# Russia

# Alexis Mrachek

n February 24, 2022, Russia invaded Ukraine. Employing a force of nearly 200,000 troops replete with armor, rocket and conventional artillery, and combat aircraft, President Vladimir Putin ordered a "special military operation" to seize Ukraine, destabilize if not overthrow its government, and neutralize its military. In addition to the tremendous losses borne by both sides, the war has depleted the military inventories of countries providing material support to Ukraine. The assault on Ukraine is glaring proof that Putin's Russia is a profound threat to the U.S., its interests, and the security and economic interests of its allies, particularly in Europe but also more broadly given the reach of Russia's military and the destructive ripple effect its use is having and can have across countries and regions of special importance to the United States.

From the Arctic to the Baltics, Ukraine, and the South Caucasus, and increasingly in the Mediterranean, Russia continues to foment instability in Europe. Despite its economic problems, Russia continues to prioritize the rebuilding of its military and funding for its military operations abroad. Russia remains antagonistic to the United States both militarily and politically, and its efforts to undermine U.S. institutions and the NATO alliance continue unabated. In Europe, Russia uses its energy position along with espionage, cyberattacks, and information warfare to exploit vulnerabilities in an effort to divide the transatlantic alliance and undermine faith in government and societal institutions.

Overall, Russia possesses significant conventional and nuclear capabilities and remains the principal threat to European security. Its aggressive stance in a number of theaters, including Ukraine, Georgia, the Balkans, and Syria, continues to encourage destabilization and threaten U.S. interests.

**Military Capabilities.** According to the International Institute for Strategic Studies (IISS):

- Among the key weapons in Russia's inventory are 339 intercontinental ballistic missiles (ICBMs); 2,927 main battle tanks; 5,180 armored infantry fighting vehicles; more than 6,050 armored personnel carriers; and more than 4,894 pieces of artillery.
- The navy has one aircraft carrier; 49 submarines (including 11 ballistic missile submarines); four cruisers; 11 destroyers; 16 frigates; and 129 patrol and coastal combatants.
- The air force has 1,172 combat-capable aircraft.
- The army has 280,000 soldiers.
- There is a total reserve force of 2,000,000 for all armed forces.<sup>1</sup>

Russia has suffered significant losses of tanks and other military hardware as a result of its assault on Ukraine, but in the coming years, it will come back with a vengeance in rebuilding its military. It will be replacing the destroyed tanks and equipment with newly developed versions, not the old Soviet versions. In addition, Russian deep-sea research vessels include converted ballistic missile submarines, which hold smaller auxiliary submarines that can operate on the ocean floor.<sup>2</sup>

In recent years, Russia has increasingly deployed paid private volunteer troops trained at Special Forces bases and often under the command of Russian Special Forces in order to avoid political blowback from military deaths abroad. It has used such volunteers in Libya, Syria, and Ukraine because they help the Kremlin to "keep costs low and maintain a degree of deniability," and "[a]ny personnel losses could be shrouded from unauthorized disclosure."<sup>3</sup>

In January 2019, reports surfaced that 400 Russian mercenaries from the Wagner Group were in Venezuela to prop up the regime of Nicolás Maduro.<sup>4</sup> Russian propaganda in Venezuela has supported the regime and stoked fears of American imperialism. In March 2022, Russian Foreign Minister Sergei Lavrov met with Venezuelan Vice President Delcy Rodriguez to discuss "their countries' strategic alliance," and after Russia invaded Ukraine, Maduro "assured Vladimir Putin of his 'strong support."

During the past few years, as the crisis has metastasized and protests against the Maduro regime have grown, Russia has begun to deploy troops and supplies to strengthen Maduro's security forces. In March 2019, for example, Russia deployed approximately 100 troops and military staff to Caracas. Russia also exports billions in arms to Venezuela (and has loaned the regime money to purchase Russian arms) along with \$70 million–\$80 million yearly in nonmilitary goods. 9

In July 2016, Putin signed a law creating a National Guard with a total strength (both civilian and military) of 340,000, controlled directly by him.10 He created this force, which is responsible for "enforcing emergency-situation regimes, combating terrorism, defending Russian territory, and protecting state facilities and assets," by amalgamating "interior troops and various law-enforcement agencies." In November 2020, the Russian National Guard (Rosgvardia) and the Belarusian Ministry of the Interior signed an official cooperation deal specifying that either side "may carry out law-enforcement-type operations on the other's territory."12 Rosgvardia also has been involved in the war in Ukraine. In March 2022, Rosgvardia Director Viktor Zolotov stated that "National Guard units are not only involved in the fight against [the so-called Ukrainian] nationalists, [but] also fight to ensure public order and security in liberated localities, guard important strategic facilities, [and] protect humanitarian aid convoys." Specifically, Rosgvardia was sent to seize control of various Ukrainian cities.<sup>13</sup>

The Russian economy rebounded during the latter part of the COVID-19 pandemic,<sup>14</sup> but after Moscow launched its second invasion of Ukraine in

February 2022, Western sanctions had a significant effect on the economy.<sup>15</sup>

In 2021, Russia spent \$65.9 billion on its military-6.37 percent more than it spent in 2020-and remained one of the world's top five nations in terms of defense spending.16 Much of Russia's military expenditure has been directed toward modernization of its armed forces. The U.S. Intelligence Community "expect[s] Moscow to sustain military modernization and enhance its armed forces, enabling it to defend Russia's national security while projecting influence globally and challenging the interests of the United States and its allies."17 From 2010 to 2019 (the most recent year for which data are publicly available), close to 40 percent of Russia's total military spending was on arms procurement.<sup>18</sup> Taking into account total military expenditure, Russia spent 3.77 percent of its GDP on defense in 2021, a slight decrease from 2020.19 This will surely increase as combat losses and consumption of war materiel in Ukraine continue to mount.

In early 2018, Russia introduced its new State Armament Program 2018–2027, a \$306 billion investment in new equipment and force modernization. According to the IISS, the program continues its predecessor's emphasis on modernization, but some of its aims are more modest than they were. The extent to which modernization efforts are affected by the Russo–Ukraine war cannot yet be known, but it seems reasonable to assume that Russia will not be content with a reduced and damaged military regardless of the outcome of the war. Consequently, general defense expenditures and investments in modernization programs are likely to increase, especially as they are enabled by historically high energy revenues.

Russia has prioritized modernization of its nuclear capabilities and claims that its nuclear trifecta is more than 89 percent of the way through its modernization from the Soviet era. Russia has been planning to deploy the RS-28 (Satan 2) ICBM as a replacement for the RS-36, which is being phased out in the 2020s. In June 2022, Putin announced in a speech that the missile had been "successfully tested" and, "with nuclear capability, will be deployed by the end of 2022." In a television interview, Alexei Zhuravlyov, a member of the Russian State Duma, boasted "that the [RS-28] would reduce the United States to 'nuclear ashes' if they 'think Russia should not exist." <sup>23</sup>

In April 2020, the Kremlin stated that it had begun state trials for its T-14 Armata main battle tank in Syria. After a series of delays, Russian troops allegedly will receive more than 40 Armata tanks in 2023. Aside from the T-14 Armata, 10 new-build T-90M main battle tanks, contracted in 2017, were delivered to the 2nd Motor-Rifle Division in the Moscow region in 2020. At the Army-2021 Forum, according to TASS, the Russian Defense Ministry signed a contract with the Uralvagonzavod plant (part of the Rostec state corporation) stipulating the delivery of another batch of T-90M Proryv tanks and modernization of T-90 tanks to T-90M level.

Russia's fifth-generation Su-27 fighter has fallen short of expectations, particularly with regard to stealth capabilities. In May 2018, the government cancelled mass production of the Su-27 because of its high costs and limited capability advantages over upgraded fourth-generation fighters. Russia lost one of its Su-27 jets near the Crimean coast during a planned mission in March 2020. In July 2021, Russia premiered the prototype for its Su-75 LTS Checkmate, which will be "the world's second single-engine fighter plane to incorporate the most sophisticated radar-evasion and command systems." The only other plane in this category is the F-35.

In December 2019, Russia's sole aircraft carrier, the *Admiral Kuznetsov*, caught on fire during repair work.<sup>31</sup> The carrier was scheduled to begin sea trials in 2022,<sup>32</sup> but the addition of a propeller-rudder system, hull repairs, and an assortment of delays in other maintenance work have caused the trials to be delayed until 2024.<sup>33</sup> In May 2019, reports surfaced that Russia is seeking to begin construction of a new nuclear-powered aircraft carrier in 2023 for delivery in the late 2030s, but the procurement's financial and technological feasibility remains questionable.<sup>34</sup>

Following years of delays, the *Admiral Gorshkov* stealth guided missile frigate was commissioned in July 2018. According to one report, the Russian Navy is expected to add 10 new *Gorshkov*-class frigates and 14 *Steregushchiy*-class corvettes by 2027. Russia is also significantly upgrading its nuclear-powered battle cruiser *Admiral Nakhimov*, which is expected to become the "most powerful surface vessel in the Russian Navy" and be ready for sailing in 2023.<sup>35</sup>

Russia plans to procure eight *Lider*-class guided missile destroyers for its Northern and Pacific Fleets, but procurement has faced consistent delay.<sup>36</sup> In

April 2020, it was reported that Russia's Severnoye Design Bureau had halted development of the frigates because of financial setbacks.<sup>37</sup>

In November 2018, Russia sold four *Admiral Grigorovich*–class frigates to India, which should take delivery of all four by 2026.<sup>38</sup> The ships had been intended for the Black Sea Fleet, but Russia found itself unable to produce a replacement engine following the imposition of Ukraine-related sanctions. Of the planned 14 frigates, Russia had engines for only two, but in January 2021, India procured gas turbine engines from Ukraine "and handed [them] over to Russia to install them on the Admiral Grigorovich-class guided-missile stealth frigates that are being made for the Indian Navy by a Russian shipyard as part of \$2.5 billion deal."<sup>39</sup>

Russia's naval modernization continues to prioritize submarines. In June 2020, the first Project 955A Borei-A ballistic-missile submarine, the *Knyaz Vladimir*, was delivered to the Russian Northern Fleet as an addition to the three original Project 955 Boreis. <sup>40</sup> In December 2021, Russia launched *Knyaz Oleg* and *Novosibirsk*, part of the Borei-A and Yasen-M submarine classes, respectively, <sup>41</sup> in addition to *Generalissimo Suvorov*, the third of the upgraded Borei-A class submarines. <sup>42</sup> The *Novosibirsk* is equipped with Kalibr cruise missiles. <sup>43</sup> Russia reportedly will construct a total of 10 Borei-A class submarines; so far, five have been delivered. <sup>44</sup>

The *Laika*-class submarines (previously called *Khaski*) are planned fifth-generation stealth nuclear-powered submarines. They are slated to begin construction in 2023 and to be armed with Zircon hypersonic missiles, which have a reported speed of from Mach 5 to Mach 6.<sup>45</sup> According to a Russian vice admiral, these submarines will be two times quieter than current subs.<sup>46</sup> Construction of the first *Laika* is scheduled for the end of 2030.<sup>47</sup>

Russia also continues to upgrade its diesel electric *Kilo*-class subs. <sup>48</sup> It reportedly inducted the first improved Project 636.6 *Kilo*-class submarine into its Pacific Fleet in November 2019. <sup>49</sup> Russia launched the third of six Project 06363 improved *Kilo*-class subs in March 2021, and all six are to be built by 2024. <sup>50</sup> According to one assessment, the submarines' improved noise reduction has caused them to be nicknamed "Black Holes," but "the submarine class lacks a functioning air-independent propulsion system, which reduced the boats' overall stealth capabilities." <sup>51</sup>

Transport remains a nagging problem, and Russia's defense minister has stressed the paucity of transport vessels. According to a RAND report:

In 1992, just after the collapse of the Soviet Union, the Russian Federation military had more than 500 transport aircraft of all types, which were capable of lifting 29,630 metric tons. By 2017, there were just over 100 available transport aircraft in the inventory, capable of lifting 6,240 metric tons, or approximately one-fifth of the 1992 capacity.<sup>52</sup>

That number is even lower now. At least two Russian transport aircraft were shot down right after Russia's second invasion of Ukraine, which began on February 24, 2022.<sup>53</sup>

Although budget shortfalls have hampered modernization efforts overall, Russia continues to focus on development of such high-end systems as the S-500 surface-to-air missile system. As of March 2021, the Russian Ministry of Defense was considering the most fitting ways to introduce its new S-500 Prometheus surface-to-air missile system, which can detect targets at up to 1,200 miles and uses a missile with a range of approximately 250 miles, "as part of its wider air-defense modernization." According to one report, the S-500 system will enter full service by 2025. 54

Russia's counterspace and countersatellite capabilities are formidable. According to the U.S. Intelligence Community:

Russia continues to train its military space elements and field new antisatellite weapons to disrupt and degrade U.S. and allied space capabilities, and it is developing, testing, and fielding an array of nondestructive and destructive counterspace weapons—including jamming and cyberspace capabilities, directed energy weapons, on-orbit capabilities, and ground-based ASAT capabilities—to target U.S. and allied satellites.<sup>55</sup>

In November 2021, Russia conducted an anti-satellite missile test that reportedly "endangered the crew aboard the International Space Station (ISS)" because it created more than 1,500 pieces of trackable orbital debris and "hundreds of thousands of pieces of smaller orbital debris." <sup>56</sup> In September

2021, it was revealed that three Voronezh radars will be modernized as part of Russia's missile attack early warning system by 2028.<sup>57</sup>

**Military Exercises.** Russian military exercises, especially snap exercises, are a source of serious concern because they have masked real military operations in the past. Their purpose is twofold: to project strength and to improve command and control. In March 2022, Air Force General Tod D. Wolters, then Commander, U.S. European Command (EUCOM), testified that:

Russia maintains a large conventional force presence along NATO's borders and conducts snap exercises to increase instability. Russia employs unconventional tools, ranging from disinformation campaigns, malicious cyber activities, and the manipulation of energy markets to support Moscow's efforts at political subversion and economic intimidation. These tools and others are intended to coerce, weaken, and divide our Allies and Partners in the European theater and beyond.<sup>58</sup>

Concerns were heightened and eventually validated when Russia used such exercises in the spring and fall of 2021 to position forces close to Ukraine's borders with Russia and Belarus—forces that it ultimately used to invade Ukraine.

Exercises in the Baltic Sea in January 2022 amid heightened tensions between Moscow and the West over Russia's military buildup on the Ukrainian border were meant as a message. Twenty Russian navy vessels performed "exercises focused on naval and anti-aircraft defence." Right before the exercises occurred, the U.S. announced that it might send extra troops to NATO's eastern flank. It is possible that Moscow used this announcement as its reason for initiating the exercises.

Russia's snap exercises are conducted with little or no warning and often involve thousands of troops and pieces of equipment.<sup>61</sup> In April 2021, for example, between 150,000 and 300,000 Russian troops massed at the Ukrainian border and in Crimea to conduct snap exercises that also involved approximately 35,000 combat vehicles, 900 aircraft, and 190 navy ships.<sup>62</sup> In February 2022, just before Moscow's second invasion of Ukraine, Russia and Belarus held joint snap exercises reportedly with 30,000 combat troops and special operation forces, fighter

jets, Iskander dual-capable missiles, and S-400 air defense systems.<sup>63</sup>

## Threats to the Homeland

Russia is the only state adversary in the Europe region that possesses the capability to threaten the U.S. homeland with both conventional and nonconventional means. Although there does not currently appear to be a strong likelihood that Russia will use its nuclear capabilities against the United States directly, Putin "casts the war [in Ukraine] as an inevitable confrontation with the United States, which he accuses of threatening Russia by meddling in its backyard and enlarging the NATO military alliance," and CIA Director William Burns has said that "none of us can take lightly the threat posed by a potential resort to tactical nuclear weapons or low-yield nuclear weapons" in Ukraine.<sup>64</sup>

Russia's most recent National Security Strategy does not mention NATO directly, but it does assert that the U.S. is planning to deploy medium-range and short-range missiles in Europe—a possibility that NATO firmly denies. The same document also clearly states that Russia will use every means at its disposal to achieve its strategic goals. Among its "basic concepts" is "ensuring national security—the implementation by public authorities in cooperation with civil society institutions and organizations of political, legal, military, socio-economic, informational, organizational and other measures aimed at countering threats to national security."<sup>65</sup>

The most recent Russian military doctrine, which Putin signed in December 2014, specifically emphasizes the threat allegedly posed by NATO and global strike systems.<sup>66</sup>

**Strategic Nuclear Threat.** Russia possesses the largest arsenal of nuclear weapons (including short-range nuclear weapons) among the nuclear powers.<sup>67</sup> It is one of the few nations with the capability to destroy many targets in the U.S. homeland and in U.S.-allied nations as well as the capability to threaten and prevent free access to the commons by other nations.

Russia has both intercontinental-range and short-range ballistic missiles and a varied arsenal of nuclear weapons that can be delivered by sea, land, and air. It also is investing significant resources in modernizing its arsenal and maintaining the skills of its workforce, and "modernization of Russia's strategic nuclear triad is expected to remain a priority"

under the new state armament program.<sup>68</sup> Modern weapons and equipment allegedly now constitute 89 percent of Russia's nuclear triad.<sup>69</sup>

Russia currently relies on its nuclear arsenal to ensure its invincibility against any enemy, intimidate European powers, and deter counters to its predatory behavior in its "near abroad," primarily in Ukraine, where it uses the threat of nuclear attack to deter other countries from supporting Ukraine's defense, but also in the Baltic States. To This arsenal serves both as a deterrent to large-scale attack and as a protective umbrella under which Russia can modernize its conventional forces at a deliberate pace, but Russia also needs a modern and flexible military to fight local wars such as those against Georgia in 2008 and the renewed offensive against Ukraine that began in 2022.

Under Russian military doctrine, the use of nuclear weapons in conventional local and regional wars would be de-escalatory because it would cause an enemy to concede defeat. In April 2022, for example, "Russia's Foreign Minister said...that if the U.S. and Ukraine's other Western allies continue to arm the country as it battles Moscow's invading forces, the risk of the war escalating into a nuclear conflict 'should not be underestimated."<sup>71</sup>

General Wolters discussed the risks presented by Russia's possible use of tactical nuclear weapons in his 2022 EUCOM posture statement:

Russia's nuclear arsenal and strike capability remains an enduring, existential threat to the United States, democracy, and our peaceful Allies and Partners. A central concern is Russia's non-strategic nuclear weapons stockpile and the Kremlin's potential to use these weapons in crisis or conflict.

Russia pursues malign activities, including military aggression, aimed at undermining democracy, the rules-based international order, and has a willingness to use force to achieve its aims. Russia pursues these activities despite widespread international condemnation and economic sanctions. President Putin leverages coercive and aggressive policies to counter Western influence and threaten peace and stability in Europe.<sup>72</sup>

Item 19 in Putin's June 2020 executive order, "Basic Principles of State Policy of the

Russian Federation on Nuclear Deterrence," outlines four "conditions specifying the possibility of nuclear weapons use by the Russian Federation." They include:

- The "arrival of reliable data on a launch of ballistic missiles attacking the territory of the Russian Federation and/or its allies";
- The "use of nuclear weapons or other types of weapons of mass destruction by an adversary against the Russian Federation and/or its allies";
- An "attack by [an] adversary against critical governmental or military sites of the Russian Federation, disruption of which would undermine nuclear forces response actions"; and
- "[A]ggression against the Russian Federation with the use of conventional weapons when the very existence of the state is in jeopardy."<sup>73</sup>

Russia's reliance on nuclear weapons is based partly on their small cost relative to the cost of conventional weapons, especially in terms of their effect, and on Russia's inability to attract sufficient numbers of high-quality servicemembers. In other words, Russia sees its nuclear weapons as a way to offset the lower quantity and quality of its conventional forces.

Just as it is doing to deter Western support for Ukraine, Moscow has repeatedly threatened U.S. allies in Europe with nuclear deployments and even preemptive nuclear strikes. The Russians justify their aggressive behavior by pointing to deployments of U.S. missile defense systems in Europe. In the past, these systems were not scaled or postured to mitigate Russia's advantage in ballistic missiles and nuclear weapons to any significant degree, but Pentagon officials have said that laser-armed Strykers are set to arrive by September 2022 and that new Eastern European batteries and sea-based interceptors are set to arrive by 2023.

Russia continues to violate the Intermediate-Range Nuclear Forces (INF) Treaty, which bans the testing, production, and possession of intermediate-range missiles. <sup>76</sup> Russia first violated the treaty in 2008 and then systematically escalated its violations, moving from testing to producing to deploying the prohibited missile into the field. Russia

fully deployed the SSC-8 cruise missile in violation of the INF Treaty early in 2017 and has deployed battalions with the missile at the Kapustin Yar missile test site in southern Russia; at Kamyshlov near the border with Kazakhstan; in Shuya east of Moscow; and in Mozdok in occupied North Ossetia.<sup>77</sup> U.S. officials consider the banned SSC-8 cruise missiles to be fully operational.<sup>78</sup>

In December 2018, in response to Russian violations, the U.S. declared Russia to be in material breach of the INF Treaty, a position with which NATO allies were in agreement.<sup>79</sup> The U.S. provided its six-month notice of withdrawal from the INF treaty on February 2, 2019, and officially withdrew from the treaty on August 2.<sup>80</sup>

Russia's sizable nuclear arsenal remains the only threat to the existence of the U.S. homeland emanating from Europe and Eurasia. While the potential for use of this arsenal remains low, the fact that Moscow continues to threaten Europe with nuclear attack demonstrates that this substantial nuclear capability will continue to play a central strategic role in shaping both Russian military and political thinking and the level of Russia's aggressive behavior with respect to other countries.

## Threat of Regional War

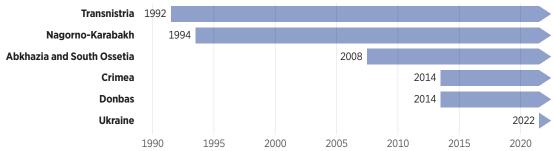
Many U.S. allies regard Russia as a genuine threat. At times, this threat is of a military nature, as seen in Russia's war against Ukraine. At other times, it involves less conventional tactics such as cyberattacks, exploitation of Russia's status as a source of energy, and propaganda. Today, as in the days of Imperial Russia, Moscow uses both the pen and the sword to exert its influence. Organizations like the Collective Security Treaty Organization (CSTO) and the Eurasian Economic Union (EEU), for example, embody Russia's attempt to bind regional capitals to Moscow through a series of agreements and treaties.

Russia also uses espionage in ways that are damaging to U.S. interests. For example:

- In October 2019, the U.S. released and deported to Russia Maria Butina, a convicted Russian operative who had infiltrated American conservative political groups to interfere with the 2016 presidential election.<sup>81</sup>
- In February 2022, the U.S. expelled 12 officials from Russia's mission to the United Nations.

