</sup> *Ibid.*
- <sup>19</sup> Dempsey, *Why Defense Matters: A New Narrative for NATO*, 7.
- <sup>20</sup> North Atlantic Treaty Organization, "Readiness Action Plan."
- <sup>21</sup> Shlapak and Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics*, 9.
- <sup>22</sup> *Ibid.*, 11.
- <sup>23</sup> North Atlantic Treaty Organization, "NATO's Enhanced Forward Presence."
- <sup>24</sup> European Command, "European Reassurance Initiative (ERI) Fact Sheet."
- <sup>25</sup> Garamone, "Gorenc discusses European Reassurance Initiative, air police mission."
- <sup>26</sup> Komurek, "F-22 Raptors deploy to Europe."
- <sup>27</sup> McCabe, "The Russian Perception of the NATO Aerospace Threat: Could it Lead to Preemption?" 64-77.
- <sup>28</sup> *Ibid.*
- <sup>29</sup> Marmeï and White, *European Deterrence Initiative: Bolstering the Defense of the Baltic States*, 4.
- <sup>30</sup> Coffey and Kochis, *Time for the Baltic Air Policing Mission to Become the Baltic Air Defense Mission*, 3.
- <sup>31</sup> Giles, *The Turning Point for Russian Foreign Policy*, xiii.
- <sup>32</sup> Day, "Reinforcing NATO's Deterrence in the East," 11.
- <sup>33</sup> Charap and Shapiro, "US-Russian relations: The middle cannot hold," 151.
- <sup>34</sup> Chivvis et al., *Strengthening Strategic Stability with Russia*, 2.

- <sup>35</sup> Frederick et al., *Assessing Russian Reactions*.
- <sup>36</sup> Department of State, “Conventional Armed Forces in Europe Treaty (CFE Treaty).”
- <sup>37</sup> Wilcox, “Russia and the Treaty,” 569.
- <sup>38</sup> *Ibid.*, 571.
- <sup>39</sup> Department of State, “CFE Treaty.”
- <sup>40</sup> International Institute for Strategic Studies, *The Military Balance*, 514.
- <sup>41</sup> North Atlantic Treaty Organization, “Collective defence – Article 5.”
- <sup>42</sup> GlobalSecurity.org, “Collective Security Treaty Organization (CSTO).”
- <sup>43</sup> International Institute for Strategic Studies, *The Military Balance*, 501.
- <sup>44</sup> *Ibid.*, 188.
- <sup>45</sup> Eastern Order of Battle, “Russian Frontal Aviation Arms Order of Battle.”
- <sup>46</sup> International Institute for Strategic Studies, “The Military Balance 2018.”
- <sup>47</sup> Department of National Defence, “Canada’s Air Task Force in Romania concluding its contribution to NATO enhanced Air Policing.”
- <sup>48</sup> International Institute for Strategic Studies, *The Military Balance*, 65.
- <sup>49</sup> Cenciotti, “The Italian F-35A Stealth Jets Declared Operational In The Air-To-Air Role.”
- <sup>50</sup> International Institute for Strategic Studies, *The Military Balance*, 65.
- <sup>51</sup> Alex, “Sukhoi Su-57 (T-50 / PAK FA).”
- <sup>52</sup> Department of State, “CFE Treaty.”
- <sup>53</sup> Harahan and Kuhn, *A History of the On-Site Inspection Agency and CFE Treaty Implementation, 1990-1996*.
- <sup>54</sup> *Ibid.*
- <sup>55</sup> Joint Air Power Competence Centre, “The Role of Joint Air Power in NATO Deterrence,” 17.
- <sup>56</sup> Sputnik News, “Analyst Warns Russia Will Respond to F-22 Deployment in Europe.”
- <sup>57</sup> Frederick et al., *Assessing Russian Reactions*, xi.
- <sup>58</sup> International Institute for Strategic Studies, *The Military Balance*, 193-199.
- <sup>59</sup> *Ibid.*, 49.
- <sup>60</sup> Plopsky, “Russia’s Capitol Is Stacked with Super Powerful S-400 Missile Defense Systems (But It’s No Shield).”
- <sup>61</sup> The Baltic Times, “Portugal to take lead of NATO’s Baltic air-policing, Spain, France to augment mission.”
- <sup>62</sup> Day, “Reinforcing NATO’s Deterrence,” 5.
- <sup>63</sup> Secretary of Defense. *European Deterrence Initiative Department of Defense Budget Fiscal Year 2019*.