# **Russian Interference Zones**





**Transnistria.** Russia has stationed troops in Transnistria since 1992 when a cease-fire ended the Moldovan civil war.

Nagorno-Karabakh. In September 2020, major fighting broke out in the Nagorno-Karabakh region, which Armenia had been occupying since 1994. The fighting ended in November 2020 when Armenia and Azerbaijan signed a Russian-brokered cease-fire. Russian peacekeeping troops remain in Nagorno-Karabakh for now.

Abkhazia and South Ossetia. Russian troops have been stationed in both Abkhazia and South Ossetia since Russia's 2008 invasion of Georgia and the subsequent five-day war. Ukraine. In February 2022, Russia launched a full-scale invasion of Ukraine. Early on, Russian forces attempted to capture Ukraine's capital of Kyiv but failed. Russia maintains control of Crimea and parts of Donbas while fighting continues across Eastern Ukraine with a large contingent of Russia's army engaged in the conflict.

 $\textbf{SOURCE:} \ \text{Heritage Foundation research}.$ 

▲ heritage.org

According to the U.S. Mission to the U.N., the officials had "abused their privileges of residency in the U.S. by engaging in espionage activities that are adverse to our national security." 82

In 2019, the European External Action Service, diplomatic service of the European Union (EU), estimated that 200 Russian spies were operating in Brussels, which is the headquarters of NATO.<sup>83</sup> In March 2022, Brussels expelled 21 Russian diplomats for "alleged threats and posing threats to security."<sup>84</sup> According to one report, Russian spies are becoming harder to track because they infiltrate companies, schools, and even the government.<sup>85</sup> In addition, the expulsion of Russian spies is not a permanent solution for Western nations because "Russia tends to send back new spies to replace the ones who have left."<sup>86</sup>

On March 4, 2018, Sergei Skripal, a former Russian GRU colonel who was convicted in 2006 of selling secrets to the United Kingdom and freed in a spy swap between the U.S. and Russia in 2010, and his daughter Yulia were poisoned with Novichok nerve agent by Russian security services in Salisbury, U.K. Hundreds of residents could have been contaminated, including a police officer who was exposed to the nerve agent after responding. Fit took a year and the work of about 190 U.K. Army and Royal Air Force personnel, supported by "specialist contractors," to complete the physical cleanup of Salisbury. L.S. intelligence officials have reportedly linked Russia to the deaths of 14 people in the U.K. alone, many of them Russians who ran afoul of the Kremlin.

Russian intelligence operatives are reportedly mapping U.S. telecommunications infrastructure around the United States, focusing especially on fiber-optic cables.<sup>90</sup>

- In March 2022, U.S. intelligence analysts concluded that Russian military spy hackers were responsible for a multifaceted cyberattack on satellite broadband service, administered by U.S.-based Viasat, in Ukraine and Europe at the onset of Russia's renewed offensive in Ukraine.
- In March 2017, the U.S. charged four people, including two Russian intelligence officials, with directing hacks of user data involving Yahoo and Google accounts.<sup>92</sup>

 Undersea cables in the United States are also at risk of being tapped for valuable intelligence. Fourteen Russian sailors who died aboard a submarine that caught fire in July 2019 were suspected of attempting to tap information flowing from American undersea cables.<sup>93</sup>

Russia has also used its relations with friendly nations-especially Nicaragua-for espionage purposes. In April 2017, Nicaragua began using a Russian-provided satellite station at Managua that, even though the Nicaraguan government denies it is intended for spying, is of concern to the U.S.94 In November 2017, the Russian-built "counter-drug" center at Las Colinas opened, its future purpose being to support "Russian security engagement with the entire region."95 According to a Foreign Policy Research Institute report, "Aside from the center, Russian forces have participated in joint raids and operations against drug trafficking [in Nicaragua], capturing as many as 41 presumed traffickers in one particular operation" since 2017. Moscow also has an agreement with Nicaragua, signed in 2015, that "facilitate[s] Russian access to the ports of Corinto and Bluefields."97

Moscow poses a security challenge to members of NATO that border Russia. Until recently, a conventional Russian attack against a NATO member was thought unlikely, but Russia's assault on Ukraine and its threatening of NATO members that are supporting Ukraine raise the specter of a larger conflict involving NATO. Russia continues to use cyberattacks, espionage, its significant share of the European energy market, and propaganda to sow discord among NATO member states and undermine the alliance. The Estonian Foreign Intelligence Service's International Security and Estonia 2019 report states clearly that "[t]he only serious threat to regional security, including the existence and sovereignty of Estonia and other Baltic Sea states, emanates from Russia, It involves not only asymmetrical, covert or political

Pressure on Central and Eastern Europe.

After decades of Russian domination, the countries of Central and Eastern Europe factor Russia into their military planning and foreign policy formulation in a way that is simply unimaginable in many Western European countries and North America. Estonia and Latvia have sizable ethnic Russian populations, and there is concern that Russia might

subversion, but also a potential military threat."98

exploit this as a pretext for aggression—a view that is not without merit in view of Moscow's irredentist rhetoric and Russia's use of this technique to invade Ukraine in 2014 and 2022.

According to Lithuania's *National Threat Assessment 2022*:

Russia is and will remain the greatest and potentially existential threat to Lithuania and other countries of the region. By threatening to invade Ukraine and spark a conflict in Europe, Russia seeks to force the West to acknowledge its right to determine political choices of other independent states to decide on the ways how to ensure national and regional security. Moscow is also taking advantage of instability generated by [Belarusian dictator Alexander] Lukashenka and together with Beijing further challenging the West....

Moscow attempts to persuade the country's population that the West is to blame for the economic and social problems and society's discontent with the regime; however, it is clearly an outcome of ineffective political system and poor management of national resources and priorities. Therefore, the regime employs increasingly aggressive tactics in fighting against the perceived internal and external opponents, escalates military threats to neighbouring states and the West thus seeking to allegedly prevent threats to Russia.<sup>99</sup>

In language that still applies today, Lithuania's *National Threat Assessment 2019* states that Russia "exploits democratic freedoms and rights for its subversive activity" and "actually promotes its aggressive foreign policy" while "pretending to develop cultural relations" in Lithuania.<sup>100</sup>

Latvian authorities describe the means used by Russia to claim that it is defending the rights of citizens or Russian "compatriots" in similar terms. "[O]ne of the priorities of Russian propaganda," for example, "has been promoting the 'correct' interpretation of historical events [including the Second World War] in line with the interests of the Kremlin." Other means include "spread[ing] lies at [the] international level about the Latvian government's policies, which are allegedly aimed at restricting Russian-speakers' rights," as well as "a series of

measures to attract new leaders for the 'compatriot' policy" and "expanded...efforts to consolidate young people who could potentially become the next promoters of the Kremlin's worldview in Latvia." The principal "directions of Russia's 'compatriot' policy [are] consolidation of the Russian diaspora abroad, protection of the rights of 'compatriots', support for 'compatriot' youth organisations, [and] the protection of the Russian language and 'ethnocultural identity."<sup>101</sup>

In March 2017, General Curtis Scaparrotti, then Commander, U.S. European Command, and NATO Supreme Allied Commander Europe, testified that Russian propaganda and disinformation should be viewed as an extension of Russia's military capabilities: "The Russians see this as part of that spectrum of warfare, it's their asymmetric approach." <sup>102</sup> In 2020, for example, "Russian -sponsored actors released a forged letter online where Polish Brigadier General Ryszard Parafianowicz appeared to criticize openly the American presence in his country during the US-led exercise Defender-Europe 20."103 Today, "[t]he threat of influence no longer exists only during deployment but also in garrison because of 'the collapsed nature of communication...and...porous boundaries between war and everyday life,' which means geography is no longer enough to act as a defense."104

Russia also has sought to use disinformation to undermine NATO's Enhanced Forward Presence (eFP) in the Baltics. A disinformation campaign nicknamed "ghostwriter," for example, has been ongoing since 2017. Russian hackers often have leveraged "website compromises or spoofed email accounts to disseminate fabricated content." In one case in 2019, a fake message published on the Polish War Studies Academy website, purportedly from the organization's commander, called for troops "to fight against 'the American occupation." In 2020, hackers falsified an interview transcript, claiming that Lieutenant General Christopher Cavoli, then Commander of U.S. Army Europe, was criticizing the Baltic states' militaries.

U.S. troops stationed in Poland for NATO's eFP have been the target of similar Russian disinformation campaigns. <sup>108</sup> A fabricated interview with General Cavoli that was published online was meant to undermine NATO's reputation among the public. <sup>109</sup> One report summarized that "Russia's state propaganda channels RT and Sputnik remain very keen to

exploit to the maximum any incidents involving eFP personnel, and to repeat the Kremlin's anti-NATO and anti-eFP narrative." In particular, more recent Russian propaganda has focused on portraying eFP as an "occupying force." III

In February 2022, the Baltics and Poland together urged the largest social media companies to restrict Russian disinformation about the war in Ukraine from "spreading across [their] platforms." The Baltic states also banned a number of Russian and Belarusian channels that allegedly were disseminating propaganda to justify Moscow's war.<sup>112</sup>

Russia has also demonstrated a willingness to use military force to change the borders of modern Europe. When Kremlin-backed Ukrainian President Viktor Yanukovych failed to sign an Association Agreement with the EU in 2013, months of street demonstrations led to his ouster early in 2014. Russia responded by sending troops, aided by pro-Russian local militia, to occupy the Crimean Peninsula under the pretext of "protecting Russian people." This led to Russia's eventual annexation of Crimea, the first such forcible annexation of territory in Europe since the Second World War.<sup>113</sup> Then, in February 2022, Russia invaded Ukraine a second time, presumably with the goal of bringing the entire nation under Putin's control. At the time this book was being prepared, Russia occupied one-fifth of Ukraine, an area that includes most of Ukraine's industrial sector, its port cities on the Black Sea, and the major transport corridors for grain exports. It is likely that Russia will not relinquish by negotiation what it has taken by force, preferring instead to formalize ownership of the area it controls by simply annexing it.

Russia's annexation of Crimea effectively cut Ukraine's coastline in half, and Russia has claimed rights to underwater resources off the Crimean Peninsula. Ha May 2018, Russia inaugurated the first portion of a \$7.5 billion, 11.8-mile bridge connecting Russia with Kerch in occupied Crimea. The effect on Ukraine's regional economic interests can be seen in the fact that 30 percent of the cargo ships that served Mariupol could not clear the span. He December 2019, Russia completed a new rail bridge over the Kerch Strait that the EU condemned as "yet another step towards a forced integration of the illegally annexed peninsula."

Russia has deployed 30,000 troops to Crimea and has embarked on a major program to build housing,

restore airfields, and install new radars there. The Monolit-B radar system, for instance, has a passive range of 450 kilometers, and its deployment "provides the Russian military with an excellent real-time picture of the positions of foreign surface vessels operating in the Black Sea." In addition, "Russian equipment there includes 40 main battle tanks, 680 armored personnel carriers and 174 artillery systems of various kinds" along with 113 combat aircraft. These numbers may well be different now given Russia's renewed war in Ukraine and the losses of Russian personnel and equipment from Ukrainian defensive actions. 121

Control of Crimea has allowed Russia to use the Black Sea as a platform to launch and support naval operations along the Ukrainian coastline as part of the renewed offensive against Ukraine. 122 Russia also has been using the naval base at Sevastopol for operations in the Eastern Mediterranean, but Turkey's closure of the Bosporus Strait to military traffic in response to Russia's war against Ukraine has ended this option, at least temporarily.123 Before Turkey closed the Strait, the Black Sea fleet had received six Kilo diesel submarines and three Admiral Grigorovich-class frigates equipped with Kalibr-NK long-range cruise missiles. 124 Russia was also planning to add 10 Gorshkov-class frigates and 14 Steregushchiv-class corvettes to its Black Sea fleet.125 Kalibrs have a range of at least 2,500 kilometers, placing cities from Rome to Vilnius within range of Black Sea-based cruise missiles. 126 In April 2022, in a significant operational and symbolic loss for Russia, Ukrainian forces sank Russia's *Moskva* guided missile cruiser, which had been the flagship of its Black Sea Fleet.127

Russia has deployed five S-400 air defense systems with a potential range of approximately 250 miles to Crimea. Russia's new S-350 air defense systems also could be deployed to Crimea, but that is somewhat unlikely. In addition, "local capabilities [in Crimea] have been strengthened by the Pantsir-S1 (SA-22 Greyhound) short-to-mediumrange surface-to-air missile (SAM) and anti-air-craft artillery weapons system, which particularly complements the S-400." Russia also deploys the Bastion P coastal defenses armed with the P-800 Oniks anti-ship cruise missile, which "has a range of up to 300 kilometers and travels at nearly Mach 2.5, making it extraordinarily difficult to defeat with kinetic means."

In Moldova, Russia supports the breakaway enclave of Transnistria, where yet another frozen conflict festers to Moscow's liking. According to the Congressional Research Service:

Russia stations about 1,500 soldiers in Transnistria, a few hundred of which Moldova accepts as peacekeepers. In 2017, Moldova's Constitutional Court ruled that Russia's non-peacekeeping troop presence was unconstitutional. In 2018, the U.N. General Assembly passed a resolution calling on Russia to withdraw its troops from Moldova "unconditionally and without further delay."

A conflict resolution process operates in a "5+2" format under the chairpersonship of the Organization for Security and Cooperation in Europe (OSCE), with the OSCE, Russia, and Ukraine as mediators and the EU and the United States as observers. The EU also supports conflict management through the EU Border Assistance Mission to Moldova and Ukraine, which seeks to help the two countries combat transborder crime, facilitate trade, and resolve the conflict over Transnistria.<sup>132</sup>

Russia continues to occupy 12 percent of Moldova's territory. On January 22, 2019, in an effort to enhance its control of the breakaway region, Russia opened an office in Moscow for the Official Representation of the Pridnestrovian Moldavian Republic in the Russian Federation. In February 2022, a few weeks before Russia's second invasion of Ukraine, Russian armed forces staged military drills in Transnistria. The exercises followed a Ukrainian warning that "Russian special services could be preparing false flag provocations' against Russian troops stationed in [Transnistria] to justify a broader invasion of Ukraine." Concerns that Russian troops stationed in Transnistria could be mobilized for the war in Ukraine persist.

Russia's permanent stationing of Iskander missiles in Kaliningrad in 2018 occurred a year to the day after NATO's eFP deployed to Lithuania. <sup>136</sup> Russia reportedly has deployed tactical nuclear weapons, the S-400 air defense system, and P-800 anti-ship cruise missiles to Kaliningrad. <sup>137</sup> Additionally, Russia established a new tank regiment, comprised of approximately 93 tanks, after 2018. <sup>138</sup> According to

the IISS, the majority of Russian air force pilot graduates in 2019 were sent to Kaliningrad "to improve staffing" in the air force units located there.  $^{139}$ 

Russia also has outfitted a missile brigade in Luga, Russia, just 74 miles from the Estonian city of Narva, with Iskander missiles. 140 It also has deployed Iskanders to the Southern Military District at Mozdok near Georgia, and Russian military officials have reportedly asked manufacturers to increase the Iskander missiles' range and improve their accuracy. 141 In addition, Russia has been firing Iskanders with "mystery munitions," described as "decoys meant to trick air-defense radars and heat-seeking missiles," at targets in Ukraine. 142

Nor is Russia deploying missiles only in Europe. In September 2019, Russia announced its plans to deploy additional missile systems on Paramushir and Matua, two islands in the northern portion of the Kuril Island chain claimed by Japan. <sup>143</sup> In December 2020, Russia announced the deployment of S-300V4 air defense missile systems on Iturup. <sup>144</sup> In December 2021, Russia deployed Bastion coastal defense missile systems to Matua. <sup>145</sup> In March 2022, Russia conducted military drills on the Kuril Islands that involved more than 3,000 troops and hundreds of pieces of army equipment. <sup>146</sup>

Russia represents a real and potentially existential threat to NATO member countries in Eastern and Central Europe. In addition to its aggression in Georgia and Ukraine, Russia has threatened countries that provide support to Ukraine. It also has threatened Finland and Sweden for moving to join NATO. Given this pattern of aggressive behavior, the possibility of a conventional attack against a NATO member cannot be discounted. In all likelihood, however, Russia will continue to use nonlinear means in an effort to pressure and undermine the NATO alliance and any non-NATO country that opposes Moscow's political objectives.

**Militarization of the High North.** Russia has a long history in the Arctic and, as an Arctic nation, has interests there. However, Russia's ongoing militarization of the region, coupled with its bellicose behavior toward its neighbors, makes the Arctic a security concern.

Because nationalism is on the rise in Russia, Vladimir Putin's Arctic strategy is popular among the population. For Putin, the Arctic is an area that allows Russia to flex its muscles without incurring any significant geopolitical risk.

Russia is also eager to promote its economic interests in the region. Half of the world's Arctic territory and half of the Arctic region's population are located in Russia. It is well known that the Arctic is home to large stockpiles of proven but unexploited oil and gas reserves. Most of these reserves are thought to be located in Russia. In particular, Russia hopes that the Northern Sea Route (NSR) will become one of the world's most important shipping lanes.

Russia has invested heavily in the Arctic region, opening a series of Arctic bases and investing in cold-weather equipment, coastal defense systems, underground storage facilities, and specialized training. According to one report, "[t]he Kremlin's dominance due to its unique topography and overwhelming military presence has made it impregnable in the Arctic."<sup>147</sup> Additionally, "Russian hardware in the High North area includes bombers and MiG31BM jets, and new radar systems close to the coast of Alaska."<sup>148</sup>

Russia also has staged a series of statement activities in the Arctic. In 2007, Artur Chilingarov, then a member of the Russian Duma, led a submarine expedition to the North Pole and planted a Russian flag on the seabed. Later, he declared: "The Arctic is Russian." In July 2017, Russia released a new naval doctrine citing the alleged "ambition of a range of states, and foremost the United States of America and its allies, to dominate the high seas, including in the Arctic, and to press for overwhelming superiority of their naval forces." 150

In May 2017, Russia announced that its buildup of the Northern Fleet's nuclear capacity is intended "to phase 'NATO out of [the] Arctic." In a March 2021 statement exercise, three Russian ballistic missile submarines punched through the Arctic ice near the North Pole. In June 2022, Russia withdrew from a nuclear safety program in the Arctic region, raising concerns in the West "about a new period of heightened nuclear risks." Russia also has stationed a floating nuclear power plant on the northern coast of Siberia. "If the venture is successful," according to one account, "it will represent another milestone in Moscow's efforts to tame the melting Northern Sea Route, which...could become a direct trade route between Europe and Asia."

Although the Arctic region has been an area of low conflict among the Arctic powers, NATO should consider the implications of Russia's recent aggressive military behavior. NATO is a collective security organization that is designed to defend the territorial integrity of its members. Five NATO members (Canada, Denmark, Iceland, Norway, and the United States) are Arctic countries, and all five have territory above the Arctic Circle. Two closely allied nations, Finland and Sweden, are awaiting NATO membership and also have Arctic territory. NATO ambassadors signed the necessary Accession Protocols, the first step in ratification of both countries' membership in the alliance, on July 5, 2022. <sup>155</sup>

In recent years, the U.S. has begun to pay increased attention to the Arctic theater in Europe. One way it has done this is by maintaining an enhanced presence in Norway. In April 2021, the two nations signed the Supplementary Defense Cooperation Agreement, which in part allows the U.S. to build additional infrastructure at Rygge and Sola air stations in southern Norway as well as Evenes air station and Ramsund naval station above the Arctic Circle. Construction at Evenes will support Norwegian and allied maritime patrol aircraft in their monitoring of Russian submarine activity.

Because Russia is an Arctic power, its military presence in the region is to be expected, but it should be viewed with some caution because of Russia's pattern of aggression. In the Arctic, sovereignty equals security. Respecting national sovereignty in the Arctic would ensure that the chances of armed conflict in the region remain low. Since NATO is an intergovernmental alliance of sovereign nation-states built on the consensus of all of its members, it has a role to play in Arctic security. In the words of NATO Secretary-General Jens Stoltenberg:

Russia's military build-up is the most serious challenge to stability and Allied security in the High North.... A strong, firm and predictable Allied presence is the best way to ensure stability and protect our interests. We cannot afford a security vacuum in the High North. It could fuel Russian ambitions, expose NATO, and risk miscalculation and misunderstandings.<sup>157</sup>

In March 2017, a decree signed by Putin gave the Federal Security Service (FSB), which controls law enforcement along the Northern Sea Route, an Arctic shipping route linking Asia and Europe as well as additional powers to confiscate land "in areas with special objects for land use, and in the border areas."<sup>158</sup> Russia's Arctic territory is included within this FSB-controlled border zone. The FSB and its subordinate coast guard have added patrol vessels and have built up Arctic bases, including a coast guard base in Murmansk that was opened in December 2018.<sup>159</sup>

The Russian National Guard, which reports to Putin, is likewise taking on an increased role in the Arctic and is now charged with protecting infrastructure sites that are deemed to be of strategic importance, including a new liquefied natural gas (LNG) export terminal at Sabetta that was opened in December 2017. <sup>160</sup> In April 2021, shareholders of Novatek, Russia's second-largest natural gas producer, "approved external financing of \$11 billion for the Arctic LNG 2 project, which [was] expected to start production of [LNG] in 2023." <sup>161</sup> However, the imposition of Western sanctions against Russian banks because of the war in Ukraine could force Novatek to halt development of the Arctic LNG 2 terminal. <sup>162</sup>

In May 2018, Putin issued a presidential degree setting a target of 80 million tons shipped across the NSR by 2024. However, in October 2021, Russian Deputy Prime Minister Yuri Trutnev announced that Russia "plans to begin year-round shipping via the Northern Sea Route...in 2022 or 2023," even earlier than previously planned.

Russia also has been investing in military bases in the Arctic. Its Arctic Trefoil base on Alexandra Land Island, commissioned in 2017, can house 150 soldiers for up to 18 months. <sup>165</sup> In addition, old Soviet-era facilities have been reopened.

In September 2018, the Northern Fleet announced construction plans for a new military complex to house a 100-soldier garrison and anti-aircraft units at Tiksi. In January 2019, Russian authorities claimed that the base was 95 percent completed, <sup>166</sup> But in March 2020, Russia appeared to be "significantly behind in its plans for Tiksi." In 2018, Russia also opened an Arctic airfield at Nagurskoye that is equipped with a 2,500-meter landing strip and a fleet of MiG-31 or Su-34 Russian fighters. <sup>168</sup> The landing strip "can handle all types of aircraft, including nuclear-capable strategic bombers." <sup>169</sup>

Air power in the Arctic is increasingly important to Russia, which has 14 operational airfields in the region along with 16 deep-water ports, "a new command, and roughly 50 icebreakers...some of which are nuclear powered." In February 2021, it was reported that:

Recently released photos and video show MiG-31BM Foxhound interceptors in action at Rogachevo Air Base in the Novaya Zemlya archipelago, above the Arctic Circle, an increasingly strategic region that's home to a resurgent Russian military presence. Russia's Ministry of Defense provided the imagery as a new rotation of MiG-31BMs arrived at the base, undertaking what the defense ministry describes as "experimental combat duty to protect the state border of the Russian Federation in the Arctic airspace." 171

In March 2019, Mayor General Igor Kozhin, head of the Russian Naval Air Force, claimed that Russia had successfully tested a new airstrip cover that is effective in "temperatures down to minus 30 centigrades."<sup>172</sup>

Russia resumed regular fighter jet combat patrols in the Arctic in 2019. The Ministry of Defense, for example, announced that in January 2019, two Tu-160 bombers flew for 15 hours in international airspace over the Arctic. Ver the course of one week in April 2019, Russian fighter and bomber jets flew near the coast of Norway twice. In one instance, two Tu-60 bombers and a MiG-31 flew 13 hours over the Barents, Norwegian, and North Seas. British and Danish jets scrambled to meet the Russian aircraft.