- <sup>64</sup> Miller, “Airmen remain in high demand in Europe.”
- <sup>65</sup> International Institute for Strategic Studies, *The Military Balance*, 501.
- <sup>66</sup> Frederick et al., *Assessing Russian Reactions*, 54-55.
- <sup>67</sup> Pawlyk, “Most Russian Plane Intercepts over Baltics Due to Error: NATO General.”
- <sup>68</sup> TASS Russian News Agency, “Defense Ministry urges US to keep recon planes away from Russia or agree on flight rules.”
- <sup>69</sup> TASS Russian News Agency, “Moscow concerned about growing number of NATO drills near Russian borders – diplomat.”
- <sup>70</sup> Sputnik News, “Russia Will Respond to F-22.”
- <sup>71</sup> McCabe, “The Russian Perception,” 71.

- <sup>72</sup> Batyuk, “America’s Post-Cold War Policies,” 89.
- <sup>73</sup> Department of Defense, *Evaluation of the European Reassurance Initiative (ERI)*, ii.
- <sup>74</sup> Chivvis et al., *Strengthening Strategic Stability*, 13-14.
- <sup>75</sup> Frederick et al., *Assessing Russian Reactions*, 57-58.
- <sup>76</sup> Department of Defense, *Evaluation of the ERI*, 16.
- <sup>77</sup> Frederick et al., *Assessing Russian Reactions*, 48.
- <sup>78</sup> Ibid.
- <sup>79</sup> Pawlyk, “Most Russian Plane Intercepts.”
- <sup>80</sup> North Atlantic Treaty Organization. “Portugal to lead, France and Spain to augment NATO Air Policing in Baltics.”
- <sup>81</sup> Komurek, “Raptors deploy to Europe.”
- <sup>82</sup> McLaughlin, “Amid NATO exercises, Russia puts Northern Fleet on ‘full alert’.”
- <sup>83</sup> Day, “Reinforcing NATO’s Deterrence,” 10.
- <sup>84</sup> Shlapak and Johnson, *Reinforcing Deterrence*, 9.
- <sup>85</sup> Marmeï and White, *European Deterrence Initiative*, 4.
- <sup>86</sup> Coffey and Kochis, *Baltic Air Defense Mission*, 3.
- <sup>87</sup> Kacprzyk, *Deterring Russia after Ukraine*, 2.
- <sup>88</sup> Coffey and Kochis, *Baltic Air Defense Mission*, 2.
- <sup>89</sup> Rempfer, “Why Poland wants a permanent US military base, and is willing to pay \$2 billion for it.”
- <sup>90</sup> Charap and Shapiro, “The middle cannot hold,” 154.
- <sup>91</sup> Macdonald, “Eyeing possible Polish U.S. base, Belarus says no Russian base, for now.”
- <sup>92</sup> Day, “Reinforcing NATO’s Deterrence,” 2.
- <sup>93</sup> Dempsey, *Why Defense Matters*, 5.
- <sup>94</sup> McCabe, “The Russian Perception,” 64.
- <sup>95</sup> Radin and Reach, *Russian Views of the International Order*, 28-29.
- <sup>96</sup> Giles, *The Turning Point*, xiii.
- <sup>97</sup> Ibid., 7-8.
- <sup>98</sup> Batyuk, “America’s Post-Cold War Policies,” 93.
- <sup>99</sup> Radin and Reach, *Russian Views of the International Order*, 86.
- <sup>100</sup> Charap and Shapiro, “The middle cannot hold,” 152-153.

## ***Bibliography***

- Alex, Dan. "Sukhoi Su-57 (T-50 / PAK FA)." Military Factory. Accessed May 29, 2018. [https://www.militaryfactory.com/aircraft/detail.asp?aircraft\\_id=782](https://www.militaryfactory.com/aircraft/detail.asp?aircraft_id=782).
- The Baltic Times. "Portugal to take lead of NATO's Baltic air-policing, Spain, France to augment mission." May 1, 2018. [https://www.baltictimes.com/portugal\\_to\\_take\\_lead\\_of\\_nato\\_s\\_baltic\\_air-policing\\_\\_spain\\_\\_france\\_to\\_augment\\_mission/](https://www.baltictimes.com/portugal_to_take_lead_of_nato_s_baltic_air-policing__spain__france_to_augment_mission/).