In 2017, Russia activated a new radar complex on Wrangel Island. <sup>176</sup> In 2019, it announced plans to lay a nearly 8,000-mile fiber-optic cable across its Arctic coast, linking military installations along the way from the Kola Peninsula through Vladivostok. <sup>177</sup> Construction of the cable began in August 2021 and is due to be completed in 2026. <sup>178</sup>

In November 2019, Russia announced rocket firings in the Norwegian Sea 20 to 40 nautical miles from the Norwegian coast. The test firings, with little advance notice, were designed to send a message as they took place in an area through which NATO ships were sailing during the Trident Juncture exercise. <sup>179</sup> In March 2021, Russia's *Admiral Gorshkov* frigate successfully "launched an Oniks cruise missile and hit a coastal target on Novaya Zemlya, about 300 kilometers from launch position." <sup>180</sup> In September 2021, it was reported that "Russia's Northern Fleet had begun preparations to deploy the air-launched ballistic missile Kh-47M2 Kinzhal on MiG-31K carriers." <sup>181</sup>

Russia's ultimate goal is encapsulated in a June 2019 study published by the Royal Institute of International Affairs:

Since the mid-2010s, the Kremlin has deployed substantive force and capabilities along the coast of its northern border in the AZRF [Arctic Zone of the Russian Federation]. Parts of the armed forces are now Arctic-capable, and have developed concepts of operations tailored to that environment. With the creation of OSK Sever [Joint Strategic Command North] in 2013, the Russian armed forces have been slowly reshaping their Arctic command structure. The Arctic forces are primarily focused on air and naval operations, with the aim of creating an integrated combined-arms force for the region.<sup>182</sup>

For a few years, Russia was developing three new nuclear icebreakers, and in May 2019, it launched its third and final *Arktika*. The *Arktika*, currently the world's largest and most powerful nuclear icebreaker, sailed straight to the North Pole in October 2020. 184 In January 2022, the *Arktika* completed its first sail across the eastern part of the NSR. 185 That same month, Russia's newest nuclear-powered icebreaker, the *Sibir*, the second of Project 22220, arrived at its home port of Murmansk. 186

Russia's Northern Fleet is also building newly refitted submarines, including a newly converted Belgorod nuclear-powered submarine that was launched in April 2019.187 The Belgorod is expected to carry six Poseidon drones, also known as nuclear torpedoes, and will carry out "a series of special missions."188 The submarine will have a smaller minisub that will potentially be capable of tampering with or destroying undersea telecommunications cables. 189 According to Russian media reports, the Belgorod "will be engaged in studying the bottom of the Russian Arctic shelf, searching for minerals at great depths, and also laying underwater communications."190 Two similar submarines, the Khabarovsk and *Ulyanovsk*, which will also carry Poseidon drones, are scheduled to be commissioned in 2024 and 2025, respectively.<sup>191</sup> In addition, the Northern Fleet received 13 new ships in 2021, adding to the "more than four dozen already in service." 192

Russia continues to develop and increase its military capabilities in the Arctic region. The likelihood of armed conflict remains low, but physical changes

in the region mean that the posture of players will continue to evolve. It is clear that Russia intends to exert a dominant influence. According to a U.S. Department of State official:

[The U.S. has] concerns about Russia's military buildup in the Arctic. Its presence has grown dramatically in recent years with the establishments of new Arctic commands, new Arctic brigades, refurbished airfields and other infrastructure, deep water ports, new military bases along its Arctic coastline, an effort to establish air defense and coastal missile systems, early warning radars, and a variety of other things along the Arctic coastline. We've seen an enhanced ops [operations] tempo of the Russian military in the Arctic, including last October one of the largest Russian military exercises in the Arctic since the end of the Cold War. So there is some genuine and legitimate concern there on the part of the United States and our allies and partners about that behavior in the Arctic.193

Destabilization in the South Caucasus. The South Caucasus sits at a crucial geographical and cultural crossroads and has been strategically important, both militarily and economically, for centuries. Although the countries in the region (Armenia, Georgia, and Azerbaijan) are not part of NATO and therefore do not receive a security guarantee from the United States, they have participated to varying degrees in NATO and U.S.-led operations. This is especially true of Georgia, which aspires to join NATO.

Russia views the South Caucasus as part of its natural sphere of influence and stands ready to exert its influence by force if necessary. In August 2008, Russia invaded Georgia, coming as close as 15 miles to the capital city of Tbilisi. A decade later, several thousand Russian troops occupied the two Georgian regions of South Ossetia and Abkhazia.

Russia has sought to deepen its relationship with the two occupied regions. In 2015, it signed so-called integration treaties with South Ossetia and Abkhazia that, among other things, call for a coordinated foreign policy, creation of a common security and defense space, and implementation of a streamlined process for Abkhazians and South Ossetians to receive Russian citizenship. <sup>194</sup> The Georgian Foreign Ministry criticized the treaties as a step toward

"annexation of Georgia's occupied territories," both of which are still internationally recognized as part of Georgia.

In January 2018, Russia ratified an agreement with the de facto leaders of South Ossetia to create a joint military force—an agreement that the U.S. condemned.196 South Ossetia's former leader, Anatoli Bibilov, had planned to hold a referendum on whether the region should join Russia on July 17, 2022, but his successor, Alan Gagloev, has cancelled the plebiscite as "premature." Russia's "creeping annexation" of Georgia has left towns split in two and families separated by military occupation and the imposition of an internal border (known as "borderization").198 In May 2020, the U.S. embassy in Tbilisi reported that Russian-led security forces were continuing to erect unauthorized fences and reinforcing existing illegal "borderization" efforts near a number of Georgian villages. 199

Moscow continues to exploit ethnic divisions and tensions in the South Caucasus to advance pro-Russian policies that are often at odds with America's or NATO's goals in the region, but Russia's influence is not restricted to soft power. In the South Caucasus, the coin of the realm is military might. It is a dangerous neighborhood surrounded by instability and insecurity that is reflected in terrorism, religious fanaticism, centuries-old sectarian divides, and competition for natural resources.

Russia maintains a sizable military presence in Armenia based on an agreement that gives Moscow access to bases in that country at least until 2044. 200 The bulk of Russia's forces, consisting of 3,500 soldiers, dozens of fighter planes and attack helicopters, 74 T-72 tanks, and an S-300 air defense system, are based around the 102nd Military Base. 201 Russia and Armenia have also signed a Combined Regional Air Defense System agreement. Despite the election of Prime Minister Nikol Pashinyan in 2018 following the so-called Velvet Revolution, Armenia's cozy relationship with Moscow remains unchanged. 202 Armenian troops even deployed alongside Russian troops in Syria to the dismay of U.S. policymakers. 203

Another source of regional instability is the Nagorno–Karabakh conflict, which began in 1988 when Armenia made territorial claims to Azerbaijan's Nagorno–Karabakh Autonomous Oblast.<sup>204</sup> By 1992, Armenian forces and Armenian-backed militias had occupied 20 percent of Azerbaijan, including the

Nagorno–Karabakh region and seven surrounding districts. A cease-fire agreement was signed in 1994, and the conflict has been described as frozen since then. In 2020, major fighting broke out along the front lines. After six weeks of fighting, Azerbaijan liberated its internationally recognized territory, "which had been under Armenian occupation since the early 1990s." <sup>205</sup>

The conflict ended on November 9, 2020, when Armenia and Azerbaijan signed a Russian-brokered cease-fire agreement. <sup>206</sup> As part of the nine-point cease-fire plan, nearly 2,000 Russian peacekeeping soldiers were deployed to certain parts of Nagorno–Karabakh that are populated largely by ethnic Armenians. In May 2021, tensions rose again in the region but for a different reason—the demarcation of the Armenian–Azerbaijani border. <sup>207</sup>

The Nagorno-Karabakh conflict offers another opportunity for Russia to exert malign influence and consolidate power in the region. Russia "has long been Azerbaijan's main arms supplier" but "also provides military equipment to Armenia." Additionally:

In conjunction with controlling the negotiation process on the Armenian–Azerbaijani conflict over Karabakh, Moscow exploits its role as a major supplier of weapons to Azerbaijan in order to maintain its influence over Baku. In this realm, Russia plays a unique role between Azerbaijan and Armenia. As a main arms supplier of both, Moscow is also the main power broker between the two South Caucasus rivals.<sup>208</sup>

As noted by Eurasia expert Eduard Abrahamyan, "for years, Moscow has periodically sought to use the local authorities in Karabakh as a proxy tool of coercive diplomacy against both Baku and Yerevan."<sup>209</sup>

The South Caucasus might seem distant to many American policymakers, but the spillover effect of ongoing conflict in the region can have a direct impact both on U.S. interests and on the security of America's partners, as well as on Turkey and other countries that depend on oil and gas transiting the region. Russia views the South Caucasus as a vital theater and uses a multitude of tools that include military aggression, economic pressure, and the stoking of ethnic tensions to exert influence and control, usually to promote outcomes that are at odds with U.S. interests.

## Increased Activity in the Mediterranean.

Russia has had a military presence in Syria for decades, but in September 2015, it became the decisive actor in Syria's ongoing civil war, having saved Bashar al-Assad from being overthrown and having strengthened his hand militarily, thus enabling government forces to retake territory lost during the war. Although conflicting strategic interests cause the relationship between Assad and Putin to be strained at times, Assad still needs Russian military support to take back Idlib province, a goal that he and Putin probably share.<sup>210</sup> Russia's Hmeymim Air Base is located close to Idlib, making it vulnerable to attacks from rebel fighters and terrorist groups, and Moscow instinctively desires to protect its assets. Assad's only goal is to restore sovereignty over all of Syria; Russia generally is more focused on eliminating terrorism in the region and must manage its relationship with Turkey.

In January 2017, Russia signed an agreement with the Assad regime to "expand the Tartus naval facility, Russia's only naval foothold in the Mediterranean, and grant Russian warships access to Syrian waters and ports.... The agreement will last for 49 years and could be prolonged further."<sup>211</sup> According to a May 2020 report, Russia is reinforcing its naval group in the Mediterranean Sea with warships and submarines armed with Kalibr cruise missiles. <sup>212</sup> In May 2021, the Voice of America reported that Russia is expanding its navy base at Tartus and "planning to construct a floating dock to boost the port's ship repair facilities."<sup>213</sup>

The agreement with Syria also includes upgrades to the Hmeymim air base at Latakia, including repairs to a second runway.<sup>214</sup> Russia is extending one of its two runways by 1,000 feet, which would "allow the base to support more regular deployments of larger and more heavily-laden aircraft."215 Russia deployed the S-400 anti-aircraft missile system to Hmeymim in late 2015.<sup>216</sup> It also has deployed the Pantsir S1 system. "The two systems working in tandem provide a 'layered defense,'" according to one account, "with the S-400 providing long-ranged protection against bombers, fighter jets, and ballistic missiles, and the Pantsir providing medium-ranged protection against cruise missiles, low-flying strike aircraft, and drones."217 Russia currently operates out of Hmeymim air base on a 40-year agreement and continues to entrench its position there, as demonstrated by its recent building of reinforced

concrete aircraft shelters.<sup>218</sup> In August 2020, Syria agreed to give Russia additional land and coastal waters to expand its Hmeymim air base.<sup>219</sup>

According to Lieutenant General Ben Hodges, former Commander, U.S. Army Europe, Russia has used its intervention in Syria as a "live-fire training opportunity."<sup>220</sup> The IISS similarly reports that Russia has used Syria as "a test bed for the development of joint operations and new weapons and tactics."<sup>221</sup> In fact, Russia has tested hundreds of pieces of new equipment in Syria. In December 2018:

Russian Deputy Prime Minister Yury Borisov detailed to local media...the various new weapons systems [that] have been introduced to the conflict. These included the Pantsir S1 anti-aircraft and Iskander-M ballistic missile systems on the ground, Tupolev Tu-160 supersonic strategic bombers, Tu-22M3 supersonic bombers and Tu-95 propeller-driven bombers, as well as Mikoyan MiG-29K fighters and Ka-52K Katran helicopters in the air.<sup>222</sup>

Overall, Russia reportedly sold \$28 billion worth of weaponry to 45 countries, including Syria, between 2016 and  $2020.^{223}$ 

Russian pilots have occasionally acted dangerously in the skies over Syria. In May 2017, for example, a Russian fighter jet intercepted a U.S. KC-10 tanker, performing a barrel roll over the top of the KC-10.<sup>224</sup> That same month, Russia stated that U.S. and allied aircraft would be banned from flying over large areas of Syria because of a deal agreed to by Russia, Iran, and Turkey. The U.S. responded that the deal does not "preclude anyone from going after terrorists wherever they may be in Syria."<sup>225</sup>

The U.S. and Russia have a deconfliction hotline to avoid midair collisions and incidents, but incidents have occurred on the ground as well as in the air. In November 2018, Ambassador James Jeffrey, U.S. Special Representative for Syria Engagement, told news media that "American and Russian forces have clashed a dozen times in Syria—sometimes with exchanges of fire." <sup>226</sup> In February 2022, U.S. F-16 fighter jets and other coalition aircraft escorted three Russian aircraft in eastern Syria when the Russians flew into coalition-restricted airspace. <sup>227</sup>

In October 2018, Egyptian President Abdel Fattah al-Sisi signed a strategic cooperation treaty with Russia.<sup>228</sup> In November 2018, Russia sought to

solidify its relations with Egypt, approving a five-year agreement for the two countries to use each other's air bases.<sup>229</sup> Russia is a major exporter of arms to Egypt, which agreed to purchase 20 Su-35 fighter jets in 2018 for \$2 billion.<sup>230</sup> Production of the Su-35 jets began in May 2020.<sup>231</sup> In August 2021, Russia and Egypt signed an additional bilateral strategic cooperation treaty.<sup>232</sup>

In Libya, Russia continues to support Field Marshal Khalifa Haftar with weapons and military advisers. <sup>233</sup> According to the U.S. Department of Defense, Russia's Wagner Group continues to be involved militarily in Libya. <sup>234</sup> Despite its ties to Haftar, Russia has also focused on expanding business ties with the Libyan government in Tripoli. <sup>235</sup>

Russia has stepped up its military operations in the Mediterranean significantly, often harassing U.S. and allied vessels involved in operations against the Islamic State. In April 2020, for example, a Russian Su-35 jet intercepted a U.S. Navy aircraft flying over the Mediterranean Sea. It was the second time in four days that "Russian pilots [had] made unsafe maneuvers while intercepting US aircraft." The Russian jet had taken off from Hmeymim air base in Syria. In April 2022, "three P-8A maritime patrol and reconnaissance aircraft experienced unprofessional intercepts by Russian aircraft' while 'flying in international airspace over the Mediterranean Sea."" 237

From April–August 2017, the U.S. along with British, Dutch, and Spanish allies tracked the *Krasnodar*, a *Kilo*-class submarine, as it sailed from the Baltic Sea to a Russian base in occupied Crimea. The submarine stopped twice in the eastern Mediterranean to launch cruise missiles into Syria and conducted drills in the Baltic Sea and off the coast of Libya. <sup>238</sup> In February 2020, General Wolters revealed that Russian submarines are becoming more active and harder for the United States to track. <sup>239</sup> On February 24, 2022, the day Russian submarines were seen in the eastern Mediterranean. <sup>240</sup> In March 2022, the Russian Navy allegedly "deployed an Akula-class nuclear submarine in the Mediterranean."

Russia's position in Syria, including its expanded area-access/area-denial capabilities and increased warship and submarine presence, underscores the growing importance of the Mediterranean theater in ensuring Europe's security.

**The Balkans.** Security has improved dramatically in the Balkans since the 1990s, but violence

based on religious and ethnic differences remains an ongoing possibility. These tensions are exacerbated by sluggish economies, high unemployment, and political corruption.

Russia's interests in the Western Balkans are at odds with the ongoing desire of the U.S. and its European allies to encourage closer ties between the region and the transatlantic community.

Russia seeks to sever the transatlantic bond forged with the Western Balkans...by sowing instability. Chiefly Russia has sought to inflame preexisting ethnic, historic, and religious tensions. Russian propaganda magnifies this toxic ethnic and religious messaging, fans public disillusionment with the West, as well as institutions inside the Balkan nations, and misinforms the public about Russia's intentions and interests in the region.<sup>242</sup>

Senior members of the Russian government have alleged that NATO enlargement in the Balkans is one of the biggest threats to Russia. ANATO now includes four Balkan countries: Albania and Croatia, both of which became member states in April 2009; Montenegro, which became NATO's 29th member state in June 2017; and North Macedonia, which became NATO's 30th member state in March 2020.

Russia stands accused of being behind a failed plot to break into Montenegro's parliament on election day in 2016, assassinate its former prime minister, and install a pro-Russian government. In May 2019, two Russian nationals who were believed to be the masterminds behind the plot were convicted in absentia along with 12 other individuals for organizing and carrying out the failed coup.

The presiding trial judge, Suzan Mugosa, said on May 9 that [Eduard] Shishmakov and [Vladimir] Popov "pursued a joint decision to make intentional attempts to contribute significantly to the carrying out of the planned criminal actions with the intention to seriously threaten the citizens of Montenegro, to attack the lives and bodies of others, and to seriously threaten and damage Montenegro's basic constitutional, political, and social structures in order to stop Montenegro from joining the NATO alliance." 244

After Russia annexed Crimea, the Montenegrin government backed European sanctions against Moscow and even implemented its own sanctions. Nevertheless, Russia has significant economic influence in Montenegro and in 2015 sought unsuccessfully to gain access to Montenegrin ports for the Russian navy to refuel and perform maintenance. Russia was the largest investor in Montenegro until October 2020 when it was surpassed by China. 245

In March 2022, the Montenegrin government joined European sanctions on Russia, "without specifying what they were," after Russia's second invasion of Ukraine. <sup>246</sup> In April 2022, Montenegro's government suspended broadcasting by Russia Today (RT) and Sputnik in coordination with EU sanctions on Russia. <sup>247</sup>

North Macedonia's accession to NATO was similarly targeted by Russia, which had warned the nation against joining the alliance and sought to derail the Prespa agreement that paved the way for membership by settling long-standing Greek objections to Macedonia's name.248 In 2018, after North Macedonia was invited to join NATO, Russia's ambassador to the EU stated that "there are errors that have consequences."249 In July 2018, Greece expelled two Russian diplomats and banned entry by two Russian nationals because of their efforts to undermine the name agreement; Russian actions in Macedonia included disinformation surrounding the vote, websites and social media posts opposing the Prespa agreement, and payments to protestors as well as politicians and organizations that opposed the agreement.<sup>250</sup>

Serbia in particular has long served as Russia's foothold in the Balkans.

Russia's influence in the Balkans centers on Serbia, a fellow religiously orthodox nation with whom it enjoys a close economic, political, and military relationship. Serbia and Russia have an agreement in place allowing Russian soldiers to be based at Niš airport in Serbia. The two countries signed a 15-year military cooperation agreement in 2013 that includes sharing of intelligence, officer exchanges, and joint military exercises. In October [2017], Russia gave Serbia six MiG-29 fighters (which while free, will require Serbia to spend \$235 million to have them overhauled). Additionally, Russia plans to supply Serbia with helicopters, T-72 tanks,

armored vehicles, and potentially even surface-to-air missile systems.  $^{251}$ 

The so-called Russian–Serbian Humanitarian Center at Niš is "widely believed to be a Russian spy base" and is located "only 58 miles from NATO's Kosovo Force mission based in Pristina."<sup>252</sup>

In February 2020, Serbia purchased the Pantsir S1 air-defense system from Russia despite objections and potential sanctions from the United States. <sup>253</sup> Russia has used its cultural ties to increase its role in Serbia, positioning itself as the defender of orthodoxy and investing funds in the refurbishing of orthodox churches. It also has helped to establish more than 100 pro-Russian non-governmental organizations and media outlets in Macedonia. <sup>254</sup>

Serbia and Russia have signed a strategic partnership agreement that is focused on economic issues. Russia's inward investment is focused on the transport and energy sectors. Except for those in the Commonwealth of Independent States, Serbia is the only country in Europe that has a free trade deal with Russia. In January 2019, Serbia and Russia signed 26 agreements relating to energy, railway construction, and strategic education cooperation. Further proof of Belgrade's loyalty to Moscow is seen in Serbia's unwillingness or inability to "take a firm stand against Russia's war on Ukraine." 256

In a January 2019 state visit to Serbia, Vladimir Putin expressed a desire for a free trade agreement between Serbia and the Russian-led Eurasian Economic Union. An agreement between the two countries was signed in October 2019 "following veiled warnings from the European Union." Russia also has held out the possibility of \$1.4 billion in infrastructure aid to Serbia aimed at building the Turk-Stream pipeline and increasing Russia's energy leverage in the region. In May 2022, Serbia reached a three-year agreement with Russia for natural gas supplies at "the most favorable price in Europe." 258

However, Serbia still participates in military exercises far more often without Russia than with Russia. In 2017, for example, "Serbian forces participated in 2 joint exercises with Russia and Belarus but held 13 exercises with NATO members and 7 with U.S. units." Like Russia, Serbia is a member of NATO's Partnership for Peace program. Additionally, Serbia has partnered with the State of Ohio in the U.S. National Guard's State Partnership Program since 2006.

Russia is also active in Bosnia and Herzegovina—specifically, the ethnically Serb Republika Srpska, one of two substate entities inside Bosnia and Herzegovina that emerged from that country's civil war in the 1990s. Moscow knows that exploiting internal ethnic and religious divisions among the country's Bosniak, Croat, and Serb populations is the easiest way to prevent Bosnia and Herzegovina from entering the transatlantic community.

Republika Srpska's current unofficial leader, Milorad Dodik, has long advocated independence for the region and has enjoyed a very close relationship with the Kremlin. President Željka Cvijanović also claims that Republika Srpska will continue to maintain its partnership with Russia. Events in Ukraine, especially the annexation of Crimea, have inspired more separatist rhetoric in Republika Srpska, but Russia's second invasion of Ukraine allegedly has delayed Republika Srpska's plans to withdraw from Bosnia and Herzegovina's state institutions. In June 2022, in an interview with the public broadcaster of Republika Srpska, Russian Foreign Minister Sergei Lavrov declared that Dodik is "a friend of Russia."

In many ways, Russia's relationship with Republika Srpska is akin to its relationship with Georgia's South Ossetia and Abkhazia occupied regions: more like a relationship with another sovereign state than a relationship with a semiautonomous region inside Bosnia and Herzegovina. When Putin visited Serbia in October 2014, Dodik was treated like a head of state and invited to Belgrade to meet with him. In September 2016, Dodik was treated like a head of state on a visit to Moscow just days before a referendum that chose January 9 as Republika Srpska's "statehood day," a date filled with religious and ethnic symbolism for the Serbs.<sup>263</sup> In October 2018, just days before elections, Dodik was hosted by Putin as they watched the Russian Grand Prix in a VIP box.<sup>264</sup> In December 2021, Dodik again visited Moscow. The Kremlin refrained from announcing this latest meeting ahead of time, but Russian presidential spokesman Dmitry Peskov asserted that "this by no means belittle[d] the importance of the meeting."265 Republika Srpska continues to host its "statehood day" in defiance of a ruling by Bosnia's federal constitutional court that both the celebration and the referendum establishing it are illegal.<sup>266</sup>

Russia has reportedly trained a Republika Srpska paramilitary force in Russia at the nearby Niš air base to defend the Serbian entity. It has been reported that "[s]ome of its members fought as mercenaries alongside the Kremlin's proxy separatists in Ukraine."<sup>267</sup> Veterans organizations in Russia and Republika Srpska have developed close ties.<sup>268</sup>

Russia has cultivated strong ties with the security forces of Republika Srpska. Russian police take part in exchanges with the security forces, and Russian intelligence officers reportedly teach at the police academy and local university. On April 4, 2018, the Republika Srpska authorities opened a new \$4 million training center "at the site of a former army barracks in Zaluzani, outside Banja Luka." The site serves as the headquarters for "anti-terrorist units, logistics units, and a department to combat organized crime."

Russia also has continued to oppose the recognition of Kosovo as an independent sovereign country<sup>270</sup> and has condemned Kosovo's creation of its own army. Moscow does not want Kosovo to be seen as a successful nation pointed toward the West. Rather, it seeks to derail Kosovo's efforts to integrate into the West, often by exploiting the Serbian minority's grievances. In the most jarring example, a train traveling from Belgrade to Mitrovica, a heavily Serb town in Kosovo, in January 2017 was stopped at the Kosovar border. The Russian-made train was "painted in the colors of the Serbian flag and featured pictures of churches, monasteries, and medieval towns, as well as the words 'Kosovo is Serbian' in 21 languages."<sup>271</sup>

The U.S. has invested heavily in the Balkans since the end of the Cold War. Tens of thousands of U.S. servicemembers have served in the Balkans, and the U.S. has spent billions of dollars in aid there, all in the hope of creating a secure and prosperous region that eventually will be part of the transatlantic community.

The foremost external threat to the Balkans is Russia. Russia's interests in the Balkans are at odds with the U.S. goal of encouraging the region to progress toward the transatlantic community. Russia seeks to sever the transatlantic bond forged with the Western Balkans by sowing instability and increasing its economic, political, and military footprint in the region.

## Threats to the Commons

Other than cyberspace and (to some extent) airspace, the commons are relatively secure in the

European region. Despite Russia's periodic aggressive maneuvers near U.S. and NATO vessels—and with the significant exception of the Kerch Strait—this remains largely true with respect to the security of and free passage through shipping lanes. The maritime domain is heavily patrolled by the navies and coast guards of NATO and NATO partner countries, and except in remote areas in the Arctic Sea, search and rescue capabilities are readily available. Moreover, maritime-launched terrorism is not a significant problem, and piracy is virtually nonexistent.

**Sea.** In May 2018, 17 Russian fighter jets buzzed the HMS *Duncan*, which was serving as the flagship of Standing NATO Maritime Group Two (SNMG2), operating in the Black Sea. Commodore Mike Utley, who was leading SNMG2, stated that the ship was "probably the only maritime asset that has seen a raid of that magnitude in the last 25 years," and then-British Defense Minister Gavin Williamson described the pilots' behavior as "brazen Russian hostility." In June 2021, Russian fighter jets repeatedly harassed a Dutch frigate in the Black Sea. 273

Russian threats to the maritime theater also include activity near undersea fiber-optic cables. In July 2019, a Russian submarine reportedly was trying to tap information flowing through undersea cables near Russia's northern shore in the Barents Sea. The cables "carry 95 percent of daily worldwide communications" in addition to "financial transactions worth over \$10 trillion a day." Thus, any disruption would cause a catastrophic reduction in the flow of capital.

The *Yantar*, a mother ship to two Russian mini submersibles, is often seen near undersea cables, which it is capable of tapping or cutting, and has been observed collecting intelligence near U.S. naval facilities including the submarine base at Kings Bay, Georgia.<sup>275</sup> In September 2021, it was caught loitering in the English Channel.<sup>276</sup> The Russian spy ship *Viktor Leonov* was spotted collecting intelligence within 30 miles of Groton, Connecticut, in February 2018 and off the coast of South Carolina and Georgia in December 2019.<sup>277</sup>

**Airspace.** Russia has continued its provocative military flights near U.S. and European airspace in recent years. In April 2021, Lieutenant General David Krumm from Joint Base Elmendorf–Richardson, Alaska, revealed that during the previous year, there was a large increase in Russian activity and that the U.S. had intercepted more than 60 Russian aircraft

in the "most action the Alaska Air Defense Identification Zone—a region spanning 200 nautical miles that reaches past U.S. territory and into international airspace—ha[d] seen since the Soviet Union fell in 1991."<sup>278</sup> In October 2020, F-22 Raptor stealth fighter jets scrambled "to intercept Russian long-range bombers and fighters flying off Alaska's coast" in "the 14th such incident off Alaska's coast in 2020."<sup>279</sup>

In March and April 2019, the Royal Air Force scrambled fighters twice in five days to intercept Russian bombers flying near U.K. airspace off the Scottish coast while the U.S., Australia, and 11 NATO allies were taking part in the Joint Warrior exercise in Scotland. <sup>280</sup> In February 2022, U.S. fighter jets and Norwegian and British military planes intercepted Russian aircraft flying near NATO-allied airspace over the North Atlantic. <sup>281</sup>

Aggressive Russian flying has occurred near North American airspace as well. In January 2019, two U.S. F-22s and two Canadian CF-18 fighters scrambled when two Russian Tu-160 Blackjack bombers flew into Arctic airspace patrolled by the Royal Canadian Air Force.<sup>282</sup>

Russian flights have also targeted U.S. ally Japan. In March 2022, Japan scrambled a fighter jet to "warn off a helicopter believed to be Russian" that entered Japanese airspace. <sup>283</sup> In May 2022, when the QUAD<sup>284</sup> was meeting in Tokyo, Japan again scrambled jets to warn off Russian and Chinese warplanes as they neared Japanese airspace. <sup>285</sup> Nor is it only maritime patrol aircraft that fly near Japan; Russian Su-24 attack aircraft, for example, were intercepted in December 2018 and January 2019 incidents. <sup>286</sup> Between April 1, 2018, and March 31, 2019, Japan had to scramble jets 343 times to intercept Russian aircraft, although that was 47 times less than had been necessary in the preceding year. <sup>287</sup>

The main threat from Russian airspace incursions, however, remains near NATO territory in Eastern Europe, specifically in the Black Sea and Baltic regions. In March 2021, NATO fighter jets scrambled 10 times in one day "to shadow Russian bombers and fighters during an unusual peak of flights over the North Atlantic, North Sea, Black Sea and Baltic Sea." In February 2022, near NATO allied airspace over the Baltic Sea, U.S. F-15Es scrambled and intercepted Russian fighter jets. That same day, "Norwegian and British aircraft intercepted Russian aircraft in flying from the Barents [Sea] into the North Sea." In April 2022, around both the Baltic

and Black Seas, NATO fighter jets scrambled multiple times over the span of four days "to track and intercept Russian aircraft near Alliance airspace." <sup>290</sup>

There have been several incidents involving Russian military aircraft flying in Europe without using their transponders. In April 2020, two maritime Tu-142 reconnaissance and anti-submarine warfare planes flew over the Barents, Norwegian, and North Seas but had switched off their transponders. As a result, two Norwegian F-16s were scrambled to identify the planes. 291 In September 2019, a Russian Air Force Sukhoi Su-34 fighter flew over Estonian airspace without filing a flight plan or maintaining radio contact with Estonian air navigation officials because the plane's transponder had been switched off. This was the second violation of Estonia's airspace by a Russian aircraft in 2019.<sup>292</sup> In August 2019, two Russian Su-27 escort jets flew over the Baltic Sea without a flight plan and without turning on their transponders.<sup>293</sup>

Russia's violation of the sovereign airspace of NATO member states is a probing and antagonistic policy that is designed both to test the defense of the alliance and as practice for potential future conflicts. Similarly, Russia's antagonistic behavior in international waters is a threat to freedom of the seas.

Russia's reckless aerial activity in the region also remains a threat to civilian aircraft flying in European airspace. That the provocative and hazardous behavior of the Russian armed forces or Russian-sponsored groups poses a threat to civilian aircraft in Europe was amply demonstrated by the July 2014 downing of Malaysia Airlines Flight MH17, killing all 283 passengers and 15 crewmembers, over the skies of southeastern Ukraine.

**Cyberspace.** Russian cyber capabilities are sophisticated and active, regularly threatening economic, social, and political targets around the world. Moscow also appears to be increasingly aggressive in its use of digital techniques, often employing only the slightest veneer of deniability in an effort to intimidate targets and openly defy international norms and organizations.

Russia clearly believes that these online operations will be essential to its domestic and foreign policy for the foreseeable future. As former Chief of the Russian General Staff General Yuri Baluyevsky has observed, "a victory in information warfare 'can be much more important than victory in a classical military conflict, because it is bloodless, yet the

impact is overwhelming and can paralyse all of the enemy state's power structures."<sup>294</sup>

Russia continues to probe U.S. critical infrastructure. The U.S. Intelligence Community assesses that:

Russia is particularly focused on improving its ability to target critical infrastructure, including underwater cables and industrial control systems, in the United States as well as in allied and partner countries, because compromising such infrastructure improves and demonstrates its ability to damage infrastructure during a crisis.<sup>295</sup>

Russia continued to conduct cyberattacks on government and private entities in 2020 and 2021. In 2020, Russian hackers "reportedly infiltrated several US government agencies," including the Defense, Treasury, Commerce, State, Energy, and Homeland Security Departments and the National Nuclear Security Administration, as well as private-sector companies like Microsoft and Intel. SolarWinds, the company whose software was compromised, "told the [Securities and Exchange Commission] that up to 18,000 of its customers installed updates that left them vulnerable to hackers." It was estimated that "it could take months to identify all [the hackers'] victims and remove whatever spyware they installed." 296

In April 2021, the U.S. Treasury sanctioned Russia for the SolarWinds hack. It also sanctioned 32 Russian "entities and individuals" that had carried out "Russian government-directed attempts to influence the 2020 U.S. presidential election, and other acts of disinformation and interference."

In May 2021, a Russia-based hacking group known as DarkSide launched a cyberattack against Colonial Pipeline, "the operator of one of the nation's largest fuel pipelines."<sup>298</sup> The 5,500-mile pipeline, "responsible for carrying fuel from refineries along the Gulf Coast to New Jersey," was down for six days.<sup>299</sup> Colonial Pipeline paid DarkSide \$90 million in Bitcoin as a ransom payment, but the Department of Justice was able to recover approximately \$2.3 million of that amount a few weeks later.<sup>300</sup> In June 2021, REvil, a Russian cybercriminal group, launched a ransomware attack on JBS, "the world's largest meat processing company."<sup>301</sup> As a result of the cyberattack, JBS was forced to shut down all nine of its U.S. plants for a brief period.<sup>302</sup>

However, the United States is not Russia's only target. In February 2020, the U.S. and its key allies accused Russia's main military intelligence agency, the GRU, of a broad cyberattack against the Republic of Georgia "that disrupted 'several thousand Georgian government and privately-run websites and interrupted the broadcast of at least two major television stations." It was hoped that the accusation would help to deter Moscow from intervening in the 2020 presidential election.

In February 2022, "[t]he European Union and its Member States, together with its international partners, strongly condemned the malicious cyber activity conducted by the Russian Federation against Ukraine, which targeted the satellite KASAT network, owned by Viasat." The attack "interrupted service for tens of thousands of broadband customers across Europe," including in Ukraine, and "reportedly disrupted service for thousands of European wind turbines." <sup>305</sup>

In addition to official intelligence and military cyber assets, Russia employs allied criminal organizations (so-called patriotic hackers) to help it engage in cyber aggression. Using these hackers gives Russia greater resources and can help to shield its true capabilities. Patriotic hackers also give the Russian government deniability. In June 2017, for example, Putin stated that "[i]f they (hackers) are patriotically-minded, they start to make their own contribution to what they believe is the good fight against those who speak badly about Russia. Is that possible? Theoretically it is possible."

Russia's cyber capabilities are advanced and of key importance in realizing the state's strategic aims. Russia has used cyberattacks to further the reach and effectiveness of its propaganda and disinformation campaigns, and its ongoing cyberattacks against election processes in the U.S. and European countries are designed to undermine citizens' belief in the veracity of electoral outcomes and erode support for democratic institutions in the longer term. Russia also has used cyberattacks to target physical infrastructure including electrical grids, air traffic control, and gas distribution systems.

Russia's increasingly bold use of cyber capabilities, coupled with the sophistication of those capabilities and Moscow's willingness to use them aggressively, presents a serious challenge both to the U.S. and to its interests abroad.

### Conclusion

Overall, the threat to the U.S. homeland originating from Europe remains low, but the threat to America's interests and allies in the region remains significant, especially given Russia's war in Ukraine. Although Russia has the military capability to harm and (in the case of its nuclear arsenal) to pose an existential threat to the U.S., it has not conclusively demonstrated the intent to do so.

The situation is different with respect to America's allies in the region. Through NATO, the U.S. is obliged by treaty to come to the aid of the alliance's European members. Russia continues its efforts to undermine the NATO alliance and presents an existential threat to U.S. allies in Eastern Europe. NATO has been the cornerstone of European security and stability ever since its creation in 1949, and it is in America's interest to ensure that it maintains both the military capability and the political will to fulfill its treaty obligations.

While Russia is not the threat to U.S. global interests that the Soviet Union was during the Cold War, it does pose challenges to a range of America's interests and those of its allies and friends that are closest to Russia's borders. Russia possesses a full range of capabilities from ground forces to air, naval, space, and cyber. It still maintains the world's largest nuclear arsenal, and although a strike on the U.S. is highly unlikely, the latent potential for such a strike still gives these weapons enough strategic value visà-vis America's NATO allies and interests in Europe to ensure their continued relevance.

Russian provocations that are much less serious than any scenario involving a nuclear exchange pose the most serious challenge to American interests, particularly in Central and Eastern Europe, the Arctic, the Balkans, and the South Caucasus. As the Intelligence Community's most recent Annual Threat Assessment states:

Moscow will continue to employ an array of tools to advance its own interests or undermine the interests of the United States and its allies. These will be primarily military, security, and intelligence tools, with economic cooperation playing a smaller role.... Russia probably will continue to expand its global military, intelligence, security, commercial, and energy footprint and build partnerships aimed at undermining U.S. influence and boosting its own.<sup>307</sup>

Though Russia has expended much of its arsenal of munitions and has suffered significant losses in its war against Ukraine, high energy prices and the decision by several countries to continue trading with Russia despite sanctions placed on the country are ensuring a steady flow of funds into Russia's accounts that Putin will assuredly use to replenish stocks and replace losses. The result will be a Russian military rebuilt with new equipment and

seasoned by combat experience gained in Ukraine. Russia will therefore continue to be a significant security concern both for its NATO partners and other allies.

For these reasons, the *Index of U.S. Military Strength* continues to assess the threat from Russia as "aggressive" for level of provocation of behavior and "formidable" for level of capability.

# **Threats: Russia**

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior		✓			
	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability	<b>✓</b>				

### **Endnotes**

- 1. International Institute for Strategic Studies, *The Military Balance 2022: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2022), pp. 164–217.
- 2. H. I. Sutton, "Controversial Russian Spy Ship Yantar Leaves Base," Covert Shores, March 6, 2022, http://www.hisutton.com/Russian-Spy-Ship-Yantar-2022-03-06.html (accessed July 12, 2022). See also Michael Birnbaum, "Russian Submarines Are Prowling Around Vital Undersea Cables. It's Making NATO Nervous," *The Washington Post*, December 22, 2017, https://www.washingtonpost.com/world/europe/russian-submarines-are-prowling-around-vital-undersea-cables-its-making-nato-nervous/2017/12/22/d4c1f3da-e5d0-11e7-927a-e72eac1e73b6\_story.html (accessed July 12, 2022).
- Paul Stronski, "Implausible Deniability: Russia's Private Military Companies," Carnegie Endowment for International Peace Commentary, June 2, 2020, https://carnegieendowment.org/2020/06/02/implausible-deniability-russia-s-private-military-companies-pub-81954 (accessed July 14, 2022).
- Maria Tsvetkova and Anton Zverev, "Exclusive: Kremlin-Linked Contractors Help Guard Venezuela's Maduro—Sources," Reuters, January 25, 2019, https://www.reuters.com/article/us-venezuela-politics-russia-exclusive/exclusive-kremlin-linked-contractors-help-guard-venezuelas-maduro-sources-idUSKCN1PJ22M (accessed July 14, 2022).
- 5. "Venezuelan Vice President Meets 'Good Friend' Lavrov of Russia," Reuters, March 10, 2022, https://www.reuters.com/world/venezuelan-vice-president-meets-russias-lavrov-turkey-amid-ukraine-crisis-2022-03-10/ (accessed July 14, 2022).
- Agence France-Presse, "Russia Receives Venezuela's 'Strong Support," France 24, March 1, 2022, https://www.france24.com/en/live-news/20220301-russia-receives-venezuela-s-strong-support (accessed July 14, 2022).
- Reuters, "Russian Air Force Planes Land in Venezuela Carrying Troops: Reports," March 24, 2019, https://www.reuters.com/article/us-venezuela-politics-idUSKCN1R50NB (accessed July 14, 2022).
- 8. Paul D. Shinkman, "Russia Deploys Troops, Equipment to Venezuela," *U.S. News & World Report*, March 25, 2019, https://www.usnews.com/news/world/articles/2019-03-25/russia-deploys-troops-equipment-to-venezuela (accessed July 14, 2022).
- 9. Mary Anastasia O'Grady, "Putin Is Already in Cuba and Venezuela," *The Wall Street Journal*, January 30, 2022, https://www.wsj.com/articles/putin-is-already-in-cuba-and-venezuela-south-america-influence-western-hemisphere-ukraine-11643567547 (accessed July 14, 2022), and Daria Litvinova, "Russia in Venezuela: As Moscow Accuses U.S. of 'Information War,' What Is Putin's Role in the Standoff?" CBS News, updated May 1, 2019, https://www.cbsnews.com/news/russia-in-venezuela-why-vladimir-putin-backs-nicolas-maduro-in-standoff-with-donald-trump-us/ (accessed July 14, 2022).
- 10. International Institute for Strategic Studies, *The Military Balance 2017: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2017), p. 186.
- 11. Radio Free Europe/Radio Liberty, "Putin Creates National Guard Force," July 4, 2016, https://www.rferl.org/a/putin-national-guard-dissent-riots/27836301.html (accessed July 14, 2022), and International Institute for Strategic Studies, *The Military Balance 2017*, p. 169.
- 12. Warsaw Institute, Russia Monitor, "Russia's Rosgvardia Sets Foot in Belarus," December 22, 2020, https://warsawinstitute.org/russias-rosgvardia-sets-foot-belarus/ (accessed July 14, 2022).
- 13. Isabelle Mandraud, "Putin's National Guard Sent to 'Occupy' and 'Clean Up' Cities in Ukraine," *Le Monde*, April 13, 2022, https://www.lemonde.fr/en/international/article/2022/04/13/in-ukraine-putin-deploys-his-national-guard-to-occupy-and-clean-up-cities\_5980457\_4.html (accessed July 14, 2022).
- 14. See World Bank Group, *Amidst Strong Economic Rebound in Russia, Risks Stemming from COVID-19 and Inflation Build, Russia Economic Report* No. 46, December 2021, https://documents1.worldbank.org/curated/en/099050011302118976/pdf/P17756206d40310aa0a5e109d6fa60bc55a.pdf (accessed July 14, 2022).
- 15. Richard Partington, "Russian Economy Could Shrink by 7% as Result of Ukraine Sanctions," *The Guardian*, March 2, 2022, https://www.theguardian.com/world/2022/mar/02/russia-economy-could-shrink-by-7-per-cent-as-result-of-ukraine-sanctions-war-recession-covid (accessed July 14, 2022).
- 16. Table 1, "The 40 Countries with the Highest Military Expenditure in 2021," in Diego Lopes Da Silva, Nan Tian, Lucie Béraud-Sudreau, Alexandra Marksteiner, and Xiao Liang, "Trends in World Military Expenditure, 2021," Stockholm International Peace Research Institute *Fact Sheet*, April 2022, p. 2, https://www.sipri.org/sites/default/files/2022-04/fs\_2204\_milex\_2021\_0.pdf (accessed July 14, 2022).
- 17. Office of the Director of National Intelligence, *Annual Threat Assessment of the U.S. Intelligence Community*, February 7, 2022, p. 11, https://docs. house.gov/meetings/IG/IG00/20220308/114469/HHRG-117-IG00-Wstate-HainesA-20220308.pdf (accessed July 14, 2022).
- 18. Siemon T. Wezeman, "Russia's Military Spending: Frequently Asked Questions," Stockholm International Peace Research Institute *Backgrounder*, April 27, 2020, https://www.sipri.org/commentary/topical-backgrounder/2020/russias-military-spending-frequently-asked-questions (accessed July 14, 2022).
- 19. Table 6, "Russia: Defence Expenditure, 2011–2021," in International Institute for Strategic Studies, The Military Balance 2022, p. 173.
- 20. International Institute for Strategic Studies, *The Military Balance 2022*, p. 192.