- Batyuk, Vladimir. "America's Post-Cold War Policies in the Post-Soviet Expanse." *International Affairs: A Russian Journal of World Politics, Diplomacy and International Relations* 57, no. 5 (December 2011): 84-95. Columbia International Affairs Online.
- Cenciotti, David. "The Italian F-35A Stealth Jets Declared Operational In The Air-To-Air Role." *The Aviationist*. March 8, 2018. <https://theaviationist.com/2018/03/08/the-italian-f-35a-stealth-jets-declared-operational-in-the-air-to-air-role/>.
- Charap, Samuel, and Jeremy Shapiro. "US-Russian relations: The middle cannot hold." *Bulletin of the Atomic Scientists* 72, no. 3 (April 2016): 150-155. <https://doi.org/10.1080/00963402.2016.1170366>.
- Chivvis, Christopher S., Andrew Radin, Dara Massicot, and Clint Reach. *Strengthening Strategic Stability with Russia*. PE-234-OSD. Santa Monica, CA: RAND, 2017. <https://www.rand.org/pubs/perspectives/PE234.html>.
- Coffey, Luke, and Dan Kochis. *Time for the Baltic Air Policing Mission to Become the Baltic Air Defense Mission*. No. 4769. Washington, DC: The Heritage Foundation, 2017. <https://www.heritage.org/defense/report/time-the-baltic-air-policing-mission-become-the-baltic-air-defense-mission>.
- Day, Joseph A. "Reinforcing NATO's Deterrence in the East." Draft General Report, NATO Parliamentary Assembly, 2018. <https://www.nato-pa.int/download-file?filename=sites/default/files/2018-04/2018-%20NATO'S%20DETERRENCE%20IN%20THE%20EAST%20-%20DRAFT%20REPORT%20DAY%20-%2020063%20DSC%2018%20E.pdf>.
- Dempsey, Judy. *Why Defense Matters: A New Narrative for NATO*. CP-216. Brussels, Belgium: Carnegie Europe, 2014. [https://carnegieendowment.org/files/why\\_defense\\_matters1.pdf](https://carnegieendowment.org/files/why_defense_matters1.pdf).
- Department of Defense. *Evaluation of the European Reassurance Initiative (ERI)*. DODIG-2017-111. Washington, D.C.: Office of Inspector General, August 22, 2017. <https://media.defense.gov/2017/Sep/01/2001802392/-1/-1/1/DODIG-2017-111.PDF>.
- Department of National Defence. "Canada's Air Task Force in Romania concluding its contribution to NATO enhanced Air Policing." December 28, 2017. [https://www.canada.ca/en/department-national-defence/news/2017/12/canada\\_s\\_air\\_taskforceinromaniaconcludingitscontributiontonatoen.html](https://www.canada.ca/en/department-national-defence/news/2017/12/canada_s_air_taskforceinromaniaconcludingitscontributiontonatoen.html).

- Department of State. "Conventional Armed Forces in Europe Treaty (CFE Treaty)." <https://www.state.gov/t/avc/trty/108185.htm>.
- Eastern Order of Battle. "Russian Frontal Aviation Arms Order of Battle." Accessed June 9, 2018. [http://www.easternorbat.com/html/russian\\_air\\_force\\_eng.html](http://www.easternorbat.com/html/russian_air_force_eng.html).
- European Command. "European Reassurance Initiative (ERI) Fact Sheet," 2017. [www.eucom.mil/doc/35544/eri-fact-sheet](http://www.eucom.mil/doc/35544/eri-fact-sheet).
- Frederick, Bryan, Matthew Povlock, Stephen Watts, Miranda Priebe, and Edward Geist. *Assessing Russian Reactions to U.S. and NATO Posture Enhancements*. RR-1879-AF. Santa Monica, CA: RAND, 2017. [https://www.rand.org/content/dam/rand/pubs/research\\_reports/RR1800/RR1879/RAND\\_RR1879.pdf](https://www.rand.org/content/dam/rand/pubs/research_reports/RR1800/RR1879/RAND_RR1879.pdf).
- Garamone, Jim. "Gorenc discusses European Reassurance Initiative, air police mission." U.S. Air Force. April 5, 2016. <http://www.af.mil/News/Article-Display/Article/713864/gorenc-discusses-european-reassurance-initiative-air-police-mission/>.
- Giles, Keir. *The Turning Point for Russian Foreign Policy*. Carlisle, PA: Strategic Studies Institute U.S. Army War College, 2017. <https://ssi.armywarcollege.edu/pubs/display.cfm?pubID=1354>.
- GlobalSecurity.org. "Collective Security Treaty Organization (CSTO)." Accessed June 9, 2018. <https://www.globalsecurity.org/military/world/int/csto.htm>.
- Harahan, Joseph P., and John C. Kuhn, III. *A History of the On-Site Inspection Agency and CFE Treaty Implementation, 1990-1996*. Washington, DC: On-Site Inspection Agency, 1996. <http://www.dtra.mil/Portals/61/Documents/History/On-Site%20Inspections%20CFE%20Treaty--final.pdf>.
- International Institute for Strategic Studies. *The Military Balance* 118, no. 1. London: Taylor & Francis Group, 2018. <https://doi.org/10.1080/04597222.2018.1416963>.
- International Institute for Strategic Studies. "The Military Balance 2018." Accessed May 12, 2018. <https://www.iiss.org/publications/the-military-balance/the-military-balance-2018>.
- Joint Air Power Competence Centre. "The Role of Joint Air Power in NATO Deterrence." In *Proceedings of the Joint Air & Space Power Conference (2017)*. [https://www.japcc.org/wp-content/uploads/JAPCC\\_Conf\\_2017\\_Proceedings\\_screen.pdf](https://www.japcc.org/wp-content/uploads/JAPCC_Conf_2017_Proceedings_screen.pdf).
- Kacprzyk, Artur. *Deterring Russia after Ukraine: CEE Divided on the Future of NATO Policy*. PISM Policy Paper no. 13 (96). Warsaw, Poland: The Polish Institute of International Affairs, 2014. <http://www.pism.pl/Publications/PISM-Policy-Paper-no-96>.



- Komurek, Maj Richard. "F-22 Raptors deploy to Europe." U.S. Air Forces in Europe. October 20, 2017. <http://www.usafe.af.mil/News/Article-Display/Article/1348765/f-22-raptors-deploy-to-europe/>.
- Kroenig, Matthew. *The Renewed Russian Nuclear Threat and NATO Nuclear Deterrence Posture*. Brent Scowcroft Center Transatlantic Security Initiative Issue Brief. Washington, DC: Atlantic Council, 2016. [http://www.atlanticcouncil.org/images/publications/Russian\\_Nuclear\\_Threat\\_0203\\_web.pdf](http://www.atlanticcouncil.org/images/publications/Russian_Nuclear_Threat_0203_web.pdf).
- Macdonald, Alastair. "Eyeing possible Polish U.S. base, Belarus says no Russian base, for now." Reuters. May 31, 2018. <https://www.reuters.com/article/us-belarus-eu/eyeing-possible-polish-us-base-belarus-says-no-russian-base-for-now-idUSKCN1IW339>.
- Marmei, Eerik, and Gabriel White. *European Deterrence Initiative: Bolstering the Defense of the Baltic States*. Tallinn, Estonia: International Centre for Defense and Security, 2017. [https://www.icds.ee/fileadmin/media/IMG/2017/Publications/ICDS\\_Policy\\_Paper\\_European\\_Deterrence\\_Initiative\\_Eerik\\_Marmei-Gabriel\\_White\\_December\\_2017.pdf](https://www.icds.ee/fileadmin/media/IMG/2017/Publications/ICDS_Policy_Paper_European_Deterrence_Initiative_Eerik_Marmei-Gabriel_White_December_2017.pdf).
- McCabe, Lt Col Thomas R. "The Russian Perception of the NATO Aerospace Threat: Could it Lead to Preemption?" *Air & Space Power Journal* 30, no. 3 (Fall 2016): 64-77. [http://www.airuniversity.af.mil/Portals/10/ASPJ/journals/Volume-30\\_Issue-3/V-McCabe.pdf](http://www.airuniversity.af.mil/Portals/10/ASPJ/journals/Volume-30_Issue-3/V-McCabe.pdf).
- McLaughlin, Elliott C. "Amid NATO exercises, Russia puts Northern Fleet on 'full alert'." CNN. March 17, 2015. <https://edition.cnn.com/2015/03/16/europe/russia-arctic-military-exercises/index.html>.
- Miller, Kent. "Airmen remain in high demand in Europe." *Air Force Times*. September 17, 2017. <https://www.airforcetimes.com/news/your-air-force/2017/09/18/airmen-remain-in-high-demand-in-europe/>.
- North Atlantic Treaty Organization. "Air Policing: securing NATO airspace." Accessed May 31, 2018. [https://www.nato.int/cps/en/natohq/topics\\_132685.htm](https://www.nato.int/cps/en/natohq/topics_132685.htm).