- 21. TASS, "Russian Nuclear Trifecta Modernization Level Highest in History, Defense Minister Says," December 21, 2021, https://tass.com/defense/1378715 (accessed July 14, 2022).
- 22. Maxim Starchak, "Year 2020 in Review: Results of Russia's Nuclear Weapons Modernization," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 18, Issue 7 (January 13, 2021), https://jamestown.org/program/year-2020-in-review-results-of-russias-nuclear-weapons-modernization/ (accessed July 14, 2022), and Franz-Stefan Gady, "Russia's Most Powerful Intercontinental Ballistic Missile to Enter Service in 2021," *The Diplomat*, March 30, 2018, https://thediplomat.com/2018/03/russias-most-powerful-intercontinental-ballistic-missile-to-enter-service-in-2021/ (accessed July 14, 2022).
- 23. Ben Turner, "How Deadly Is Putin's Nuclear 'Satan 2' Missile?" Live Science, April 22, 2022, https://www.livescience.com/how-deadly-satan-2-missile (accessed July 14, 2022); and Timothy Wright, "Russia's New Strategic Nuclear Weapons: A Technical Analysis and Assessment," International Institute for Strategic Studies *Analysis*, June 16, 2022, https://www.iiss.org/blogs/analysis/2022/06/russias-new-strategic-nuclear-weapons-a-technical-analysis-and-assessment (accessed July 14, 2022); and Ashish Dangwai, "Ready for Deployment: Moscow Says Can Wipe out Entire US East Coast," *The EurAsian Times*, June 23, 2022, https://eurasiantimes.com/nuclear-ashes-russias-satan-missile-is-ready-for-deployment-moscow-says-can-wipe-out-entire-us-east-coast/ (accessed July 19, 2022).
- 24. Kyle Mizokami, "Russia Is Field Testing Its New Armata Tank in Syria," *Popular Mechanics*, April 22, 2020, https://www.popularmechanics.com/military/weapons/a32228809/russia-armata-tank/ (accessed July 14, 2022).
- 25. Brent M. Eastwood, "Is Russia's T-14 Armata Tank Plan Falling Apart?" 1945, January 5, 2022, https://www.19fortyfive.com/2022/01/is-russias-t-14-armata-tank-plan-falling-apart/ (accessed July 14, 2022).
- 26. International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021), p. 170.
- 27. TASS, "Russia to Test First T-90M Tank with Over-the-Horizon Vision—Source," September 8, 2021, https://tass.com/defense/1335037 (accessed July 14, 2022).
- 28. Alex Lockie, "Russia Admits Defeat on Its 'Stealth' F-35 Killer by Canceling Mass Production of the Su-57 Fighter Jet," *Business Insider*, July 12, 2018, https://www.businessinsider.com/russia-admits-defeat-su-57-not-going-into-mass-production-2018-7 (accessed July 14, 2022).
- 29. "Russian Fighter Jet Crashes Near Crimea, Pilot Missing," *The Moscow Times*, March 26, 2020, https://www.themoscowtimes.com/2020/03/26/russian-fighter-jet-crashes-near-crimea-pilot-missing-a69753 (accessed July 14, 2022).
- 30. Brett Forrest, "Russia's New Jet Fighter Aims to Rival U.S. in Air—and on Geopolitical Map," *The Wall Street Journal*, August 9, 2021, https://www.wsj.com/articles/russias-new-jet-fighter-aims-to-rival-u-s-in-airand-on-geopolitical-map-11628514000 (accessed July 14, 2022).
- 31. Zahra Ullah, Darya Tarasova, and Brad Lendon, "Russia's Only Aircraft Carrier Catches Fire; 1 Dead and 2 Missing," CNN, updated December 12, 2019, https://www.cnn.com/2019/12/12/europe/russian-carrier-fire-intl/index.html (accessed July 14, 2022).
- 32. Benjamin Brimelow, "Russia's Unlucky Aircraft Carrier Is Getting Ready for Its Return to Action," *Business Insider*, April 19, 2021, https://www.businessinsider.com/russian-aircraft-carrier-kuznetsov-getting-ready-for-return-to-action-2021-4 (accessed July 14, 2022).
- 33. TASS, "Russia's Aircraft Carrier 'Admiral Kuznetsov' to Resume Repairs in June 2022," *Naval News*, November 12, 2021, https://www.navalnews.com/naval-news/2021/11/russias-aircraft-carrier-admiral-kuznetsov-to-resume-repairs-in-june-2022/ (accessed July 14, 2022), and Christopher Woody, "Russia's Long-Struggling Aircraft Carrier Has Its return to Action Delayed—Again," *Business Insider*, June 8, 2022, https://www.businessinsider.com/russian-aircraft-carrier-admiral-kuznetsov-delayed-again-2022-6?op=1 (accessed July 14, 2022).
- 34. Ryan Pickrell, "Russia Is Planning to Build Its First Nuclear-Powered Aircraft Carrier After Breaking Its Only Flattop," *Business Insider*, May 8, 2019, https://www.businessinsider.com/russia-wants-to-build-its-first-nuclear-powered-aircraft-carrier-2019-5 (accessed July 14, 2022).
- 35. Atle Staalesen, "The 'Moscow' Is on the Bottom of the Black Sea, but on the Shores of the White Sea Awaits a New Carrier," *The Barents Observer*, April 20, 2022, https://thebarentsobserver.com/en/security/2022/04/moscow-bottom-black-sea-shores-white-sea-awaits-new-cruiser (accessed July 14, 2022).
- 36. Thomas Nilsen, "Russian Navy Gets Go-ahead for Design of New Nuclear Powered Destroyers," *The Barents Observer*, August 28, 2017, https://thebarentsobserver.com/en/security/2017/08/russian-navy-gets-go-ahead-design-new-nuclear-powered-destroyers (accessed July 14, 2022).
- 37. Joseph Trevithick, "Russia Has Abandoned Its Massive Nuclear Destroyer and Supersized Frigate Programs," The War Zone, April 21, 2020, https://www.thedrive.com/the-war-zone/33099/russia-has-abandoned-its-massive-nuclear-destroyer-and-supersized-frigate-programs (accessed July 14, 2022).
- 38. Joanne Stocker, "India Signs Contracts to Purchase 4 Admiral Grigorovich-Class Frigates from Russia," *The Defense Post*, November 20, 2018, https://www.thedefensepost.com/2018/11/20/india-russia-4-admiral-grigorovich-project-11356-frigates/ (accessed July 14, 2022), and Ravi Sharma, "Indian Navy's Tushil Frigate Launched in Russia," *Frontline*, October 30, 2021, https://frontline.thehindu.com/dispatches/indian-navys-tushil-frigate-launched-in-russia/article37248605.ece (accessed July 14, 2022).
- 39. Andrew Osborn, "Despite Putin's Swagger, Russia Struggles to Modernize Its Navy," Reuters, February 21, 2019, https://www.reuters.com/article/us-russia-military-insight/despite-putins-swagger-russia-struggles-to-modernize-its-navy-idUSKCN1QA0U7 (accessed July 14, 2022), and Snehesh Alex Philip, "India Gets Ukrainian Engines for Its Stealth Frigates, Sends Them to Shipbuilder in Russia," *The Print*, January 19, 2021, https://theprint.in/defence/india-gets-ukrainian-engines-for-its-stealth-frigates-sends-them-to-shipbuilder-in-russia/587923/ (accessed July 14, 2022).

- 40. International Institute for Strategic Studies, *The Military Balance 2021*, pp. 164 and 171.
- 41. Fatima Bahtić, "Two New Nuclear-Powered Submarines Join Russian Navy," *Naval Today*, December 22, 2021, https://www.navaltoday.com/2021/12/22/two-new-nuclear-powered-submarines-join-russian-navy/ (accessed July 14, 2022).
- 42. Thomas Nilsen, "Russia Launches New Borei-A Class Ballistic Missile Sub," *The Barents Observer*, December 25, 2021, https://thebarentsobserver. com/en/security/2021/12/russia-launches-new-borey-class-ballistic-missile-sub (accessed July 14, 2022).
- 43. Thomas Nilsen, "Sevmash Hands Over Two Nuclear Subs to the Navy," *The Barents Observer*, December 21, 2022, https://thebarentsobserver.com/en/security/2021/12/sevmash-hands-over-two-nuclear-subs-navy (accessed July 15, 2022).
- 44. Nilsen, "Russia Launches New Borei-A Class Ballistic Missile Sub."
- 45. Charlie Gao, "Russia's Husky Class Submarine: Armed with Nuclear Torpedoes and Hypersonic Missiles?" *The National Interest*, The Buzz Blog, May 10, 2018, https://nationalinterest.org/blog/the-buzz/russias-husky-class-submarine-armed-nuclear-torpedoes-25784 (accessed July 14, 2022), and Michael Peck, "Russia Wants to Arm Its New Husky-Class Submarines with Hypersonic Missiles," *The National Interest*, The Buzz Blog, May 31, 2018, http://nationalinterest.org/blog/the-buzz/russia-wants-arm-its-new-husky-class-submarines-hypersonic-26063 (accessed July 14, 2022).
- 46. Gao, "Russia's Husky Class Submarine: Armed with Nuclear Torpedoes and Hypersonic Missiles?"
- 47. Peter Suciu, "Russia's New Laika-Class Submarine: A Threat to the US Navy and NATO?" 1945, March 29, 2022, https://www.19fortyfive.com/2022/03/russias-new-laika-class-submarine-a-threat-to-the-us-navy-and-nato/ (accessed July 14, 2022).
- 48. International Institute for Strategic Studies, *The Military Balance 2017*, p. 174.
- 49. Franz Stefan-Gady, "First Project 636.3 *Kilo*-Class Attack Sub to Enter Service with Russia's Pacific Fleet This Month," *The Diplomat*, November 22, 2019, https://thediplomat.com/2019/11/first-project-636-3-kilo-class-attack-sub-to-enter-service-with-russias-pacific-fleet-this-month/ (accessed July 14, 2022), and International Institute for Strategic Studies, *The Military Balance 2021*, p. 171.
- 50. International Institute for Strategic Studies, *The Military Balance 2022*, p. 171.
- 51. International Institute for Strategic Studies, *The Military Balance 2017*, p. 174.
- 52. Ben Connable, Abby Doll, Alyssa Demus, Dara Massicot, Clint Reach, Anthony Atler, William Mackenzie, Matthew Povlock, and Lauren Skrabala, *Russia's Limit of Advance: Analysis of Russian Ground Force Deployment Capabilities and Limitations* (Santa Monica, CA: RAND Corporation, 2020), pp. xvii and 56, https://www.rand.org/pubs/research\_reports/RR2563.html (accessed July 14, 2022).
- 53. Associated Press, "US Officials Say 2 Russian Transport Planes Shot Down over Ukraine," *The Times of Israel*, February 26, 2022, https://www.timesofisrael.com/liveblog\_entry/us-officials-say-2-russian-transport-planes-shot-down-over-ukraine/ (accessed July 14, 2022). Moscow's first invasion of Ukraine occurred in 2014 when Russia overtook Crimea.
- 54. Roger McDermott, "Moscow Weighs Options to Procure S-500 Air-Defense Systems," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 18, Issue 48 (March 24, 2021), https://jamestown.org/program/moscow-weighs-options-to-procure-s-500-air-defense-systems/ (accessed July 14, 2022).
- 55. Office of the Director of National Intelligence, Annual Threat Assessment of the U.S. Intelligence Community, p. 13.
- 56. BBC News, "Russian Anti-Satellite Missile Test Draws Condemnation," November 16, 2021, https://www.bbc.com/news/science-environment-59299101 (accessed July 14, 2022).
- 57. TASS, "Russia to Modernize Three Early Warning Radars by 2028—Developer," September 25, 2021, https://tass.com/defense/1342247 (accessed July 14, 2022).
- 58. General Tod D. Wolters, United States Air Force, Commander, United States European Command, statement on EUCOM posture before the Committee on Armed Services, U.S. Senate, March 29, 2022, pp. 2–3, https://www.armed-services.senate.gov/imo/media/doc/SASC%2029%20 MAR%202022%20EUCOM%20Statement%20(Gen%20Wolters).pdf (accessed July 14, 2022). On July 1, 2022, retiring General Wolters was succeeded by EUCOM Commander by Army General Christopher G. Cavoli. Greg Hadley, "EUCOM Command Changes Hands at a "Hinge in History," *Air Force Magazine*, July 1, 2022, https://www.airforcemag.com/eucom-command-changes-hands-at-a-hinge-in-history/ (accessed July 20, 2022).
- 59. Reuters, "Russian Navy Starts Baltic Sea Drills—Report," January 24, 2022, https://www.reuters.com/article/ukraine-crisis-russia-balticsea-drills/russian-navy-starts-baltic-sea-drills-report-idUSS8N2SV0A3 (accessed July 14, 2022).
- 60. Ibid.
- 61. Colonel Tomasz K. Kowalik and Dominik P. Jankowski, "The Dangerous Tool of Russian Military Exercises," Foreign Policy Association, Foreign Policy Blogs, June 7, 2017, https://foreignpolicyblogs.com/2017/06/07/dangerous-tool-russian-military-exercises/ (accessed July 14, 2022). Article "originally published by [the] Center for European Policy Analysis."
- 62. Nike Ching, "Blinken Heads to Ukraine After Russia Sends 150K Troops to Border," Voice of America, April 30, 2021, https://www.voanews.com/europe/blinken-heads-ukraine-after-russia-sends-150k-troops-border (accessed July 14, 2022), and Vladimir Isachenkov, "Russian Military Says Its Troops Back to Bases After Buildup," Associated Press, April 29, 2021, https://apnews.com/article/world-news-moscow-ukraine-europe-russia-629232949b5253512a58ca6fef215af9 (accessed July 14, 2022).

- 63. Holly Ellyatt, "Russia Begins Massive Military Drills with Belarus; U.S. Slams 'Escalatory' Action," CNBC, February 10, 2022, https://www.cnbc.com/2022/02/10/russia-set-to-begin-massive-military-drills-with-belarus.html (accessed July 14, 2022).
- 64. Guy Faulconbridge, "Russia Warns United States Against Sending More Arms to Ukraine," Reuters, April 25, 2022, https://www.reuters.com/world/europe/russia-warned-united-states-against-sending-more-arms-ukraine-2022-04-25/ (accessed July 23, 2022), and Jonathan Landay and Michael Martina, "U.S. Cannot 'Take Lightly' Threat Russia Could Use Nuclear Weapons—CIA Chief," Reuters, April 14, 2022, https://www.reuters.com/world/us-cannot-take-lightly-threat-russia-could-use-nuclear-weapons-cia-chief-2022-04-14/ (accessed July 14, 2022).
- 65. Vladimir Putin, Decree No. 400, "On the National Security Strategy of the Russian Federation," July 2, 2021, http://publication.pravo.gov. ru/Document/View/0001202107030001?index=0&rangeSize=1 (accessed July 23, 2022). See also Vladimir Putin, President of the Russian Federation, Presidential Decree No. 400, "On the National Security Strategy of the Russian Federation," Moscow, July 2, 2021, p. 2, https://paulofilho.net.br/wp-content/uploads/2021/10/National\_Security\_Strategy\_of\_the\_Russia.pdf (accessed July 15, 2022): "5. The following basic concepts are used in this Strategy.... 4) Ensuring national security—implementation of public authorities in interaction with civil society institutions and organizations [of] political, legal, military, socio-economic, and informational, organizational and other measures aimed at countering threats to national security."
- 66. "New Version of the Military Doctrine," Russian Strategic Nuclear Forces Blog, December 26, 2014, http://russianforces.org/blog/2014/12/new\_version\_of\_the\_military\_do.shtml (accessed July 15, 2022).
- 67. Federation of American Scientists, Nuclear Information Project, "Status of World Nuclear Forces," https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces/ (accessed July 15, 2022).
- 68. Richard Connolly and Mathieu Boulègue, "Russia's New State Armament Programme: Implications for the Russian Armed Forces and Military Capabilities to 2027," Chatham House: The Royal Institute of International Affairs *Research Paper*, May 2018, p. 16, https://www.chathamhouse.org/sites/default/files/publications/research/2018-05-10-russia-state-armament-programme-connolly-boulegue-final.pdf (accessed July 15, 2022).
- 69. TASS, "Russian Nuclear Trifecta Modernization Level Highest in History, Defense Minister Says."
- 70. International Institute for Strategic Studies, *The Military Balance 2017*, p. 15.
- 71. CBS News, "Russia Says Ukraine War Could Go Nuclear if West Keeps Sending Weapons," April 26, 2022, https://www.cbsnews.com/news/ukraine-news-russia-warns-nuclear-world-war-if-west-keeps-sending-weapons/ (accessed July 15, 2022).
- 72. Wolters, statement on EUCOM posture, March 29, 2022, p. 2.
- 73. Vladimir Putin, Executive Order No. 355, "On Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence," June 2, 2020, https://hansdevreij.com/2022/03/06/basic-principles-of-state-policy-of-the-russian-federation-on-nuclear-deterrence/ (accessed July 23, 2022).
- 74. David Reid, "Russia Threatens Military Response to Any NATO Action over Nuclear-Ready Missile," CNBC, June 26, 2019, https://www.cnbc.com/2019/06/26/russia-threatens-response-to-nato-over-nuclear-ready-ssc-8-missile.html (accessed July 15, 2022), and Jon Henley and Julian Borger, "Russia Warns of Nuclear Weapons in Baltic If Sweden and Finland Join NATO," *The Guardian*, April 14, 2022, https://www.theguardian.com/world/2022/apr/14/russia-says-it-will-reinforce-borders-if-sweden-and-finland-join-nato (accessed July 15, 2022).
- 75. Jen Judson, "Army Readies to Deliver First Set of Strykers with 50-Kilowatt Laser Weapons," *Defense News*, January 13, 2022, https://www.defensenews.com/land/2022/01/13/army-readies-to-deliver-first-set-of-strykers-with-50-kilowatt-laser-weapons/ (accessed July 15, 2022), and Patrick Tucker, "US Missile Defenses Are About to Level up," *Defense One*, August 4, 2020, https://www.defenseone.com/technology/2020/08/us-missile-defenses-are-about-level/167462/ (accessed July 15, 2022).
- 76. News release, "The Truth About Russian Violation of INF Treaty," U.S. Embassy Bratislava, March 28, 2019, https://sk.usembassy.gov/the-truth-about-russian-violation-of-inf-treaty/ (accessed July 15, 2022).
- 77. Radio Free Europe/Radio Liberty, "Report: Russia Has Deployed More Medium-Range Cruise Missiles than Previously Thought," February 10, 2019, https://www.rferl.org/a/report-russia-has-deployed-more-medium-range-cruise-missiles-than-previously-thought/29761868.html (accessed July 15, 2022).
- 78. Michael R. Gordon, "Russia Deploys Missile, Violating Treaty and Challenging Trump," *The New York Times*, February 14, 2017, https://www.nytimes.com/2017/02/14/world/europe/russia-cruise-missile-arms-control-treaty.html (accessed July 15, 2022).
- 79. Jim Garamone, "NATO Agrees: Russia in Material Breach of INF Treaty," U.S. Department of Defense, December 5, 2018, https://dod.defense.gov/News/Article/Article/1705843/nato-agrees-russia-in-material-breach-of-inf-treaty/ (accessed July 15, 2022).
- 80. Fact Sheet, "President Donald J. Trump to Withdraw the United States from the Intermediate-Range Nuclear Forces (INF) Treaty," The White House, February 1, 2019, https://trumpwhitehouse.archives.gov/briefings-statements/president-donald-j-trump-withdraw-united-states-intermediate-range-nuclear-forces-inf-treaty/ (accessed July 15, 2022), and press statement by Michael R. Pompeo, U.S. Secretary of State, "U.S. Withdrawal from the INF Treaty on August 2, 2019," U.S. Mission Russia, August 2, 2019, https://ru.usembassy.gov/u-s-withdrawal-from-the-inf-treaty-on-august-2-2019/ (accessed July 15, 2022).
- 81. Sara Murray, Sam Fossum, and Lindsay Benson, "Maria Butina Released from Federal Prison, Deported to Russia," CNN, updated October 25, 2019, https://www.cnn.com/2019/10/25/politics/maria-butina-released/index.html (accessed July 15, 2022).

- 82. United States Mission to the United Nations, "Statement on the Decision to Initiate the Expulsion of Russian Diplomats in New York," February 28, 2022, https://usun.usmission.gov/statement-on-the-decision-to-initiate-the-expulsion-of-russian-diplomats-in-new-york/ (accessed July 23, 2022).
- 83. Deutsche Welle, "Hundreds of Russian and Chinese Spies in Brussels—Report," February 9, 2019, https://www.dw.com/en/hundreds-of-russian-and-chinese-spies-in-brussels-report/a-47437958 (accessed July 15, 2022).
- 84. Marine Strauss, "Several EU Countries Expel Dozens of Russian Diplomats," Reuters, March 29, 2022, https://www.reuters.com/world/europe/belgium-expels-21-russian-diplomats-foreign-ministry-2022-03-29/ (accessed July 15, 2022).
- 85. Warren Strobel and John Walcott, "Fewer Russian Spies in U.S. but Getting Harder to Track," Reuters, March 28, 2018, https://www.reuters.com/article/us-usa-russia-spies/fewer-russian-spies-in-u-s-but-getting-harder-to-track-idUSKBN1H40JW (accessed July 15, 2022).
- 86. "Russian Spooks Are Being Kicked Out of Europe En Masse," *The Economist*, April 7, 2022, https://www.economist.com/europe/2022/04/07/russian-spooks-are-being-kicked-out-of-europe-en-masse (accessed July 15, 2022).
- 87. BBC News, "Sergei Skripal: Who Is the Former Russian Intelligence Officer?" March 29, 2018, http://www.bbc.com/news/world-europe-43291394 (accessed July 15, 2022); Martin Evans and Victoria Ward, "Salisbury Nerve Agent Backlash: Residents Outraged as 500 Told They May Be at Risk a Week After Spy Attack," *The Telegraph*, March 12, 2018, https://www.telegraph.co.uk/news/2018/03/11/salisbury-public-warned-wash-clothes-nerve-agent-attack/ (accessed July 15, 2022); and Ella Wills, "Police Officer Discharged from Hospital After Salisbury Spy Poisoning Speaks Out: 'Life Will Probably Never Be the Same," *Evening Standard*, March 22, 2018, https://www.standard.co.uk/news/uk/police-officer-discharged-from-hospital-after-salisbury-spy-poisoning-speaks-out-for-first-time-life-a3797041.html (accessed July 15, 2022).
- 88. Lauren Said-Moorhouse and Samuel Quashie-Idun, "Salisbury Declared Novichok-Free Nearly a Year After Nerve Agent Attack," CNN, March 1, 2019, https://www.cnn.com/2019/03/01/uk/salisbury-novichok-cleanup-gbr-intl/index.html (accessed July 15, 2022).
- 89. Heidi Blake, Tom Warren, Richard Holmes, Jason Leopold, Jane Bradley, and Alex Campbell, "From Russia with Blood: The Kremlin's Ruthless Assassination Program and Vladimir Putin's Secret War on the West," BuzzFeed News, June 15, 2017 (including June 16, 2017, update), https://www.buzzfeed.com/heidiblake/from-russia-with-blood-14-suspected-hits-on-british-soil?utm\_term=.dtzm1n1mZB#.po1WlrIWp0 (accessed July 15, 2022).
- 90. Ali Watkins, "Russia Escalates Spy Games After Years of U.S. Neglect," *Politico*, June 1, 2017, http://www.politico.com/story/2017/06/01/russia-spies-espionage-trump-239003 (accessed July 15, 2022).
- 91. Gordon Corera, "Russia Hacked Ukrainian Satellite Communications, Officials Believe," BBC News, March 25, 2022, https://www.bbc.com/news/technology-60796079 (accessed July 15, 2022), and Sean Lyngaas, "US Satellite Operator says Persistent Cyberattack at Beginning of Ukraine War Affected Tens of Thousands of Customers," CNN, March 30, 2022, https://www.cnn.com/2022/03/30/politics/ukraine-cyberattack-viasat-satellite/index.html (accessed July 15, 2022).
- 92. BBC News, "US Charges Russian Spies over Yahoo Breach," March 15, 2017, http://www.bbc.com/news/technology-39281063 (accessed July 15, 2022).
- 93. Nadia Schadlow and Brayden Helwig, "Protecting Undersea Cables Must be Made a National Security Priority," *Defense News*, July 1, 2020, https://www.defensenews.com/opinion/commentary/2020/07/01/protecting-undersea-cables-must-be-made-a-national-security-priority/ (accessed July 15, 2022), and Marcia Wendorf, "Both the U.S. and Russia Are Stalking the World's Undersea Cables," Interesting Engineering, August 16, 2019, https://interestingengineering.com/both-the-us-and-russia-are-stalking-the-worlds-undersea-cables (accessed July 15, 2022).
- 94. Cristina Silva, "New Cold War: Is Russia Spying on the U.S. from a Nicaragua Military Compound?" *Newsweek*, May 22, 2017, http://www.newsweek.com/new-cold-war-russia-spying-us-nicaragua-military-compound-613427 (accessed July 15, 2022).
- 95. Evan Ellis, "Russian Engagement in Latin America: An Update," Center for Strategic and International Studies *Commentary*, December 19, 2017, https://www.csis.org/analysis/russian-engagement-latin-america-update (accessed July 15, 2022).
- 96. Ivan Ulises Klyszcz, "Russia's Central American Engagements," Foreign Policy Research Institute *Russia Foreign Policy Paper*, October 2019, p. 18, https://www.fpri.org/wp-content/uploads/2019/10/rfp1klyszcz.pdf (accessed July 15, 2022).
- 97. R. Evan Ellis, *The New Russian Engagement with Latin America: Strategic Position, Commerce, and Dreams of the Past*, (Carlisle, PA: U.S. Army War College, Strategic Studies Institute, and Army War College Press, June 2015), p. 1, https://publications.armywarcollege.edu/pubs/2345.pdf (accessed July 15, 2022).
- 98. Estonian Foreign Intelligence Service, *International Security and Estonia 2019*, p. 4, https://www.valisluureamet.ee/doc/raport/2019-en.pdf (accessed July 15, 2022).
- 99. Defence Intelligence and Security Service Under the Ministry of National Defence and State Security Department of the Republic of Lithuania, National Threat Assessment 2022, pp. 5 and 8, https://www.vsd.lt/wp-content/uploads/2022/04/ANGL-el-\_.pdf (accessed July 23, 2022). To access reports for prior years, see State Security Department of Lithuania, "Threat Assessments," https://www.vsd.lt/en/threats/threats-national-security-lithuania/ (accessed July 23, 2022).
- 100. State Security Department of the Republic of Lithuania and Second Investigation Department Under the Ministry of National Defence, *National Threat Assessment 2019*, p. 6, https://www.vsd.lt/wp-content/uploads/2019/02/2019-Gresmes-internetui-EN.pdf (accessed July 16, 2022).
- 101. Latvian State Security Service, *Annual Report 2021*, April 2022, pp. 9, 17, and 19, https://vdd.gov.lv/uploads/materials/30/en/annual-report-2021. pdf (accessed July 16, 2022). To access reports for prior years, see Latvian State Security Service, "Annual Reports," https://vdd.gov.lv/en/useful/annual-reports (accessed July 16, 2022).

- 102. Bill Gertz, "Russia Waging Information Warfare, General Says," *The Washington Free Beacon*, March 24, 2017, http://freebeacon.com/national-security/russia-waging-information-warfare-general-says/ (accessed July 15, 2022).
- 103. Meghan Fitzpatrick, Ritu Gill, and Jennifer F. Giles, "Information Warfare: Lessons in Inoculation to Disinformation," *Parameters*, Vol. 52, No. 1 (Spring 2022), p. 108, https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=3132&context=parameters (accessed July 16, 2022).
- 104. Ibid., p. 109. Ellipses in original.
- 105. Mandiant Solutions, "Ghostwriter' Influence Campaign: Unknown Actors Leverage Website Compromises and Fabricated Content to Push Narratives Aligned with Russian Security Interests," 2020, p. 2, https://www.fireeye.com/content/dam/fireeye-www/blog/pdfs/Ghostwriter-Influence-Campaign.pdf (accessed July 16, 2022).
- 106. BBC News, "Hackers Post Fake Stories on Real News Sites 'to Discredit NATO," July 30, 2020, https://www.bbc.com/news/technology-53594440 (accessed July 16, 2022).
- 107. Mandiant Solutions, "'Ghostwriter' Influence Campaign," p. 8.
- 108. Bill Gertz, "Russia Steps up Anti-U.S. Military Propaganda," *The Washington Free Beacon*, April 27, 2017, http://freebeacon.com/national-security/russia-steps-anti-u-s-military-propaganda/ (accessed July 18, 2022).
- 109. John Vandiver, "Poland Hit by Wave of Fake News Before Start of Major Military Exercise with US," Stars and Stripes, May 29, 2020, https://www.stripes.com/theaters/europe/poland-hit-by-wave-of-fake-news-before-start-of-major-military-exercise-with-us-1.631647 (accessed July 18, 2022).
- 110. Kalev Stoicescu and Pauli Järvenpää, *Contemporary Deterrence: Insights and Lessons from Enhanced Forward Presence*, International Centre for Defense and Security, January 2019, p. 13, https://icds.ee/wp-content/uploads/2019/01/ICDS\_Report\_Contemporary\_Deterrence\_Stoicescu\_J%C3%A4rvenp%C3%A4%C3%A4\_January\_2019.pdf (accessed July 16, 2022).
- 111. Nika Aleksejeva, "#BalticBrief: The Kremlin's Loudspeaker in Latvia," Atlantic Council, Digital Forensic Research Lab, November 19, 2018, https://medium.com/dfrlab/balticbrief-the-kremlins-loudspeaker-in-latvia-14c6398b2473 (accessed July 16, 2022).
- 112. Agence France-Presse, "Baltics, Poland Urge Social Media Giants to Curb 'Russian Disinformation," *Barron's*, February 28, 2022, https://www.barrons.com/news/baltics-poland-urge-social-media-giants-to-curb-russian-disinformation-01646062508 (accessed July 16, 2022).
- 113. Kathrin Hille, Neil Buckley, Courtney Weaver, and Guy Chazan, "Vladimir Putin Signs Treaty to Annex Crimea," *Financial Times*, March 18, 2014, http://www.ft.com/cms/s/0/d93e4c7c-ae6d-1le3-8e41-00144feab7de.html (accessed July 16, 2022).
- 114. Janusz Bugajski and Peter B. Doran, "Black Sea Rising: Russia's Strategy in Southeast Europe," Center for European Policy Analysis *Black Sea Strategic Report* No. 1, February 2016, p. 8, https://docs.wixstatic.com/ugd/644196\_29f8496cc1934185865b81480c4561b5.pdf (accessed July 16, 2022).
- 115. Vanessa Romo, "Putin's Bridge Linking Russia to (Annexed) Crimea Opens," NPR, May 15, 2018, https://www.npr.org/sections/thetwo-way/2018/05/15/611392565/putins-bridge-linking-russia-to-annexed-crimea-opens (accessed July 16, 2022).
- 116. UNIAN Information Agency, "Shipping Volumes at Mariupol Port Fall 10% Against 2017—Media," January 9, 2019, https://www.unian.info/economics/10402497-shipping-volumes-at-mariupol-port-fall-10-against-2017-media.html (accessed July 16, 2022).
- 117. France 24, "Putin Opens Railway Bridge Connecting Crimea to Russia," December 23, 2019, https://www.france24.com/en/20191223-putin-opens-railway-bridge-connecting-crimea-to-russia (accessed July 16, 2022).
- 118. International Institute for Strategic Studies, *The Military Balance 2022*, p. 208, and "Deployment: Ukraine," in International Institute for Strategic Studies, *The Military Balance 2021*, p. 205. Ukraine has put the number of Russian troops in occupied Crimea at more than 31,000; however, with Russia's military buildup in April 2021, the number could now be closer to 40,000. Ukrinform, "Already 31,500 Russian Troops Deployed in Occupied Crimea," November 7, 2019, https://www.ukrinform.net/rubric-polytics/2813512-already-31500-russian-troops-deployed-in-occupied-crimea.html (accessed July 16, 2022), and Dan DeLuce, "Steady Increase in Russian Troops in Crimea on Ukraine Border, Pentagon Says," NBC News, updated April 20, 2021, https://www.nbcnews.com/news/world/steady-increase-russian-troops-crimea-ukraine-border-says-pentagon-n1264546 (accessed July 16, 2022).
- 119. Michael Petersen, "The Naval Power Shift in the Black Sea," War on the Rocks, January 9, 2019, https://warontherocks.com/2019/01/the-naval-power-shift-in-the-black-sea/ (accessed July 16, 2022).
- 120. Dmitry Gorenburg, "Is a New Russian Black Sea Fleet Coming? Or Is It Here?" War on the Rocks, July 31, 2018, https://warontherocks.com/2018/07/is-a-new-russian-black-sea-fleet-coming-or-is-it-here/ (accessed July 18, 2022).
- 121. Kanaryan Lyudmila, "U.S. Experts Show Russian Military Equipment Transferred to Crimea amid Recent Build-up (Photo)," UNIAN Information Agency, May 6, 2021, https://www.unian.info/world/russian-aggression-u-s-experts-show-russian-military-equipment-transferred-to-crimea-amid-recent-buildup-11411557.html (accessed July 18, 2022).
- 122. Bugajski and Doran, "Black Sea Rising: Russia's Strategy in Southeast Europe," p. 3.
- 123. Heather Mongilio, "Turkey Closes Bosphorus, Dardanelles Straits to Warships," U.S. Naval Institute News, February 28, 2022, https://news.usni. org/2022/02/28/turkey-closes-bosphorus-dardanelles-straits-to-warships (accessed July 16, 2022).
- 124. Ukrayinska Pravda, "All Russian Black Sea Fleet Submarines Went to Sea—Media," Yahoo, May 13, 2022, https://www.yahoo.com/video/russian-black-sea-fleet-submarines-183926101.html (accessed July 18, 2022); Steve Balestrieri, "Admiral Makarov: The Next Russian Warship Attacked by Ukraine?" 1945, May 6, 2022, https://www.19fortyfive.com/2022/05/admiral-makarov-the-next-russian-warship-attacked-by-ukraine/ (accessed July 18, 2022); and Gorenburg, "Is a New Russian Black Sea Fleet Coming? Or Is It Here?"

- 125. TASS, "Project 22350 Gorshkov-Class Frigates to Join Russia's Black Sea Fleet," *Naval News*, April 2, 2021, https://www.navalnews.com/naval-news/2020/04/project-22350-gorshkov-class-frigates-to-join-russias-black-sea-fleet/#:~:text=The%20latest%20frigates%20of%20 project,necessary%20infrastructure%20will%20be%20built.&text=Experts%20say%20the%20Russian%20frigates,major%20deterrence%20 in%20the%20region (accessed July 18, 2022), and Atle Staalesen, "The 'Moscow' Is on the Bottom of the Black Sea, but on the Shores of the White Sea Awaits a New Cruiser," *The Barents Observer*, April 20, 2022, https://thebarentsobserver.com/en/security/2022/04/moscow-bottom-black-sea-shores-white-sea-awaits-new-cruiser (accessed July 18, 2022).
- 126. "Russia: SSGN Severodvinsk to Get Caliber Cruise Missiles," *Naval Today*, August 16, 2012, http://navaltoday.com/2012/08/16/russia-ssgn-severodvinsk-to-get-caliber-cruise-missiles/ (accessed July 18, 2022).
- 127. Douglas Barrie and Nick Childs, "The *Moskva* Incident and Its Wider Implications," International Institute for Strategic Studies, Military Balance Blog, April 29, 2022, https://www.iiss.org/blogs/military-balance/2022/04/the-moskva-incident-and-its-wider-implications (accessed July 18, 2022).
- 128. Petersen, "The Naval Power Shift in the Black Sea."
- 129. Mark Episkopos, "Russia's New S-350 Air Defense System Could See Combat in Crimea and Syria," *The National Interest*, The Reboot Blog, August 15, 2020, https://nationalinterest.org/blog/reboot/russias-new-s-350-air-defense-system-could-see-combat-crimea-and-syria-166969 (accessed July 18, 2022), and Maxim Starchak, "New S-350 Missile System Will Strengthen Russian Air Defense," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 17, Issue 46 (April 7, 2020), https://jamestown.org/program/new-s-350-missile-system-will-strengthen-russian-air-defense/ (accessed July 18, 2022).
- 130. Sergey Sukhankin, "Russia Pours More Military Hardware into 'Fortress Crimea," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 14, Issue 147 (November 14, 2017), https://jamestown.org/program/russia-pours-military-hardware-fortress-crimea/ (accessed July 18, 2022).
- 131. Petersen. "The Naval Power Shift in the Black Sea."
- 132. Cory Welt, "Moldova: An Overview," Congressional Research Service *In Focus* No. IF10894, updated August 27, 2021, https://sgp.fas.org/crs/row/IF10894.pdf (accessed July 18, 2022).
- 133. Dumitru Minzarari, "Russia Perfecting Its Elections Interference Toolkit in Moldova," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 16, Issue 12 (January 31, 2019), https://jamestown.org/program/russia-perfecting-its-elections-interference-toolkit-in-moldova/ (accessed June 20, 2021).
- 134. "Russia Stages Drills in Moldova's Breakaway Transnistria," *The Moscow Times*, February 1, 2022, https://www.themoscowtimes.com/2022/02/01/russia-stages-drills-in-moldovas-breakaway-transnistria-a76222 (accessed May 31, 2022).
- 135. "Mobilization in Unrecognized Transnistria Fails, but Threat Remains, Says Odesa Regional Governor," Yahoo News, May 30, 2022, https://news. yahoo.com/mobilization-unrecognized-transnistria-fails-threat-095400385.html (accessed July 18, 2022).
- 136. Sergey Sukhankin, "Kaliningrad: From Boomtown to Battle-Station," European Council on Foreign Relations *Commentary*, March 27, 2017, https://www.ecfr.eu/article/commentary\_kaliningrad\_from\_boomtown\_to\_battle\_station\_7256 (accessed July 18, 2022).
- 137. Michael Krepon and Joe Kendall, "Beef up Conventional Forces; Don't Worry About a Tactical Nuke Gap," *Breaking Defense*, March 28, 2016, http://breakingdefense.com/2016/03/beef-up-conventional-forces-dont-worry-about-a-tactical-nuke-gap/ (accessed July 18, 2022), and Sukhankin, "Kaliningrad: From Boomtown to Battle-Station."
- 138. State Security Department of the Republic of Lithuania and Defence Intelligence and Security Service Under the Ministry of National Defence, *National Threat Assessment 2021*, pp. 31–32, https://www.vsd.lt/wp-content/uploads/2021/03/2021-EN-el\_.pdf (accessed July 18, 2022).
- 139. International Institute for Strategic Studies, *The Military Balance 2020: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2020), p. 171.
- 140. Kalev Stoicescu and Henrik Praks, "Strengthening the Strategic Balance in the Baltic Sea Area," International Centre for Defence and Security Report, March 2016, p. 14, https://icds.ee/wp-content/uploads/2016/Kalev\_Stoicescu\_\_Henrik\_Praks\_-\_Strengthening\_the\_Strategic\_Balance\_in the Baltic Sea Area.pdf (accessed July 18, 2022).
- 141. International Institute for Strategic Studies, *The Military Balance 2017*, p. 216, and Damien Sharkov, "Russian Military Asks Weapons Makers to Extend Range and Precision of Nuclear-Capable Iskander Missiles," *Newsweek*, May 19, 2017, http://www.newsweek.com/russia-military-weapons-maker-nato-arms-missiles-iskander-nuclear-capable-612409 (accessed July 18, 2022).
- 142. Julie Coleman, "Ukrainians Have Found Mystery Warheads that Look Like Darts. They're Russia's New Weapon," *Business Insider*, March 15, 2022, https://www.businessinsider.com/ukraine-found-dart-like-mystery-warheads-theyre-russias-new-weapon-2022-3 (accessed July 18, 2022).
- 143. Kyodo News, "Russia Plans Additional Missile Defense Buildup on Kuril Islands," September 2, 2019, https://english.kyodonews.net/news/2019/09/590dd4e9b6eb-russia-plans-additional-missile-defense-buildup-on-kuril-islands.html (accessed July 18, 2022).
- 144. Associated Press, "Russia Deploys Missiles to Pacific Islands Claimed by Japan," December 1, 2020, https://apnews.com/article/international-news-world-war-ii-kuril-islands-japan-russia-15dbd41dba12496daaeb1b59e5244681 (accessed July 18, 2022).
- 145. Associated Press, "Russia Sends Defence Missiles to Pacific Islands Claimed by Japan," *The Guardian*, December 2, 2021, https://www.theguardian.com/world/2021/dec/02/russia-sends-defence-missiles-to-pacific-islands-claimed-by-japan (accessed July 18, 2022). See also Erin Brady, "Russia Deploys Missiles, Stations Personnel on Island in Middle of Chain Claimed by Japan," *Newsweek*, December 2, 2021, https://www.newsweek.com/russia-deploys-missiles-stations-personnel-island-middle-chain-claimed-japan-1655535 (accessed July 18, 2022).

- 146. Reuters, "Russia Conducts Military Drills on Isles Disputed with Japan," March 26, 2022, https://www.reuters.com/world/europe/russia-conducts-military-drills-isles-disputed-with-japan-media-2022-03-26/ (accessed July 18, 2022).
- 147. Shaheer Ahmad and Mohammad Ali Zafar, "Russia's Reimagined Arctic in the Age of Geopolitical Competition," *Journal of Indo-Pacific Affairs*, March 9, 2022, https://www.airuniversity.af.edu/JIPA/Display/Article/2959221/russias-reimagined-arctic-in-the-age-of-geopolitical-competition/(accessed July 18, 2022).
- 148. Nick Paton Walsh, "Satellite Images Show Huge Russian Military Buildup in the Arctic," CNN, updated April 5, 2021, https://www.cnn. com/2021/04/05/europe/russia-arctic-nato-military-intl-cmd/index.html (accessed July 18, 2022).
- 149. Tom Parfitt, "Russia Plants Flag on North Pole Seabed," *The Guardian*, August 2, 2007, https://www.theguardian.com/world/2007/aug/02/russia. arctic (accessed July 18, 2022).
- 150. Dmitry Gorenburg, "Russia's New and Unrealistic Naval Doctrine," War on the Rocks, July 26, 2017, https://warontherocks.com/2017/07/russias-new-and-unrealistic-naval-doctrine/ (accessed July 18, 2022).
- 151. Daniel Brown, "Russia's NATO Northern Fleet Beefs up Its Nuclear Capabilities to Phase 'NATO Out of Arctic," *Business Insider*, June 1, 2017, http://www.businessinsider.com/russias-northern-fleet-beefs-up-its-nuclear-capabilities-phase-nato-out-arctic-2017-6 (accessed July 18, 2022).
- 152. Joseph Trevithick, "Three Russian Ballistic Missile Submarines Just Surfaced Through the Arctic Ice Together," The War Zone, March 26, 2021, https://www.thedrive.com/the-war-zone/39953/three-russian-ballistic-missile-submarines-just-surfaced-through-the-arctic-ice-together (accessed July 18, 2022). See also Reuters, "Three Russian Submarines Surface and Break Arctic Ice During Drills," March 26, 2021, https://www.reuters.com/article/us-russia-military-arctic/three-russian-submarines-surface-and-break-arctic-ice-during-drills-idUSKBN2BI2RZ (accessed July 18, 2022).
- 153. Katherine Fung, "Russia Withdraws from Nuclear Arctic Safety Program Amid Analysts' Concerns," *Newsweek*, June 2, 2022, https://www.newsweek.com/russia-withdraws-nuclear-arctic-safety-program-amid-analysts-concerns-1712362 (accessed July 18, 2022).
- 154. Charles Digges, "Russia's Floating Nuclear Plant to Make Its Way Across the Arctic," *The Maritime Executive*, August 6, 2019, https://maritime-executive.com/editorials/russia-s-floating-nuclear-plant-to-make-its-way-across-the-arctic (accessed July 18, 2022).
- 155. News release, "NATO Allies Sign Accession Protocols for Finland and Sweden," North Atlantic Treaty Organization, July 5, 2022, https://www.nato.int/cps/en/natohq/news\_197763.htm (accessed July 23, 2022), and Sylvia Amaro, "Finland and Sweden Move a Step Closer to NATO Membership with Accession Sign-off," CNBC, July 5, 2022, https://www.cnbc.com/2022/07/05/finland-and-sweden-move-a-step-closer-to-nato-membership.html (accessed July 23, 2022).
- 156. Thomas Nilsen, "U.S. Navy Will Build Airport Infrastructure in Northern Norway to Meet Upped Russian Submarine Presence," *The Barents Observer*, April 16, 2021, https://thebarentsobserver.com/en/security/2021/04/us-navy-build-airport-infrastructure-northern-norway-meet-increased-russian (accessed July 18, 2022).
- 157. Transcript, "Press Conference by Jens Stoltenberg in Bardufoss, Norway for Exercise Cold Response," North Atlantic Treaty Organization, March 25, 2022, https://www.nato.int/cps/en/natohq/opinions\_193681.htm (accessed July 18, 2022).
- 158. Thomas Nilsen, "FSB Gets Right to Confiscate Land from People," *The Barents Observer*, May 16, 2017, https://thebarentsobserver.com/en/security/2017/05/fsb-gets-right-confiscate-land-people (accessed July 18, 2022).
- 159. Atle Staalesen, "New FSB Base Opens Way for More Operations in Arctic," *The Barents Observer*, January 3, 2019, https://thebarentsobserver. com/en/security/2019/01/new-fsb-base-opens-way-more-operations-arctic (accessed July 18, 2022).
- 160. BBC News, "Putin Creates New National Guard in Russia 'to Fight Terrorism," April 6, 2016, https://www.bbc.com/news/world-europe-35975840 (accessed July 18, 2022), and Atle Staalesen, "National Guard Becomes Arctic Protector," *The Barents Observer*, January 28, 2019, https://thebarentsobserver.com/en/security/2019/01/national-guard-becomes-arctic-protector (accessed July 18, 2022).
- 161. Reuters, "Russia's Novatek Approves Arctic LNG 2 Financing of \$11 bln by End-Q2," April 23, 2021, https://www.reuters.com/business/energy/russias-novatek-approves-arctic-lng-2-financing-11-bln-by-end-q2-2021-04-23/ (accessed July 18, 2022).
- 162. Atle Staalesen, "Russia's Grand Arctic LNG Project Might Come to Halt," *The Barents Observer*, March 3, 2022, https://thebarentsobserver.com/en/2022/03/russias-grand-arctic-lng-project-might-come-halt (accessed July 18, 2022).
- 163. Atle Staalesen, "It's an Order from the Kremlin: Shipping on Northern Sea Route to Reach 80 Million Tons by 2024," *The Barents Observer*, May 15, 2018, https://thebarentsobserver.com/en/arctic/2018/05/its-order-kremlin-shipping-northern-sea-route-increase-80-million-tons-2024 (accessed July 18, 2022).
- 164. Reuters, "Russia Aims for Year-Round Shipping via Northern Sea Route in 2022 or 2023," October 11, 2021, https://www.reuters.com/world/europe/russia-aims-year-round-shipping-via-northern-sea-route-2022-or-2023-2021-10-11/ (accessed July 18, 2022).
- 165. Elizabeth McLaughlin, "The Race for the Arctic: As New Frontier Opens, Russia Leaves US in Its Wake," ABC News, May 10, 2017, http://abcnews. go.com/International/race-arctic-frontier-opens-russia-leaves-us-wake/story?id=47304875 (accessed July 18, 2022), and Andrew Osborn, "Putin's Russia in Biggest Arctic Military Push Since Soviet Fall," Reuters, January 30, 2017, http://mobile.reuters.com/article/idUSKBN15E0W0 (accessed July 18, 2022).
- 166. Atle Staalesen, "New Arctic Naval Base Built in 6 Months," *The Barents Observer*, January 30, 2019, https://thebarentsobserver.com/en/civil-society-and-media/2019/01/new-arctic-naval-base-built-6-months (accessed July 18, 2022).