- North Atlantic Treaty Organization. "Collective defence – Article 5." Accessed June 6, 2018. [https://www.nato.int/cps/en/natohq/topics\\_110496.htm](https://www.nato.int/cps/en/natohq/topics_110496.htm).
- North Atlantic Treaty Organization. "Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation." May 27, 1997. [https://www.nato.int/cps/en/natolive/official\\_texts\\_25468.htm](https://www.nato.int/cps/en/natolive/official_texts_25468.htm).
- North Atlantic Treaty Organization. "NATO's Enhanced Forward Presence," 2017. [https://www.nato.int/nato\\_static\\_fl2014/assets/pdf/pdf\\_2017\\_05/1705-factsheet-efp.pdf](https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2017_05/1705-factsheet-efp.pdf).
- North Atlantic Treaty Organization. "Portugal to lead, France and Spain to augment NATO Air Policing in Baltics." April 16, 2018. <https://ac.nato.int/archive/2018/portugal-to-lead--france-and-spain-to-augment-nato-air-policing-in-baltics>.



- North Atlantic Treaty Organization. "Readiness Action Plan." Accessed June 1, 2018. [https://www.nato.int/cps/ua/natohq/topics\\_119353.htm](https://www.nato.int/cps/ua/natohq/topics_119353.htm).
- Pawlyk, Oriana. "Most Russian Plane Intercepts over Baltics Due to Error: NATO General." *Military.com*. March 7, 2018. <https://www.military.com/daily-news/2018/03/07/most-russian-plane-intercepts-over-baltics-due-error-nato-general.html>.
- Plopsky, Guy. "Russia's Capitol Is Stacked with Super Powerful S-400 Missile Defense Systems (But It's No Shield)." *The National Interest* (blog), February 24, 2017. <http://nationalinterest.org/blog/the-buzz/why-moscows-lethal-missile-umbrella-has-fatal-flaw-19569>.
- Putin, Vladimir. *The Russian Federation's National Security Strategy*. Presidential Edict 683. Moscow: The Kremlin, 31 December 2015. <http://www.ieee.es/Galerias/fichero/OtrasPublicaciones/Internacional/2016/Russian-National-Security-Strategy-31Dec2015.pdf>.
- Radin, Andrew, and Clinton Bruce Reach. *Russian Views of the International Order*. RR-1826-OSD. Santa Monica, CA: RAND, 2017. [https://www.rand.org/pubs/research\\_reports/RR1826.html](https://www.rand.org/pubs/research_reports/RR1826.html).
- Rempfer, Kyle. "Why Poland wants a permanent US military base, and is willing to pay \$2 billion for it." *Army Times*. May 29, 2018. <https://www.armytimes.com/news/2018/05/29/why-poland-wants-a-permanent-us-military-base-and-is-willing-to-pay-2-billion-for-it/>.
- Secretary of Defense. *European Deterrence Initiative Department of Defense Budget Fiscal Year 2019*. Washington, D.C.: Office of the Under Secretary of Defense (Comptroller), 6 February 2018.
- Shlapak, David A., and Michael W. Johnson. *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics*. RR-1253. Santa Monica, CA: RAND, 2016. [https://www.rand.org/pubs/research\\_reports/RR1253.html](https://www.rand.org/pubs/research_reports/RR1253.html).
- Snow, Shawn. "US plans \$200 million buildup of European air bases flanking Russia." *Air Force Times*. December 17, 2017. <https://www.airforcetimes.com/flashpoints/2017/12/17/us-plans-200-million-buildup-of-european-air-bases-flanking-russia/>.
- Sputnik News. "Analyst Warns Russia Will Respond to F-22 Deployment in Europe." June 16, 2015. <https://sputniknews.com/world/201506161023423960/>.
- TASS Russian News Agency. "Defense Ministry urges US to keep recon planes away from Russia or agree on flight rules." February 1, 2018. <http://tass.com/defense/988082>.
- TASS Russian News Agency. "Moscow concerned about growing number of NATO drills near Russian borders – diplomat." March 16, 2015. <http://tass.com/russia/782916>.

Wilcox, Mark R. "Russia and the Treaty on Conventional Armed Forces in Europe (CFE Treaty)—A Paradigm Change?" *The Journal of Slavic Military Studies* 24, no. 4 (16 November 2011): 567-581. <https://doi.org/10.1080/13518046.2011.624456>.