- 167. Matthew Melino, Heather A. Conley, and Joseph S. Bermudez Jr., "Tiksi Airbase—Many Russian Announcements, Little Equipment," Center for Strategic and International Studies *Brief*, March 2020, p. 1, https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/200326\_Tiksi\_WEB%20FINAL\_UPDATE\_1.pdf (accessed July 18, 2022).
- 168. Atle Staalesen, "Russian Navy Announces It Will Significantly Expand Arctic Air Patrols," *The Barents Observer*, January 2, 2018, https://thebarentsobserver.com/en/security/2018/01/russian-navy-announces-it-will-significantly-increase-arctic-air-patrols (accessed July 18, 2022), and Atle Staalesen, "Navy Pilots Take Off to New Arctic Bases," *The Barents Observer*, March 13, 2019, https://thebarentsobserver.com/en/2019/03/navy-pilots-take-new-arctic-bases (accessed July 18, 2022).
- 169. Kostya Manenkov and Vladimir Isachenkov, "Russia's Northernmost Base Projects Its Power Across Arctic," Associated Press, May 18, 2021, https://apnews.com/article/arctic-europe-russia-business-technology-b67c5b28d917f03f9340d4a7b4642790 (accessed July 18, 2022).
- 170. Meghan Sullivan, "Monitoring the Arctic in Russian Invasion of Ukraine," Indian Country Today, updated March 8, 2022, https://indiancountrytoday.com/news/monitoring-the-arctic-in-russian-invasion-of-ukraine (accessed July 18, 2022).
- 171. Thomas Newdick, "Russia Bolsters Its Arctic Defenses with MiG-31 Interceptor Rotation in the Far North," The War Zone, February 9, 2021, https://www.thedrive.com/the-war-zone/39155/russia-bolsters-its-arctic-defenses-with-mig-31-fighter-jet-rotation-in-the-far-north (accessed July 18, 2022).
- 172. Staalesen, "Navy Pilots Take Off to New Arctic Bases."
- 173. Thomas Nilsen, "Russia Resumes North Pole Patrols with Fighter Jets," *The Barents Observer*, February 2, 2019, https://thebarentsobserver.com/en/security/2019/02/russia-resumes-north-pole-patrols-fighter-jets (accessed July 18, 2022).
- 174. Thomas Nilsen, "In Polar Night, Russia Exercises Strategic Bombers and Newest Frigate," *The Barents Observer*, January 27, 2019, https://thebarentsobserver.com/en/security/2019/01/polar-night-russia-exercises-strategic-bombers-and-newest-frigate (accessed July 18, 2022).
- 175. Thomas Nilsen, "Video: Russian Bombers Outside Norway for Second Time in a Week," *The Barents Observer*, April 4, 2019, https://thebarentsobserver.com/en/security/2019/04/video-russian-bombers-outside-norway-second-time-week (accessed July 18, 2022).
- 176. Damien Sharkov, "Russia Deploys Air Radar on Arctic Wrangel Island," *Newsweek*, January 4, 2017, http://www.newsweek.com/russia-deploys-air-radar-arctic-wrangel-island-538527 (accessed July 18, 2022).
- 177. Thomas Nilsen, "Russia Plans to Lay Trans-Arctic Fiber Cable Linking Military Installations," *The Barents Observer*, April 24, 2018, https://thebarentsobserver.com/en/security/2018/04/russia-slated-lay-military-trans-arctic-fibre-cable (accessed July 18, 2022).
- 178. Gleb Stolyarov, "Russia Starts Operation to Lay Undersea Fibre Optic Cable through Arctic," Reuters, August 6, 2021, https://www.reuters.com/technology/russia-starts-operation-lay-undersea-fibre-optic-cable-through-arctic-2021-08-06/ (accessed July 18, 2022).
- 179. Thomas Nilsen, "Russia to Test-Launch Rockets Near Norway's Arctic Coast in Last Days of Trident Juncture," Radio Canada International, Eye on the Arctic, October 31, 2018, http://www.rcinet.ca/eye-on-the-arctic/2018/10/31/russia-missile-launch-norway-finnmark-arctic-flight-nato-trident-juncture/ (accessed July 18, 2022).
- 180. Thomas Nilsen, "Northern Fleet Frigate Fired Missile at Target on Novaya Zemlya as British Reconnaissance Aircraft Was Watching," *The Barents Observer*, March 25, 2021, https://thebarentsobserver.com/en/security/2021/03/northern-fleet-makes-ready-missile-tests (accessed July 18, 2022).
- 181. Jyri Lavikainen, "Strengthening Russia's Nuclear Forces in the Arctic: The Case of the Kinzhal Missile," Center for Strategic and International Studies, September 2021, p. 1, https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/210914\_Lavikainen\_URMT2021.pdf?B1t3v3\_ehfwgpc8.s WJUqBqpB3 oV.j (accessed July 18, 2022).
- 182. Mathieu Boulègue, "Russia's Military Posture in the Arctic: Managing Hard Power in a 'Low Tension' Environment," Chatham House: The Royal Institute of International Affairs *Research Paper*, June 2019, p. 16, https://www.chathamhouse.org/sites/default/files/2019-06-28-Russia-Military-Arctic 0.pdf (accessed July 18, 2022).
- 183. Stephen Blank, "Russia's New Arctic Base Continue[s] the Militarization of the High North," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 12, Issue 202 (November 6, 2015), http://www.jamestown.org/single/?tx\_ttnews%5Btt\_news%5D=44572&no\_cache=1#.VxqCwfkrJph (accessed July 18, 2022); Osborn, "Putin's Russia in Biggest Arctic Military Push Since Soviet Fall"; and Franz Stefan-Gady, "Russia Launches New Nuclear-Powered Icebreaker," *The Diplomat*, May 27, 2019, https://thediplomat.com/2019/05/russia-launches-new-nuclear-powered-icebreaker/ (accessed July 18, 2022).
- 184. Reuters, "Russia Says World's Largest Nuclear Icebreaker Embarks on Arctic Voyage," September 22, 2020, https://www.reuters.com/article/us-russia-arctic-icebreaker/russia-says-worlds-largest-nuclear-icebreaker-embarks-on-arctic-voyage-idUSKCN26D1FO (accessed July 18, 2022), and Thomas Nilsen, "Russia's New Giant Icebreaker Sailed Straight to the North Pole," *The Barents Observer*, October 5, 2020, https://thebarentsobserver.com/en/arctic/2020/10/russias-new-giant-icebreaker-sailed-straight-north-pole (accessed July 18, 2022).
- 185. Atle Staalesen, "World's Most Powerful Icebreaker Makes Maiden Voyage Across Arctic Route," *The Barents Observer*, January 3, 2022, https://thebarentsobserver.com/en/industry-and-energy/2022/01/worlds-most-powerful-icebreaker-makes-maiden-voyage-across-arctic-route (accessed July 18, 2022).
- 186. TASS, "Russia's Newest Nuclear-Powered Icebreaker Arrives in Murmansk," Arctic Today, January 25, 2022, https://www.arctictoday.com/russias-newest-nuclear-powered-icebreaker-arrives-in-murmansk/ (accessed July 18, 2022).

- 187. Kyle Mizokami, "Russia Launches Belgorod, the World's Longest Submarine," *Popular Mechanics*, April 24, 2019, https://www.popularmechanics.com/military/navy-ships/a27243915/russia-launches-belgorod-the-worlds-longest-submarine/ (accessed July 18, 2022).
- 188. Alex Lockie, "Russia Says It's Going to Arm a Submarine with 6 Nuclear 'Doomsday' Devices," *Business Insider*, March 12, 2019, https://www.businessinsider.com/russia-to-arm-a-secretive-submarine-with-6-nuclear-doomsday-devices-2019-3 (accessed July 18, 2022). See also TASS, "Russian Northern Fleet Creates Submarine Division for Deep-Water Operations," *Navy Recognition*, posted April 27, 2018, https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2018/april-2018-navy-naval-defense-news/6169-russian-northern-fleet-creates-submarine-division-for-deep-water-operations.html (accessed July 18, 2022), and RIA Novosti, "Russia to Convert Belgorod Submarine for Special Missions," RP Defense, February 9, 2012, http://rpdefense.over-blog.com/article-russia-to-convert-belgorod-submarine-for-special-missions-98932964.html (accessed July 18, 2022).
- 189. Lockie, "Russia Says It's Going to Arm a Submarine with 6 Nuclear 'Doomsday' Devices."
- 190. Sputnik, "Russian Navy to Receive Biggest and Most Unique Nuclear Submarine in the World," updated April 23, 2017, https://sputniknews.com/military/201704231052905471-russia-navy-biggest-sub/ (accessed July 18, 2022).
- 191. Thomas Nilsen, "Russia's Nuclear Submarine Construction Reaches Post-Soviet High," *The Barents Observer*, January 6, 2022, https://thebarentsobserver.com/en/security/2022/01/bustling-sevmash-shipyard-enters-new-year-post-soviet-high-construction-peak (accessed July 18, 2022).
- 192. Kramer, "In the Russian Arctic."
- 193. Quoted in Ronald O'Rourke, Laura B. Comay, Peter Folger, John Frittelli, Marc Humphries, Jane A. Leggett, Jonathan L. Ramseur, Pervaze A. Sheikh, and Harold F. Upton, "Changes in the Arctic: Background and Issues for Congress," Congressional Research Service *Report for Members and Committees of Congress* No. R41153, updated May 17, 2021, p. 20, https://crsreports.congress.gov/product/pdf/R/R41153/179 (accessed July 18, 2022).
- 194. Civil Georgia, "Moscow, Sokhumi Endorse Final Text of New Treaty," November 22, 2014, http://www.civil.ge/eng/article.php?id=27841 (accessed July 18, 2022).
- 195. Civil Georgia, "Tbilisi Condemns Russia's Move to Sign New Treaty with Sokhumi," November 22, 2014, http://www.civil.ge/eng/article.php?id=27842 (accessed July 18, 2022).
- 196. Radio Free Europe/Radio Liberty, "U.S. Condemns Russian Military Deal with Georgian Breakaway Region," January 26, 2018, https://www.rferl. org/a/u-s-condemns-russian-ossetia-military-deal-georgia/29000754.html (accessed July 18, 2022), and press statement, "Russia's Violations of Georgian Sovereignty," U.S. Department of State, January 26, 2018, https://2017-2021.state.gov/russias-violations-of-georgian-sovereignty/index. html (accessed July 18, 2022).
- 197. France 24, "Georgia's Separatist South Ossetia Region to Hold Referendum on Joining Russia," May 13, 2022, https://www.france24.com/en/europe/20220513-georgia-s-separatist-south-ossetia-region-to-hold-referendum-on-joining-russia (accessed July 18, 2022), and Deutsche Welle, "South Ossetia Shelves Plan for Referendum to Join Russia," May 31, 2022, https://www.dw.com/en/south-ossetia-shelves-plan-for-referendum-to-join-russia/a-61982164 (accessed July 18, 2022).
- 198. Adrian Croft, "Georgia Says Russia Bent on 'Creeping Annexation' of Breakaway Regions," Reuters, February 26, 2015, http://www.reuters.com/article/us-georgia-russia-idUSKBN0LU2M020150226 (accessed July 18, 2022).
- 199. U.S. Embassy in Georgia, "Statement on Continued 'Borderization' Activities Along the ABL, as Well as Disinformation Campaign Against the Lugar Center," May 27, 2020, https://ge.usembassy.gov/u-s-embassy-statement-on-continued-borderization-activities-along-the-abl-as-well-as-the-disinformation-campaign-against-the-lugar-center-may-27/#.Xs57tRzLz2g.twitter (accessed July 18, 2022).
- 200. Andrew Osborn, "Russia to Beef up Military Presence in Former Soviet Space," *The Telegraph*, August 18, 2010, http://www.telegraph.co.uk/news/worldnews/europe/russia/7952433/Russia-to-beef-up-military-presence-in-former-Soviet-space.html (accessed July 18, 2022).
- 201. International Institute for Strategic Studies, The Military Balance 2022, p. 182.
- 202. Joshua Kucera and Bradley Jardine, "Armenia Elects Protest Leader as Prime Minister," Eurasianet, May 8, 2018, https://eurasianet.org/s/armenia-elects-protest-leader-as-prime-minister (accessed July 18, 2022).
- 203. Radio Free Europe/Radio Liberty Armenian Service, "U.S. Frowns on Armenia's Involvement in Russia-Backed Syria Mission," February 13, 2019, https://www.rferl.org/a/us-frowns-on-armenia-s-involvement-in-russia-backed-syria-mission/29768111.html (accessed July 18, 2022).
- 204. In 1991, the Azerbaijan SSR Parliament dissolved the Nagorno-Karabakh Autonomous Oblast and divided the area among five rayons (administrative regions) in Azerbaijan.
- 205. Luke Coffey, "Winners and Losers of the Second Karabakh War," *Arab News*, November 21, 2020, https://www.arabnews.com/node/1766356 (accessed July 18, 2022).
- 206. BBC News, "Armenia, Azerbaijan and Russia Sign Nagorno-Karabakh Peace Deal," November 10, 2020, https://www.bbc.com/news/world-europe-54882564 (accessed July 18, 2022).
- 207. Al Jazeera, "Azerbaijan Accuses Armenia of Shooting as Border Tensions Rise," May 28, 2021, https://www.aljazeera.com/news/2021/5/28/azerbaijan-accuses-armenia-of-shooting-as-border-tensions-rise (accessed July 18, 2022).

- 208. Nurlan Aliyev, "Russia's Arms Sales: A Foreign Policy Tool in Relations with Azerbaijan and Armenia," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 15, Issue 47 (March 28, 2018), https://jamestown.org/program/russias-arms-sales-foreign-policy-tool-relations-azerbaijan-armenia/ (accessed July 18, 2022).
- 209. Eduard Abrahamyan, "Is Russia Cultivating 'Symmetric Separatism' in Karabakh?" Jamestown Foundation *Eurasia Daily Monitor*, Vol. 16, Issue 83 (June 5, 2019), https://jamestown.org/program/is-russia-cultivating-symmetric-separatism-in-karabakh/ (accessed July 18, 2022).
- 210. For a detailed examination of the Russia-Assad relationship, see *Russia's War in Syria: Assessing Russian Military Capabilities and Lessons Learned*, ed. Robert E. Hamilton, Chris Miller, and Aaron Stein (Philadelphia, PA: Foreign Policy Research Institute, 2020), https://www.fpri.org/wp-content/uploads/2020/09/russias-war-in-syria.pdf (accessed July 18, 2022).
- 211. Reuters, "Russia Establishing Permanent Presence at Its Syrian Bases: RIA," December 26, 2017, https://www.reuters.com/article/us-mideast-crisis-syria-russia-bases/russia-establishing-permanent-presence-at-its-syrian-bases-ria-idUSKBNIEKOHD (accessed July 18, 2022).
- 212. TASS, "Russia Builds up Mediterranean Naval Force," *Naval News*, May 6, 2020, https://www.navalnews.com/naval-news/2020/05/russia-builds-up-mediterranean-naval-force/ (accessed July 18, 2022).
- 213. Jamie Dettmer, "Russia Expands Military Facilities in Syria," Voice of America, May 12, 2021, https://www.voanews.com/middle-east/russia-expands-military-facilities-syria (accessed July 18, 2022).
- 214. Reuters, "Russia to Upgrade Its Naval, Air Bases in Syria: Interfax," January 15, 2017, http://www.reuters.com/article/us-mideast-crisis-syria-russia-base-idUSKBN14Z0FQ (accessed July 18, 2022).
- 215. Joseph Trevithick, "Russia Is Extending One of the Runways at Its Syrian Airbase," The War Zone, February 6, 2021, https://www.thedrive.com/the-war-zone/39113/what-does-russia-have-planned-for-its-lengthened-runway-at-its-air-base-in-syria (accessed July 18, 2022).
- 216. Jonathan Marcus, "Russia S-400 Syria Missile Deployment Sends Robust Signal," BBC News, December 1, 2015, http://www.bbc.com/news/world-europe-34976537 (accessed July 18, 2022).
- 217. Ben Brimelow, "Russia's Newest Anti-Air Defenses Are in Syria—and the US Should Be Worried," *Business Insider*, April 11, 2018, http://www.businessinsider.com/pantsir-s1-makes-russian-air-defenses-stronger-2018-2 (accessed July 18, 2022).
- 218. Lukas Andriukaitis, "#PutinAtWar: Russia Fortifies Air Base in Khmeimim," Atlantic Council, Digital Forensic Research Lab, November 11, 2018, https://medium.com/dfrlab/putinatwar-russia-fortifies-air-base-in-khmeimim-803f4cc07946 (accessed July 18, 2022).
- 219. Reuters, "Syria Agrees to Let Russia Expand Hmeimim Air Base," August 19, 2020, https://www.reuters.com/article/us-russia-syria-airbase/syria-agrees-to-let-russia-expand-hmeimim-air-base-idUSKCN25F2BP (accessed July 18, 2022).
- 220. BBC News, "Russia Used Syria as Live-Fire Training—US General," December 22, 2016, http://www.bbc.com/news/world-europe-38402506 (accessed July 18, 2022).
- 221. International Institute for Strategic Studies, *The Military Balance 2019: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2019), p. 168.
- 222. Tom O'Connor, "Russia Is 'Forcing' U.S. Military Out of Syria and Testing New Weapons to Help, Reports Say," *Newsweek*, December 17, 2018, https://www.newsweek.com/russia-forcing-us-out-syria-new-weapons-1262207 (accessed July 18, 2022).
- 223. Al Jazeera, "Infographic: Which Countries Buy the Most Russian Weapons?" March 9, 2022, https://www.aljazeera.com/news/2022/3/9/infographic-which-countries-buy-the-most-russian-weapons#:-:text=Russia%20is%20the%20world's%20second%2Dlargest%20arms%20 exporter%2C%20behind%20the,its%20arms%20to%2010%20countries (accessed July 18, 2022).
- 224. Ryan Browne, "US Official: Russia Apologized After Russian Jet Performed Barrel Roll over US Plane," CNN, updated May 25, 2017, http://www.cnn.com/2017/05/25/politics/russia-us-aircraft-barrel-roll/ (accessed July 18, 2022).
- 225. Anne Barnard, "Russia Says Deal Bars American Jets from Much of Syria's Skies. U.S. Says No," *The New York Times*, May 5, 2017, https://www.nytimes.com/2017/05/05/world/middleeast/syria-deescalation-zones-russia-iran-turkey.html (accessed July 18, 2022).
- 226. Chad Garland, "US and Russian Forces Have Clashed Repeatedly in Syria, US Envoy Says," *Stars and Stripes*, November 23, 2018, https://www.stripes.com/news/us-and-russian-forces-have-clashed-repeatedly-in-syria-us-envoy-says-1.557790 (accessed July 18, 2022).
- 227. Barbara Starr, "US Fighter Jets Escort Russian Aircraft in Eastern Syria," CNN, February 15, 2022, https://www.cnn.com/2022/02/15/politics/us-jets-escort-russian-aircraft-syria/index.html (accessed July 18, 2022).
- 228. Radio Free Europe/Radio Liberty, "Putin, Egyptian Leader Sign 'Strategic' Partnership Treaty," October 17, 2018, https://www.rferl.org/a/putin-egytian-leader-el-sissi-discuss-increasing-arms-sales-direct-air-links-moscow-visit-sochi/29547819.html (accessed July 18, 2022).
- 229. Vladimir Isachenkov, "Russia Negotiates Deal for Its Warplanes to Use Egypt Bases," Associated Press, November 30, 2017, https://apnews.com/bdfae4502ca74c1eacdbf6d32252e8f4 (accessed July 18, 2022).
- 230. "Russia Secures \$2BIn Fighter Jet Contract with Egypt—Reports," *The Moscow Times*, March 18, 2019, https://www.themoscowtimes.com/2019/03/18/russia-secures-2bln-fighter-jet-contract-with-egypt-reports-a64842 (accessed July 18, 2022).
- 231. Derek Bisaccio, "Su-35 Production for Egypt Begins," Forecast International, Defense & Security Monitor Blog, May 18, 2020, https://dsm. forecastinternational.com/wordpress/2020/05/18/egyptian-su-35-production-begins/ (accessed July 18, 2022).

- 232. "Egypt, Russia Sign Military, Security Cooperation Protocol," *Egypt Today*, August 26, 2021, https://www.egypttoday.com/Article/1/107242/Egypt-Russia-sign-military-security-cooperation-protocol (accessed July 18, 2022).
- 233. Radio Free Europe/Radio Liberty, "U.S. Says Russian Military Supplying More Weapons and Vagner Group Fighters to Libya," July 25, 2020, https://www.rferl.org/a/us-accuses-russia-weapons-vagner-libya/30746298.html (accessed July 18, 2022).
- 234. News release, "Russia, Wagner Group Continue Military Involvement in Libya," U.S. Africa Command, July 24, 2020, https://www.defense.gov/Explore/News/Article/Article/2287821/russia-wagner-group-continue-military-involvement-in-libya/ (accessed July 18, 2022); Ilya Barabanov and Nader Ibrahim, "Wagner: Scale of Russian Mercenary Mission in Libya Exposed," BBC News, August 11, 2021, https://www.bbc.com/news/world-africa-58009514 (accessed July 18, 2022); and Giorgio Cafiero and Emily Milliken, "Russians Unlikely to Leave Libya, Despite Ukraine War," Al Jazeera, April 15, 2022, https://www.aljazeera.com/news/2022/4/15/russians-unlikely-leave-libya-despite-ukraine-war (accessed July 18, 2022).
- 235. James Marson, "After Military Push in Syria, Russia Plays Both Sides in Libya," *The Wall Street Journal*, updated June 7, 2018, https://www.wsj.com/articles/after-military-push-in-syria-russia-plays-both-sides-in-libya-1528372802 (accessed July 18, 2022).
- 236. Ryan Browne and Chandelis Duster, "Russia Intercepts US Navy Aircraft over Mediterranean Sea," CNN, updated April 20, 2020, https://www.cnn. com/2020/04/20/politics/russian-military-intercepts-us-navy-aircraft/index.html (accessed July 18, 2022).
- 237. Agence France-Presse, "Russian Planes Intercepted US Navy Aircraft over Mediterranean: Pentagon," France 24, February 16, 2022, https://www.france24.com/en/live-news/20220216-russian-planes-intercepted-us-navy-aircraft-over-mediterranean-pentagon (accessed July 18, 2022).
- 238. Julian E. Barnes, "A Russian Ghost Submarine, Its U.S. Pursuers and a Deadly New Cold War," *The Wall Street Journal*, October 20, 2017, https://www.wsj.com/articles/a-russian-ghost-submarine-its-u-s-pursuers-and-a-deadly-new-cold-war-1508509841 (accessed July 18, 2022).
- 239. Christopher Woody, "Top U.S. Commander in Europe Says Russia's Subs Are Getting Busier, as Trump Cuts Sub-Hunting Planes from the Pentagon Budget," *Business Insider*, February 26, 2020, https://www.businessinsider.com/russia-subs-getting-busier-and-harder-to-track-in-atlantic-2020-2 (accessed July 18, 2022).
- 240. H. I. Sutton, "Unusual Russian Navy Concentration Seen in Eastern Mediterranean," *Naval News*, February 24, 2022, https://www.navalnews.com/naval-news/2022/02/unusual-russian-navy-concentration-seen-in-eastern-mediterranean/ (accessed July 18, 2022).
- 241. Itamilradar, "Russian Navy Akula Class Submarine Deployed in the Mediterranean Sea," March 20, 2022, https://www.itamilradar. com/2022/03/20/russian-navy-akula-class-submarine-deployed-in-the-mediterranean-sea/ (accessed July 18, 2022).
- 242. Daniel Kochis, "A Roadmap for Strengthened Transatlantic Pathways in the Western Balkans," Heritage Foundation *Backgrounder* No. 3286, March 16, 2018, p. 4, https://www.heritage.org/global-politics/report/roadmap-strengthened-transatlantic-pathways-the-western-balkans.
- 243. See, for example, Daria Sito-Sucic, "Russia Says NATO Membership of Balkan Countries Threatens Security," Reuters, April 23, 2018, https://www.reuters.com/article/us-balkans-russia-nato/russia-says-nato-membership-of-balkan-countries-threatens-security-idUSKBN1HU2CS (accessed July 18, 2022).
- 244. Radio Free Europe/Radio Liberty Balkan Service, "Montenegrin Court Convicts All 14 Defendants of Plotting Pro-Russia Coup," May 9, 2019, https://www.rferl.org/a/montenegro-court-convicts-14-on-terrorism-charges-/29930212.html (accessed July 18, 2022).
- 245. Samir Kajosevic, "China Replaces Russia as Largest Investor in Montenegro," Balkan Insight, October 20, 2020, https://balkaninsight.com/2020/10/20/china-replaces-russia-as-largest-investor-in-montenegro/ (accessed July 18, 2022).
- 246. Reuters, "Montenegro Adopts Unspecified Sanctions Against Russia," April 8, 2022, https://www.reuters.com/world/europe/montenegro-adopts-unspecified-sanctions-against-russia-2022-04-08/ (accessed July 18, 2022).
- 247. Samir Kajosevic, "Montenegro's Divided Govt Finally Silences Russian Media," Balkan Insight, April 8, 2022, https://balkaninsight.com/2022/04/08/montenegros-divided-govt-finally-silences-russian-media/ (accessed July 18, 2022).
- 248. Andrew Rettman, "Nato to Add Macedonia Despite Putin Warning," EUobserver, February 7, 2019, https://euobserver.com/foreign/144109 (accessed July 18, 2022).
- 249. Helene Cooper and Eric Schmitt, "U.S. Spycraft and Stealthy Diplomacy Expose Russian Subversion in a Key Balkans Vote," *Toronto Star*, October 10, 2018, https://www.thestar.com/news/world/2018/10/10/us-spycraft-and-stealthy-diplomacy-expose-russian-subversion-in-a-key-balkans-vote.html (accessed July 19, 2022).
- 250. Ibid.
- 251. Kochis, "A Roadmap for Strengthened Transatlantic Pathways in the Western Balkans," p. 9.
- 252. Ibid., p. 4.
- 253. Radio Free Europe/Radio Liberty Balkan Service, "Serbia Receives Delivery of Russian Antiaircraft Systems Despite U.S. Sanction Threats," February 24, 2020, https://www.rferl.org/a/serbia-receives-delivery-russian-antiaircraft-systems-despite-u-s-sanction-threats/30450693.html (accessed July 19, 2022).
- 254. Marc Santora and Neil MacFarquhar, "Putin Gets Red Carpet Treatment in Serbia, a Fulcrum Once More," *The New York Times*, January 17, 2019, https://www.nytimes.com/2019/01/17/world/europe/serbia-putin-russia-belgrade-vucic.html (accessed June 9, 2022). See also European Values Center for Security Policy, Kremlin Watch Program, *Assessment of the Kremlin's Malign Influence in Bosnia and Herzegovina, Montenegro and North Macedonia*, 2020, https://www.kremlinwatch.eu/userfiles/assessment.pdf (accessed July 19, 2022).

- 255. Snezana Bjelotomic, "Serbia and Russia Sign 26 Intergovernmental Agreements During Putin's Visit," *Serbian Monitor*, January 18, 2019, https://www.serbianmonitor.com/en/serbia-and-russia-sign-26-intergovernmental-agreements-during-putins-visit/ (accessed July 19, 2022).
- 256. Engjellushe Morina, "Bound to Russia: Serbia's Disruptive Neutrality," European Council on Foreign Relations *Commentary*, March 14, 2022, https://ecfr.eu/article/bound-to-russia-serbias-disruptive-neutrality/ (accessed July 19, 2022).
- 257. Radio Free Europe/Radio Liberty Balkan Service, "Serbia Signs Trade Agreement with Russia-Led Eurasian Economic Union," October 25, 2019, https://www.rferl.org/a/serbia-to-ink-trade-agreement-with-russia-led-eurasian-economic-union/30235917.html (accessed July 19, 2022).
- 258. Radio Free Europe/Radio Liberty, "Vucic Says Serbia Secures Gas Deal with Russia Following Phone Talks with Putin," May 29, 2022, https://www.rferl.org/a/serbia-vucic-gas-deal-russia/31873908.html (accessed July 19, 2022).
- 259. Vincent L. Morelli and Sarah E. Garding, "Serbia: Background and U.S. Relations," Congressional Research Service *Report for Members and Committees of Congress* No. R44955, updated November 16, 2018, p. 13, https://fas.org/sgp/crs/row/R44955.pdf (accessed July 19, 2022).
- 260. Srpska Republika News Agency and N1 Sarajevo, "RS President: Republika Srpska Has Very Good Relations with Serbia and Russia," N1, January 5, 2019, https://rs.n1info.com/english/news/a449708-rs-president-republika-srpska-has-very-good-relations-with-serbia-and-russia/ (accessed July 19, 2022).
- 261. Radio Free Europe/Radio Liberty Balkan Service, "Bosnian Serb Leader Says Secession Plan Delayed By War In Ukraine," June 6, 2022, https://www.rferl.org/a/bosnia-herzegovina-dodik-secession-ukraine/31886186.html (accessed July 19, 2022).
- 262. Srpska Republika News Agency and N1 Sarajevo, "Lavrov: Dodik Is a Friend of Russia," N1, June 4, 2022, https://ba.n1info.com/english/news/lavrov-dodik-is-a-friend-of-the-russia/ (accessed July 19, 2022).
- 263. Radio Free Europe/Radio Liberty, "Tensions Rise as Bosnian Serbs Vote in Banned Referendum," updated September 25, 2016, https://www.rferl.org/a/balkan-tensions-rise-as-bosnian-serbs-push-ahead-with-banned-referendum/28010813.html (accessed July 19, 2022), and Gordana Knezevic, "Russia's Fingers in Bosnia's Pie," Radio Free Europe/Radio Liberty, September 28, 2016, https://www.rferl.org/a/russia-putin-republika-srpska-bosnia-dodik-referendum-statehood-day/28018362.html (accessed July 19, 2022).
- 264. Zorica Ilic, "Russia's Balkan Power Games on Show Ahead of Elections," Deutsche Welle, October 6, 2018, https://www.dw.com/en/russias-balkan-power-games-on-show-ahead-of-elections/a-45781149 (accessed July 19, 2022).
- 265. TASS, "Kremlin Spokesman Confirms Putin Received Milorad Dodik in Kremlin," December 3, 2021, https://tass.com/politics/1370329 (accessed July 19, 2022).
- 266. Radio Free Europe/Radio Liberty Balkan Service, "Ethnic Serbs Celebrate Republika Srpska Day Despite Ban by Bosnia Court," January 9, 2022, https://www.rferl.org/a/republika-srpska-national-day-ban/31646317.html (accessed July 19, 2022).
- 267. Gordana Knezevic, "Talk of Paramilitaries, Real or Imagined, Could Fuel Division," Radio Free Europe/Radio Liberty, February 21, 2018, https://www.rferl.org/a/balkans-talk-of-paramilitaries-fuel-division/29055292.html (accessed July 19, 2022).
- 268. Vera Mironova and Bogdan Zawadewicz, "Putin Is Building a Bosnian Paramilitary Force," *Foreign Policy*, August 8, 2018, https://foreignpolicy.com/2018/08/08/putin-is-building-a-bosnian-paramilitary-force/ (accessed July 19, 2022).
- 269. Ibid.
- 270. Milica Stojanovic, "Russian Ambassador to Serbia Denies Change in Putin's Kosovo Policy," Balkan Insight, April 29, 2022, https://balkaninsight.com/2022/04/29/russian-ambassador-to-serbia-denies-change-in-putins-kosovo-policy/ (accessed July 19, 2022).
- 271. Radio Free Europe/Radio Liberty Balkan Service, "Serbia Stops 'Promo Train' to Kosovo's North," January 14, 2017, https://www.rferl.org/a/28233304.html (accessed July 19, 2022).
- 272. Christopher Woody, "17 Russian Jets Buzzed a British Destroyer in May in an 'Unprecedented' Show of Force," Task & Purpose, November 27, 2018, https://taskandpurpose.com/news/17-russian-jets-buzz-british-destroyer/ (accessed July 19, 2022).
- 273. Agence France-Presse, "Tensions Rise in Black Sea as Russian Jets Conduct 'Mock Attacks' on Dutch Frigate," *South China Morning Post*, June 30, 2021, https://www.scmp.com/news/world/europe/article/3139262/tensions-rise-black-sea-russian-jets-conduct-mock-attacks-dutch (accessed July 19, 2022).
- 274. Marcia Wendorf, "Both the U.S. and Russia Are Stalking the World's Undersea Cables," Interesting Engineering, August 16, 2019, https://interestingengineering.com/both-the-us-and-russia-are-stalking-the-worlds-undersea-cables (accessed July 19, 2022).
- 275. Kyle Mizokami, "What Is a Russian Spy Ship Doing in the Eastern Mediterranean?" *Popular Mechanics*, September 19, 2017, https://www.popularmechanics.com/military/navy-ships/a28276/yantar-spy-ship-eastern-mediterranean/ (accessed July 19, 2022), and Deb Reichmann, "Russia May Be Targeting Undersea Internet Cables. Here's Why That's Bad," Yahoo News, March 30, 2018, https://www.yahoo.com/news/russia-may-targeting-undersea-internet-213130980.html (accessed July 19, 2022).
- 276. Alice Fuller, "Russian Spy Ship that Can 'Cut Undersea Cables' Spotted in English Channel," *New York Post*, September 13, 2021, https://nypost. com/2021/09/13/russian-spy-ship-that-can-cut-undersea-cables-spotted-in-english-channel/ (accessed July 19, 2022).
- 277. Ryan Browne and Zachary Cohen, "Russian Spy Ship Spotted 100 Miles off North Carolina Coast," CNN, updated January 22, 2018, https://www.cnn. com/2018/01/22/politics/russia-spy-ship-us-coast/index.html?sr=twCNNp012218russia-spy-ship-us-coast0253PMStory&CNNPolitics=Tw (accessed July 19, 2022), and Shawn Snow, "Russian Spy Ship Lurking off US Coast Conducting 'Unsafe Operation," *Military Times*, December 18, 2019, https://www.militarytimes.com/flashpoints/2019/12/18/russian-spy-ship-lurking-off-us-coast-conducting-unsafe-operation/ (accessed July 19, 2022).

- 278. Rachel S. Cohen, "Spike in Russian Aircraft Intercepts Straining Air Force Crews in Alaska, Three-Star Says," *Air Force Times*, April 28, 2021, https://www.airforcetimes.com/news/your-air-force/2021/04/28/spike-in-russian-aircraft-intercepts-straining-air-force-crews-in-alaska-three-star-says/ (accessed July 19, 2022).
- 279. Corey Dickstein, "US Jets Intercept Russian Bombers off Alaskan Coast for 14th Time this Year," *Stars and Stripes*, October 20, 2020, https://www.stripes.com/news/air-force/us-jets-intercept-russian-bombers-off-alaskan-coast-for-14th-time-this-year-1.649318 (accessed July 19, 2022).
- 280. BBC News, "RAF Lossiemouth Jets Scrambled to Russian Planes Twice in Five Days," April 3, 2019, https://www.bbc.com/news/uk-scotland-highlands-islands-47799660 (accessed July 19, 2022).
- 281. Ellie Kaufman, "US and NATO Military Airplanes Intercept Russian Airplanes over North Atlantic," CNN, February 4, 2022, https://www.cnn. com/2022/02/04/politics/nato-and-us-planes-intercept-russians/index.html (accessed July 19, 2022).
- 282. Radio Free Europe/Radio Liberty, "U.S., Canadian Jets Scrambled to Escort Russian Bombers Away from North American Coastline," January 27, 2019, https://www.rferl.org/a/us-canadian-jets-scramble-escort-russian-blackjack-bombers-away/29733515.html (accessed July 19, 2022).
- 283. Alastair Gale, "Japan Alleges Russian Incursion in Its Airspace, Scrambles Jet in Response," *The Wall Street Journal*, March 2, 2022, https://www.wsj.com/livecoverage/russia-ukraine-latest-news-2022-03-02/card/japan-alleges-russian-incursion-in-its-airspace-and-scrambles-jet-in-response-ZC95kfeNdyvpsTUr4pm9 (accessed June 9, 2022).
- 284. Known officially as the Quadrilateral Security Dialogue, comprised of four countries: the United States, Australia, India, and Japan. See Patrick Gerard Buchan and Benjamin Rimland, "Defining the Diamond: The Past, Present, and Future of the Quadrilateral Security Dialogue," Center for Strategic and International Studies *Brief*, March 2020, https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/200312\_BuchanRimland\_QuadReport\_v2%5B6%5D.pdf?fuRA6mwjWYKqROtSmJD4u5ct.vijdkZv (accessed July 24, 2022), and "Quad Joint Leaders Statement," The White House, May 24, 2022, https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/24/quad-joint-leaders-statement/ (accessed July 24, 2022).
- 285. Nobuhiro Kubo, "Japan Scrambles Jets after Russian, Chinese Warplanes Near Airspace During Quad," Reuters, May 24, 2022, https://www.reuters.com/world/asia-pacific/japan-says-it-scrambled-jets-after-russian-chinese-warplanes-neared-airspace-2022-05-24/ (accessed July 17, 2022).
- 286. Franz-Stefan Gady, "Japan Intercepts 2 Russian Nuclear-Capable Fighter-Bombers," *The Diplomat*, January 17, 2019, https://thediplomat.com/2019/01/japan-intercepts-2-russian-nuclear-capable-fighter-bombers/ (accessed July 19, 2022).
- 287. Franz-Stefan Gady, "Japan Scrambles Fighter Jets to Intercept 2 Russian Military Aircraft," *The Diplomat*, May 6, 2019, https://thediplomat.com/2019/05/japan-scrambles-fighter-jets-to-intercept-2-russian-military-aircraft/ (accessed July 19, 2022).
- 288. News release, "NATO Jets Intercept Warplanes During Unusual Level of Air Activity." North Atlantic Treaty Organization, last updated March 30, 2021, https://www.nato.int/cps/en/natohq/news\_182897.htm (accessed July 17, 2022).
- 289. News release, "NATO Fighters Intercept Russian Aircraft over the Baltic Sea and in the High North," North Atlantic Treaty Organization, February 4, 2022, https://ac.nato.int/archive/2022/nato-fighters-intercept-russian-aircraft-over-the-baltic-sea-and-in-the-high-north- (accessed July 19, 2022).
- 290. News release, "NATO Jets Scramble in Response to Russian Aircraft over Baltic and Black Sea," North Atlantic Treaty Organization, April 29, 2022, https://ac.nato.int/archive/2022/nato-jets-scramble-in-response-to-russian-aircraft-over-baltic-and-black-sea (accessed July 19, 2022).
- 291. Thomas Nilsen, "Russian Sub Hunters Worry Air Traffic Controllers. Norway Scrambled F-16s and F-35s," *The Barents Observer*, April 30, 2020, https://thebarentsobserver.com/en/security/2020/04/russian-sub-hunter-worries-air-traffic-controllers-norway-scrambled-f-16s-and-f-35s (accessed July 19, 2022).
- 292. Associated Press, "Russian Aircraft Violates Airspace of NATO Member Estonia," ABC News, September 24, 2019, https://abcnews.go.com/ International/wireStory/russian-aircraft-violates-airspace-nato-member-estonia-65818448 (accessed July 19, 2022).
- 293. Radio Free Europe/Radio Liberty, "NATO Says Russian Su-27 Escort Jets Had No Flight Plans, Turned off Transponders," August 14, 2019, https://www.rferl.org/a/nato-says-russian-su-27-escort-jets-had-no-flight-plans-turned-off-transponders/30109797.html (accessed July 19, 2022).
- 294. BBC News, "Russian Military Admits Significant Cyber-War Efforts," February 23, 2017, http://www.bbc.com/news/world-europe-39062663 (accessed July 16, 2022).
- 295. Office of the Director of National Intelligence, Annual Threat Assessment of the U.S. Intelligence Community, p. 12.
- 296. Patrick Howell O'Neill, "How Russian Hackers Infiltrated the US Government for Months Without Being Spotted," *MIT Technology Review*, December 15, 2020, https://www.technologyreview.com/2020/12/15/1014462/how-russian-hackers-infiltrated-the-us-government-for-months-without-being-spotted/ (accessed July 17, 2022), and Isabella Jibilian and Katie Canales, "The US Is Readying Sanctions Against Russia over the SolarWinds Cyber Attack. Here's a Simple Explanation of How the Massive Hack Happened and Why It's Such a Big Deal," *Business Insider*, April 15, 2021, https://www.businessinsider.com/solarwinds-hack-explained-government-agencies-cyber-security-2020-12 (accessed July 17, 2022).
- 297. "FACT SHEET: Imposing Costs for Harmful Foreign Activities by the Russian Government," The White House, April 15, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/15/fact-sheet-imposing-costs-for-harmful-foreign-activities-by-the-russian-government/ (accessed July 16, 2022).

- 298. Jenna McLaughlin, "Justice Department Recovers Majority of Colonial Pipeline Ransom: 'We Turned the Tables on DarkSide,'" Yahoo News, June 7, 2021, https://news.yahoo.com/justice-department-recovers-majority-of-colonial-pipeline-ransom-we-turned-the-tables-on-dark-side-210611828. html (accessed July 16, 2022).
- 299. Matt Egan and Clare Duffy, "Colonial Pipeline Launches Restart After Six-Day Shutdown," CNBC, updated May 12, 2021, https://www.cnn. com/2021/05/12/business/colonial-pipeline-restart/index.html (accessed July 16, 2022).
- 300. Ryan Browne, "Hackers Behind Colonial Pipeline Attack Reportedly Received \$90 Million in Bitcoin Before Shutting Down," CNBC, May 18, 2021, https://www.cnbc.com/2021/05/18/colonial-pipeline-hackers-darkside-received-90-million-in-bitcoin.html (accessed July 16, 2022), and news release, "Department of Justice Seizes \$2.3 Million in Cryptocurrency Paid to the Ransomware Extortionists Darkside," U.S. Department of Justice, June 7, 2021, https://www.justice.gov/opa/pr/department-justice-seizes-23-million-cryptocurrency-paid-ransomware-extortionists-darkside (accessed July 16, 2022).
- 301. BBC News, "JBS: FBI Says Russia-Linked Group Hacked Meat Supplier," June 3, 2021, https://www.bbc.com/news/world-us-canada-57338896 (accessed July 16, 2022).
- 302. Brett Molina and Mike Snider, "JBS USA, World's Largest Meat Supplier, Shuts Down 9 Beef Plants After Cyberattack; 'Vast Majority' of Plants to Open Wednesday," *USA Today*, June 1, 2021, https://www.usatoday.com/story/money/shopping/2021/06/01/jbs-cyberattack-worlds-largest-meat-supplier-closes-5-beef-plants/7493850002/ (accessed July 16, 2022).
- 303. Ryan Browne, "US and UK Accuse Russia of Major Cyber Attack on Georgia," CNN, updated February 26, 2020, https://www.cnn. com/2020/02/20/politics/russia-georgia-hacking/index.html (accessed July 16, 2022).
- 304. Press release, "Russian Cyber Operations Against Ukraine: Declaration of the High Representative on Behalf of the European Union," Council of the European Union, May 10, 2022, https://www.consilium.europa.eu/en/press/press-releases/2022/05/10/russian-cyber-operations-against-ukraine-declaration-by-the-high-representative-on-behalf-of-the-european-union/ (accessed July 16, 2022).
- 305. Press statement by Antony J. Blinken, Secretary of State, "Attribution of Russia's Malicious Cyber Activity Against Ukraine," U.S. Department of State, May 10, 2022, https://www.state.gov/attribution-of-russias-malicious-cyber-activity-against-ukraine/ (accessed July 16, 2022), and Kevin Collier, "E.U., U.K. and U.S. Accuse Russia of Cyberattack on Internet Provider," NBC News, May 10, 2022, https://www.nbcnews.com/tech/security/eu-uk-accuse-russia-cyberattack-internet-provider-rcna28086(accessed July 16, 2022).
- 306. Denis Pinchuk, "Patriotic Russians May Have Staged Cyber Attacks on Own Initiative: Putin," Reuters, June 1, 2017, http://www.reuters.com/article/us-russia-economic-forum-putin-cyber-idUSKBN18S56Y (accessed July 16, 2022).
- 307. Office of the Director of National Intelligence, Annual Threat Assessment of the U.S. Intelligence Community, p. 10.